

La distribución del ingreso y la riqueza

Bitácoras de cálculo

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Introducción

Para construir y procesar las diversas bases de datos del estudio “La distribución del ingreso y la riqueza: nuevas aproximaciones conceptuales y metodológicas”, se utilizó el paquete estadístico R¹. Con el propósito de que el lector interesado pueda conocer el código que formó parte de los guiones (scripts) elaborados en R, se presenta a continuación las bitácoras de cálculo. De especial utilidad han sido las librerías “tidyverse” y “gt” porque hacen más comprensible el código para procesar y generar cuadros.

Se ha tratado de hacer lo más comprensible posible los pasos que se siguieron para el procesamiento, optando por un código que, si bien puede ser poco elegante para un experto en R, resulte comprensivo para el investigador que desee conocer los detalles. Por ello, se ha intercalado una explicación junto con párrafos sombreados en gris que conforman el código en R, basta con copiar las líneas de estos párrafos sombreados en un script de R y ejecutarlo. Se recomienda crear una carpeta específica donde se guarden los diversos “scripts”, con una subcarpeta que lleve el nombre de “Bases”², en donde se deberán copiar las tablas con los microdatos de cada una de las encuestas.

¹ R es un *software* libre para procesamiento estadístico y generación de cuadros y gráficos, disponible [en línea] <https://www.r-project.org/>.

² De lo contrario, se deberá modificar el “path” para que el código pueda encontrar las tablas requeridas para el procesamiento.

I. Base de datos homologada de la ENIGH

A. Librerías requeridas

Se dan de alta las librerías que se requieren para el procesamiento:

```
library(foreign)
library(tidyverse)
options(dplyr.summarise.inform = FALSE)
library(gt)
```

Para llevar a cabo una construcción de variables de ingresos y gastos consistente se procedió, en primer lugar, a construir un conjunto de bases de datos homologadas para los 18 levantamientos de la Encuesta Nacional de Ingresos y Gastos de los Hogares (ENIGH), comprendidos entre 1984 y 2020. Esta construcción conserva los mismos criterios al momento de incluir cada una de las variables de la encuesta, con el propósito de corregir, en la medida de lo posible, los sesgos presentes que se han analizado. Se han construido nueve bases:

- i) Hogares. Características de las viviendas y los hogares
- ii) Personas. Información sociodemográfica de todas las personas, y de la ocupación para aquellos con 12 años y más
- iii) Ingresos. Ingresos y percepciones de las personas mayores de 12 años, y menores de edad
- iv) Especie. Remuneraciones en especie, es decir, apoyos que se dan a los trabajadores de manera regular y que son parte del proceso de producción del empleador, así como prestaciones en especie
- v) Autoconsumo. Bienes y servicios producidos para consumo propio
- vi) Apoyos. Transferencias en especie (regalos y apoyos), otorgados a los hogares
- vii) Alquiler. Estimación del alquiler de la vivienda
- viii) Nuevas transferencias. Transferencias otorgadas por el gobierno federal no consideradas por el Instituto Nacional de Estadística (INEGI) en la construcción del ejercicio 2020
- ix) Gastos. Gasto corrientes y erogaciones de capital

II. Base de datos de hogares homologada

En las encuestas de 1984 y de 1989 no hay manera de establecer una diferencia entre las viviendas y los hogares, en virtud de que el instituto tabuló las cifras a nivel de hogar. En los ejercicios de 1992 a 2006 es posible hacer esta distinción en virtud de que el último dígito del folio se refiere al hogar, correspondiendo el valor de cero al hogar principal. A partir de la encuesta de 2008 el INEGI estableció la separación entre vivienda (folio de vivienda), y el hogar (folio del hogar), asignando el valor de uno al hogar principal. Para corregir esta situación, se ha creado en la base homologada la variable "foliohog", en las tablas de 1984 a 2006; se ha asignado el valor de uno a esta variable en las encuestas de 1984 y 1989, y se uniformaron sus valores en los ejercicios de 1992 a 2006, para que el hogar principal tenga el valor de uno, el segundo hogar el dos y así sucesivamente.

En cuanto a los factores de expansión, en algunos años el Instituto Nacional de Estadística y Geografía (INEGI) publicó dos bases de datos; las originales con los factores de expansión estimados al momento de realizar la encuesta y las modificadas, cuyos factores de expansión se ajustaron. Para la construcción de la tabla homologada de hogares se han utilizado las bases con los factores de expansión actualizados por el INEGI. Por otro lado, se debe tomar en cuenta el hecho de que en las viviendas residen, además de los miembros del hogar, familiares, amigos, trabajadores domésticos y huéspedes.

También se dan situaciones en donde el jefe de familia está ausente, por ejemplo, trabajando en algún otro lugar dentro o fuera del país. Por ello, el Instituto Nacional de Estadística y Geografía (INEGI) ha excluido en todas las encuestas ENIGH (1984 a 2020), el jefe ausente, los trabajadores domésticos y sus familiares, y los huéspedes en la construcción de las variables (de hecho, no se les incluye en los cuestionarios de ingresos y gastos). En la construcción homologada de este estudio hemos seguido este mismo criterio, por lo que se les ha excluido de la base de personas y se ha estimado el tamaño del hogar sin incluirles.

De la misma manera, se ha tenido que uniformar la variable de tamaño de la localidad donde se ubica la vivienda y, por lo tanto, el hogar, en virtud de que en las encuestas de 1984 y 1989 solo se desglosó en alta densidad (viviendas en localidades de 15.000 o más habitantes), y baja densidad (en localidades de menos de 15.000 habitantes). En cambio, en las encuestas posteriores (1992 a 2020) se agrupó a las viviendas en cuatro zonas: i) localidades con 100,000 y más habitantes; ii) localidades con 15.000 a 99.999 habitantes; iii) localidades con 2.500 a 14.999 habitantes; y, iv) localidades con menos de 2.500 habitantes.

Con el propósito de homologar y no perder el detalle que las encuestas posteriores de 1992 a 2020 ofrecen se crearon dos variables. La primera se denomina zona en donde se agrupan, para todos los levantamientos, las viviendas en las dos categorías de las encuestas de 1984 y 1989: 1) alta densidad, viviendas en localidades de 15.000 y más habitantes; y 2) baja densidad, viviendas en localidades menores a 15.000 habitantes (véase cuadro AM.8 del anexo metodológico). La segunda se denomina "tamloc" e incluye el desglose de las encuestas de 1992 al 2020; a las encuestas anteriores se les asigna el valor de nueve, para identificarlo como valor perdido (véase el cuadro AM.9 del anexo metodológico). Finalmente, la tabla de hogares quedó conformada por siete variables.

Cuadro 1
Variables de la tabla de hogares

Variable	Descripción	Observaciones
enc	Año de la encuesta	Llave
folioviv	Folio de la vivienda	Llave
foliohog	Folio del hogar	Llave
tamhog	Tamaño del hogar	Se excluyen el jefe ausente, los trabajadores domésticos y sus familiares, y los huéspedes
tamloc	Lugar de residencia	
zona	Tamaño de la localidad	
factor	Factor de expansión	Actualizados por el INEGI

Fuente: Elaboración propia.

A. Tabla de hogares de 1984

Tabla de hogares:

```
hogares <- read.dbf("Bases/1984/hogares.dbf", as.is=TRUE)
colnames(hogares) <- tolower(colnames(hogares))
```

Se agregan los residentes del hogar. Se excluyen los jefes ausentes, trabajadores domésticos, abonados y huéspedes:

```
personas <- read.dbf("Bases/1984/pobla.dbf", as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
personas <- personas %>%
  filter(parentesco!="Q"&parentesco!="D"&parentesco!="A")
residentes <- personas %>% group_by(folio) %>%
  summarise(tamhog=n())
remove(personas)
hogares <- hogares %>% left_join(residentes, by="folio")
remove(residentes)
```

Se salva la tabla de hogares:

```
hogares <- hogares %>%
  mutate(enc=1984) %>%
  mutate(folioviv=substr(folio, 5, 11)) %>%
  mutate(foliohog=1) %>%
  mutate(across(c("folio": "foliohog"), as.numeric)) %>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0))) %>%
  mutate(tamloc=9)
Hogares1984 <- hogares %>%
  select(enc, folioviv, foliohog, tamhog, zona, tamloc, factor)
remove(hogares)
```

B. Tabla de hogares de 1989

Tabla de hogares:

```
hogares <- read.dbf("Bases/1989/hogares.dbf",as.is=TRUE)
colnames(hogares) <- tolower(colnames(hogares))
```

Se agregan los residentes del hogar. Se excluyen los jefes ausentes, trabajadores domésticos, abonados y huéspedes:

```
personas <- read.dbf("Bases/1989/pobla.dbf",as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
personas <- personas %>%
  filter(parentesco!="2"&parentesco!="8"&parentesco!="9")
residentes <- personas %>% group_by(folio) %>%
  summarise(tamhog=n())
remove(personas)
hogares <- hogares %>% left_join(residentes,by="folio")
remove(residentes)
```

Se salva la tabla de hogares:

```
hogares <- hogares %>%
  mutate(enc=1989) %>%
  mutate(folioviv=substr(folio,5,11)) %>%
  mutate(foliohog=1) %>%
  mutate(across(c("folio":"foliohog"),as.numeric)) %>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0))) %>%
  mutate(tamloc=9)
Hogares1989 <- hogares %>%
  select(enc,folioviv,foliohog,tamhog,zona,tamloc,factor)
remove(hogares)
```

C. Tabla de hogares de 1992

Tabla de hogares:

```
hogares <- read.dbf("Bases/1992/hogares.dbf",as.is=TRUE)
colnames(hogares) <- tolower(colnames(hogares))
```

Se calcula la variable rural/urbano (zona):

```
hogares <- hogares %>%
  mutate(zona=if_else(estrato=="1"|estrato=="2",1,9)) %>%
  mutate(zona=if_else(estrato=="3"|estrato=="4",2,zona))
```

Se agregan los residentes del hogar. Se excluyen los jefes ausentes, trabajadores domésticos, abonados y huéspedes:

```
personas <- read.dbf("Bases/1992/pobla.dbf",as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
personas <- personas %>%
  filter(paren!="2"&paren!="8"&paren!="9")
residentes <- personas %>% group_by(folio) %>%
  summarise(tamhog=n())
remove(personas)
```

```
hogares <- hogares %>% left_join(residentes,by="folio")
remove(residentes)
```

Se salva la tabla de hogares:

```
hogares <- hogares %>%
  mutate(enc=1992) %>%
  mutate(folioviv=substr(folio,5,10)) %>%
  mutate(foliohog=substr(folio,11,11)) %>%
  mutate(across(c("folio":"foliohog"),as.numeric)) %>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0))) %>%
  mutate(foliohog=foliohog+1)
Hogares1992 <- hogares %>%
  select(enc, folioviv, foliohog, tamhog, zona, tamloc=estrato, factor)
remove(hogares)
```

D. Tabla de hogares de 1994

Tabla de hogares:

```
hogares <- read.dbf("Bases/1994/hogares.dbf",as.is=TRUE)
colnames(hogares) <- tolower(colnames(hogares))
```

Se calcula la variable rural/urbano (zona):

```
hogares <- hogares %>%
  mutate(zona=if_else(estrato=="1"|estrato=="2",1,9)) %>%
  mutate(zona=if_else(estrato=="3"|estrato=="4",2,zona))
```

Se agregan los residentes del hogar. Se excluyen los jefes ausentes, trabajadores domésticos, abonados y huéspedes:

```
personas <- read.dbf("Bases/1994/pobla.dbf",as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
personas <- personas %>%
  filter(parentesco!="2"&parentesco!="8"&parentesco!="9")
residentes <- personas %>% group_by(folio) %>%
  summarise(tamhog=n())
remove(personas)
hogares <- hogares %>% left_join(residentes,by="folio")
remove(residentes)
```

Se salva la tabla de hogares:

```
hogares <- hogares %>%
  mutate(enc=1994) %>%
  mutate(folioviv=substr(folio,5,10)) %>%
  mutate(foliohog=substr(folio,11,11)) %>%
  mutate(across(c("folio":"foliohog"),as.numeric)) %>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0))) %>%
  mutate(foliohog=foliohog+1)
Hogares1994 <- hogares %>%
  select(enc, folioviv, foliohog, tamhog, zona, tamloc=estrato, factor)
remove(hogares)
```


E. Tabla de hogares de 1996

Tabla de hogares:

```
hogares <- read.dbf("Bases/1996/hogares.dbf",as.is=TRUE)
colnames(hogares) <- tolower(colnames(hogares))
```

Se calcula variable rural/urbano (zona):

```
hogares <- hogares %>%
  mutate(zona=if_else(estrato=="1"|estrato=="2",1,9)) %>%
  mutate(zona=if_else(estrato=="3"|estrato=="4",2,zona))
```

Se agregan los residentes del hogar. Se excluyen los jefes ausentes, trabajadores domésticos, abonados y huéspedes:

```
personas <- read.dbf("Bases/1996/pobla.dbf",as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
personas <- personas %>%
  filter(parentesco!="02"&parentesco!="20"&parentesco!="21")
residentes <- personas %>% group_by(folio) %>%
  summarise(tamhog=n())
remove(personas)
hogares <- hogares %>% left_join(residentes,by="folio")
remove(residentes)
```

Se salva la tabla de hogares:

```
hogares <- hogares %>%
  mutate(enc=1996) %>%
  mutate(folioviv=substr(folio,5,10)) %>%
  mutate(foliohog=substr(folio,11,11)) %>%
  mutate(across(c("folio":"foliohog"),as.numeric)) %>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0))) %>%
  mutate(foliohog=foliohog+1)
Hogares1996 <- hogares %>%
  select(enc,folioviv,foliohog,tamhog,zona,tamloc=estrato,factor)
remove(hogares)
```

F. Tabla de hogares de 1998

Tabla de hogares:

```
hogares <- read.dbf("Bases/1998/hogares.dbf",as.is=TRUE)
colnames(hogares) <- tolower(colnames(hogares))
```

Se calcula variable rural/urbano (zona):

```
hogares <- hogares %>%
  mutate(zona=if_else(estrato=="1"|estrato=="2",1,9)) %>%
  mutate(zona=if_else(estrato=="3"|estrato=="4",2,zona))
```

Se agregan los residentes del hogar. Se excluyen los jefes ausentes, trabajadores domésticos, abonados y huéspedes:

```
personas <- read.dbf("Bases/1998/pobla.dbf",as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
```

```

personas <- personas %>%
  filter(parentesco!="02"&parentesco!="20"&parentesco!="21")
residentes <- personas %>% group_by(folio) %>%
  summarise(tamhog=n())
remove(personas)
hogares <- hogares %>% left_join(residentes,by="folio")
remove(residentes)

```

Se salva la tabla de hogares:

```

hogares <- hogares %>%
  mutate(enc=1998) %>%
  mutate(folioviv=substr(folio,5,10)) %>%
  mutate(foliohog=substr(folio,11,11)) %>%
  mutate(across(c("folio":"foliohog"),as.numeric)) %>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0))) %>%
  mutate(foliohog=foliohog+1)
Hogares1998 <- hogares %>%
  select(enc,folioviv,foliohog,tamhog,zona,tamloc=estrato,factor)
remove(hogares)

```

G. Tabla de hogares de 2000

Tabla de hogares:

```

hogares <- read.dbf("Bases/2000/hogares.dbf",as.is=TRUE)
colnames(hogares) <- tolower(colnames(hogares))

```

Se calcula variable rural/urbano (zona):

```

hogares <- hogares %>%
  mutate(zona=if_else(estrato=="1"|estrato=="2",1,9)) %>%
  mutate(zona=if_else(estrato=="3"|estrato=="4",2,zona))

```

Se agregan los residentes del hogar. Se excluyen los jefes ausentes, trabajadores domésticos, abonados y huéspedes:

```

personas <- read.dbf("Bases/2000/pobla.dbf",as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
personas <- personas %>%
  filter(parentesco!="02"&parentesco!="20"&parentesco!="21")
residentes <- personas %>% group_by(folio) %>%
  summarise(tamhog=n())
remove(personas)
hogares <- hogares %>% left_join(residentes,by="folio")
remove(residentes)

```

Se guarda la tabla de hogares:

```

hogares <- hogares %>%
  mutate(enc=2000) %>%
  mutate(folioviv=substr(folio,5,11)) %>%
  mutate(foliohog=substr(folio,12,12)) %>%
  mutate(across(c("folio":"foliohog"),as.numeric)) %>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0))) %>%
  mutate(foliohog=foliohog+1)
Hogares2000 <- hogares %>%

```

```
select(enc, folioviv, foliohog, tamhog, zona, tamloc=estrato, factor)
remove(hogares)
```

H. Tabla de hogares de 2002

Tabla de hogares:

```
hogares <- read.dbf("Bases/2002/hogares.dbf", as.is=TRUE)
colnames(hogares) <- tolower(colnames(hogares))
```

Se calcula la variable rural/urbano (zona):

```
hogares <- hogares %>%
  mutate(zona=if_else(estrato=="1"|estrato=="2", 1, 9)) %>%
  mutate(zona=if_else(estrato=="3"|estrato=="4", 2, zona))
```

Se agregan los residentes del hogar. Se excluyen los jefes ausentes, trabajadores domésticos, abonados y huéspedes:

```
personas <- read.dbf("Bases/2002/pobla.dbf", as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
personas <- personas %>%
  mutate(parentesco=as.numeric(parentesco)) %>%
  filter(parentesco==10|(parentesco>=20&parentesco<=63))
residentes <- personas %>% group_by(folio) %>%
  summarise(tamhog=n())
remove(personas)
hogares <- hogares %>% left_join(residentes, by="folio")
remove(residentes)
```

Se guarda la tabla de hogares:

```
hogares <- hogares %>%
  mutate(enc=2002) %>%
  mutate(folioviv=substr(folio, 5, 10)) %>%
  mutate(foliohog=substr(folio, 11, 11)) %>%
  mutate(across(c("folio": "foliohog"), as.numeric)) %>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0))) %>%
  mutate(foliohog=foliohog+1)
Hogares2002 <- hogares %>%
  select(enc, folioviv, foliohog, tamhog, zona, tamloc=estrato, factor)
remove(hogares)
```

I. Tabla de hogares de 2004

Tabla de hogares:

```
hogares <- read.dbf("Bases/2004/hogares.dbf", as.is=TRUE)
colnames(hogares) <- tolower(colnames(hogares))
```

Se calcula la variable rural/urbano (zona):

```
hogares <- hogares %>%
  mutate(zona=if_else(estrato=="1"|estrato=="2", 1, 9)) %>%
  mutate(zona=if_else(estrato=="3"|estrato=="4", 2, zona))
```

Se agregan los residentes del hogar. Se excluyen los jefes ausentes, trabajadores domésticos, abonados y huéspedes:

```
personas <- read.dbf("Bases/2004/pobla.dbf",as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
personas <- personas %>%
  filter(parentesco!="400"&parentesco!="420"&parentesco!="430"&parentesco!="440"&
    parentesco!="700")
residentes <- personas %>% group_by(folio) %>%
  summarise(tamhog=n())
remove(personas)
hogares <- hogares %>% left_join(residentes,by="folio")
remove(residentes)
```

Se guarda la tabla de hogares:

```
hogares <- hogares %>%
  mutate(enc=2004) %>%
  mutate(folioviv=substr(folio,5,10)) %>%
  mutate(foliohog=substr(folio,11,11)) %>%
  mutate(across(c("folio":"foliohog"),as.numeric)) %>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0))) %>%
  mutate(foliohog=foliohog+1)
Hogares2004 <- hogares %>%
  select(enc,folioviv,foliohog,tamhog,zona,tamloc=estrato,factor)
remove(hogares)
```

J. Tabla de hogares de 2005

Tabla de hogares:

```
hogares <- read.dbf("Bases/2005/hogares.dbf",as.is=TRUE)
colnames(hogares) <- tolower(colnames(hogares))
```

Se calcula la variable rural/urbano (zona):

```
hogares <- hogares %>%
  mutate(zona=if_else(estrato=="1"|estrato=="2",1,9)) %>%
  mutate(zona=if_else(estrato=="3"|estrato=="4",2,zona))
```

Se agregan los residentes del hogar. Se excluyen los jefes ausentes, trabajadores domésticos, abonados y huéspedes:

```
personas <- read.dbf("Bases/2005/pobla.dbf",as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
personas <- personas %>%
  filter(parentesco!="400"&parentesco!="420"&parentesco!="430"&parentesco!="440"&
    parentesco!="700")
residentes <- personas %>% group_by(folio) %>%
  summarise(tamhog=n())
remove(personas)
hogares <- hogares %>% left_join(residentes,by="folio")
remove(residentes)
```

Se guarda la tabla de hogares:

```
hogares <- hogares %>%
  mutate(enc=2005) %>%
  mutate(folioviv=substr(folio,5,10)) %>%
  mutate(foliohog=substr(folio,11,11)) %>%
  mutate(across(c("folio":"foliohog"),as.numeric)) %>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0))) %>%
  mutate(foliohog=foliohog+1)
Hogares2005 <- hogares %>%
  select(enc, folioviv, foliohog, tamhog, zona, tamloc=estrato, factor)
remove(hogares)
```

K. Tabla de hogares de 2006

Tabla de hogares:

```
hogares <- read.dbf("Bases/2006/hogares.dbf", as.is=TRUE)
colnames(hogares) <- tolower(colnames(hogares))
```

Se calcula la variable rural/urbano (zona):

```
hogares <- hogares %>%
  mutate(zona=if_else(estrato=="1"|estrato=="2",1,9)) %>%
  mutate(zona=if_else(estrato=="3"|estrato=="4",2,zona))
```

Se agregan los residentes del hogar. Se excluyen los jefes ausentes, trabajadores domésticos, abonados y huéspedes:

```
personas <- read.dbf("Bases/2006/pobla.dbf", as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
personas <- personas %>%
  filter(parentesco!="400"&parentesco!="420"&parentesco!="430"&parentesco!="440"&
    parentesco!="700")
residentes <- personas %>% group_by(folio) %>%
  summarise(tamhog=n())
remove(personas)
hogares <- hogares %>% left_join(residentes, by="folio")
remove(residentes)
```

Se guarda la tabla de hogares:

```
hogares <- hogares %>%
  mutate(enc=2006) %>%
  mutate(folioviv=substr(folio,5,10)) %>%
  mutate(foliohog=substr(folio,11,11)) %>%
  mutate(across(c("folio":"foliohog"),as.numeric)) %>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0))) %>%
  mutate(foliohog=foliohog+1)
Hogares2006 <- hogares %>%
  select(enc, folioviv, foliohog, tamhog, zona, tamloc=estrato, factor)
remove(hogares)
```

L. Tabla de hogares de 2008

Tabla de hogares:

```
hogares <- read.dbf("Bases/2008/hogares.dbf",as.is=TRUE)
colnames(hogares) <- tolower(colnames(hogares))
```

Se calcula la variable rural/urbano (zona):

```
hogares <- hogares %>%
  mutate(zona=if_else(estrato=="1"|estrato=="2",1,9)) %>%
  mutate(zona=if_else(estrato=="3"|estrato=="4",2,zona))
```

Se agregan los residentes del hogar. Se excluyen los jefes ausentes, trabajadores domésticos, abonados y huéspedes:

```
personas <- read.dbf("Bases/2008/pobla.dbf",as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
personas <- personas %>%
  filter((parentesco<401|parentesco>461)&(parentesco<701|parentesco>715))
residentes <- personas %>% group_by(folioviv,foliohog) %>%
  summarise(tamhog=n())
remove(personas)
hogares <- hogares %>% left_join(residentes,by=c("folioviv","foliohog"))
remove(residentes)
```

Se guarda la tabla de hogares:

```
hogares <- hogares %>%
  mutate(enc=2008) %>%
  mutate(across(c("folioviv":"tamhog"),as.numeric)) %>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0))) %>%
  mutate(foliohog=foliohog+1)
Hogares2008 <- hogares %>%
  select(enc,folioviv,foliohog,tamhog,zona,tamloc=estrato,factor)
remove(hogares)
```

M. Tabla de hogares de 2010

Tabla de hogares:

```
hogares <- read.dbf("Bases/2010/hogares.dbf",as.is=TRUE)
colnames(hogares) <- tolower(colnames(hogares))
```

Se calcula la variable rural/urbano (zona):

```
hogares <- hogares %>%
  mutate(zona=if_else(tam_loc==1|tam_loc==2,1,9)) %>%
  mutate(zona=if_else(tam_loc==3|tam_loc==4,2,zona))
```

Se agregan los residentes del hogar. Se excluyen los jefes ausentes, trabajadores domésticos, abonados y huéspedes:

```
personas <- read.dbf("Bases/2010/pobla.dbf",as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
personas <- personas %>% mutate (parentesco=as.integer(parentesco))
personas <- personas %>%
```

```

  filter((parentesco<401|parentesco>461)&(parentesco<701|parentesco>715))
residentes <- personas %>% group_by(folioviv, foliohog) %>%
  summarise(tamhog=n())
remove(personas)
hogares <- hogares %>% left_join(residentes, by=c("folioviv", "foliohog"))
remove(residentes)

```

Se guarda la tabla de hogares:

```

hogares <- hogares %>%
  mutate(enc=2010) %>%
  mutate(across(c("folioviv": "tamhog"), as.numeric)) %>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0))) %>%
  mutate(foliohog=foliohog+1)
Hogares2010 <- hogares %>%
  select(enc, folioviv, foliohog, tamhog, zona, tamloc=tam_loc, factor)
remove(hogares)

```

N. Tabla de hogares de 2012

Tabla de hogares:

```

hogares <- read.dbf("Bases/2012/hogares.dbf", as.is=TRUE)
colnames(hogares) <- tolower(colnames(hogares))

```

Se agrega tamaño de la localidad y se calcula la variable rural/urbano (zona):

```

vivienda <- read.dbf("Bases/2012/vivienda.dbf", as.is=TRUE)
colnames(vivienda) <- tolower(colnames(vivienda))
vivienda <- vivienda %>%
  mutate(zona=if_else(tam_loc==1|tam_loc==2, 1, 9)) %>%
  mutate(zona=if_else(tam_loc==3|tam_loc==4, 2, zona))
vivienda <- vivienda %>% select(folioviv, zona, tamloc=tam_loc)
hogares <- hogares %>% left_join(vivienda, by="folioviv")
remove(vivienda)

```

Se agregan los residentes del hogar. Se excluyen los jefes ausentes, trabajadores domésticos, abonados y huéspedes:

```

personas <- read.dbf("Bases/2012/pobla.dbf", as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
personas <- personas %>% mutate(parentesco=as.integer(parentesco))
personas <- personas %>%
  filter((parentesco<401|parentesco>461)&(parentesco<701|parentesco>715))
residentes <- personas %>% group_by(folioviv, foliohog) %>%
  summarise(tamhog=n())
remove(personas)
hogares <- hogares %>% left_join(residentes, by=c("folioviv", "foliohog"))
remove(residentes)

```

Se guarda la tabla de hogares:

```

hogares <- hogares %>%
  mutate(enc=2012) %>%
  mutate(across(c("folioviv": "tamloc"), as.numeric)) %>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0))) %>%
  mutate(foliohog=foliohog+1)

```

```
Hogares2012 <- hogares %>%
  select(enc, folioviv, foliohog, tamhog, zona, tamloc, factor=factor_hog)
remove(hogares)
```

O. Tabla de hogares de 2014

Tabla de hogares:

```
hogares <- read.dbf("Bases/2014/hogares.dbf", as.is=TRUE)
colnames(hogares) <- tolower(colnames(hogares))
```

Se agrega el tamaño de la localidad y se calcula la variable rural/urbano (zona):

```
vivienda <- read.dbf("Bases/2014/vivienda.dbf", as.is=TRUE)
colnames(vivienda) <- tolower(colnames(vivienda))
vivienda <- vivienda %>%
  mutate(zona=if_else(tam_loc==1|tam_loc==2,1,9)) %>%
  mutate(zona=if_else(tam_loc==3|tam_loc==4,2,zona))
vivienda <- vivienda %>% select(folioviv, zona, tamloc=tam_loc)
hogares <- hogares %>% left_join(vivienda, by="folioviv")
remove(vivienda)
```

Se agregan los residentes del hogar. Se excluyen los jefes ausentes, trabajadores domésticos, abonados y huéspedes:

```
personas <- read.dbf("Bases/2014/pobla.dbf", as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
personas <- personas %>%
  mutate(parentesco=as.numeric(as.character(parentesco))) %>%
  filter((parentesco<401|parentesco>461)&(parentesco<701|parentesco>715))
residentes <- personas %>% group_by(folioviv, foliohog) %>%
  summarise(tamhog=n())
remove(personas)
hogares <- hogares %>% left_join(residentes, by=c("folioviv", "foliohog"))
remove(residentes)
```

Se guarda la tabla de hogares:

```
hogares <- hogares %>%
  mutate(enc=2014) %>%
  mutate(across(c("folioviv": "tamloc"), as.numeric)) %>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0)))
Hogares2014 <- hogares %>%
  select(enc, folioviv, foliohog, tamhog, zona, tamloc, factor=factor_hog)
remove(hogares)
```

P. Tabla de hogares de 2016

Tabla de hogares:

```
hogares <- read.dbf("Bases/2016/hogares.dbf", as.is=TRUE)
colnames(hogares) <- tolower(colnames(hogares))
```

Se agrega factor y tamaño de la localidad, y se calcula la variable rural/urbano (zona):

```
vivienda <- read.dbf("Bases/2016/vivienda.dbf", as.is=TRUE)
colnames(vivienda) <- tolower(colnames(vivienda))
```



```
vivienda <- vivienda %>%
  mutate(zona=if_else(tam_loc==1|tam_loc==2,1,9)) %>%
  mutate(zona=if_else(tam_loc==3|tam_loc==4,2,zona))
vivienda <- vivienda %>% select(folioviv,zona,tamloc=tam_loc,factor)
hogares <- hogares %>% left_join(vivienda,by="folioviv")
remove(vivienda)
```

Se agregan los residentes del hogar. Se excluyen los jefes ausentes, trabajadores domésticos, abonados y huéspedes:

```
personas <- read.dbf("Bases/2016/pobla.dbf",as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
personas <- personas %>%
  mutate(parentesco=as.numeric(as.character(parentesco))) %>%
  filter((parentesco<401|parentesco>461)&(parentesco<701|parentesco>715))
residentes <- personas %>% group_by(folioviv,foliohog) %>%
  summarise(tamhog=n())
remove(personas)
hogares <- hogares %>% left_join(residentes,by=c("folioviv","foliohog"))
remove(residentes)
```

Se guarda la tabla de hogares:

```
hogares <- hogares %>%
  mutate(enc=2016) %>%
  mutate(across(c("folioviv":"factor"),as.numeric)) %>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0)))
Hogares2016 <- hogares %>% select(enc,folioviv,foliohog,tamhog,zona,tamloc,factor)
remove(hogares)
```

Q. Tabla de hogares de 2018

Tabla de hogares:

```
hogares <- read.dbf("Bases/2018/hogares.dbf",as.is=TRUE)
colnames(hogares) <- tolower(colnames(hogares))
```

Se agrega factor y tamaño de la localidad, y se calcula la variable rural/urbano (zona):

```
vivienda <- read.dbf("Bases/2018/vivienda.dbf",as.is=TRUE)
colnames(vivienda) <- tolower(colnames(vivienda))
vivienda <- vivienda %>%
  mutate(zona=if_else(tam_loc==1|tam_loc==2,1,9)) %>%
  mutate(zona=if_else(tam_loc==3|tam_loc==4,2,zona))
vivienda <- vivienda %>% select(folioviv,zona,tamloc=tam_loc,factor)
hogares <- hogares %>% left_join(vivienda,by="folioviv")
remove(vivienda)
```

Se agregan los residentes del hogar. Se excluyen los jefes ausentes, trabajadores domésticos, abonados y huéspedes:

```
personas <- read.dbf("Bases/2018/pobla.dbf",as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
personas <- personas %>%
  mutate(parentesco=as.numeric(as.character(parentesco))) %>%
  filter((parentesco<401|parentesco>461)&(parentesco<701|parentesco>715))
residentes <- personas %>% group_by(folioviv,foliohog) %>%
```

```

  summarise(tamhog=n())
remove(personas)
hogares <- hogares %>% left_join(residentes,by=c("folioviv","foliohog"))
remove(residentes)

```

Se guarda la tabla de hogares:

```

hogares <- hogares %>%
  mutate(enc=2018) %>%
  mutate(across(c("folioviv":"factor"),as.numeric)) %>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0)))
Hogares2018 <- hogares %>%
  select(enc,folioviv,foliohog,tamhog,zona,tamloc,factor)
remove(hogares)

```

R. Tabla de hogares de 2020

Tabla de hogares:

```

hogares <- read.dbf("Bases/2020/hogares.dbf",as.is=TRUE)
colnames(hogares) <- tolower(colnames(hogares))

```

Se agrega factor y tamaño de la localidad y se calcula la variable rural/urbano (zona):

```

vivienda <- read.dbf("Bases/2020/vivienda.dbf",as.is=TRUE)
colnames(vivienda) <- tolower(colnames(vivienda))
vivienda <- vivienda %>%
  mutate(zona=if_else(tam_loc==1|tam_loc==2,1,9)) %>%
  mutate(zona=if_else(tam_loc==3|tam_loc==4,2,zona))
vivienda <- vivienda %>% select(folioviv,zona,tamloc=tam_loc,factor)
hogares <- hogares %>% left_join(vivienda,by="folioviv")
remove(vivienda)

```

Se agregan los residentes del hogar. Se excluyen los jefes ausentes, trabajadores domésticos, abonados y huéspedes:

```

personas <- read.dbf("Bases/2020/pobla.dbf",as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
personas <- personas %>%
  mutate(parentesco=as.numeric(as.character(parentesco))) %>%
  filter((parentesco<401|parentesco>461)&(parentesco<701|parentesco>715))
residentes <- personas %>% group_by(folioviv,foliohog) %>%
  summarise(tamhog=n())
remove(personas)
hogares <- hogares %>% left_join(residentes,by=c("folioviv","foliohog"))
remove(residentes)

```

Se guarda la tabla de hogares:

```

hogares <- hogares %>%
  mutate(enc=2020) %>%
  mutate(across(c("folioviv":"factor"),as.numeric)) %>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0)))
Hogares2020 <- hogares %>%
  select(enc,folioviv,foliohog,tamhog,zona,tamloc,factor)
remove(hogares)

```

Se generan los cuadros de control:

Cuadro 2
Número de hogares y personas

enc	Hogares	Personas
1984	14 988 551	75 972 257
1989	15 955 536	78 739 029
1992	18 536 267	86 900 545
1994	19 692 850	89 773 052
1996	20 510 639	92 695 009
1998	22 205 926	95 261 153
2000	23 667 479	98 310 615
2002	24 531 631	100 854 320
2004	25 561 447	102 988 791
2005	25 710 321	103 934 163
2006	27 445 356	108 578 347
2008	27 874 625	111 611 544
2010	29 556 772	114 559 931
2012	31 559 379	117 284 429
2014	31 671 002	119 906 312
2016	33 462 598	122 643 890
2018	34 744 818	125 091 790
2020	35 749 659	126 760 856

Fuente: Elaboración propia.

Hogares por zona:

1. Alta densidad (viviendas en localidades de 15 000 o más habitantes)
2. Baja densidad (viviendas en localidades de menos de 15 000 habitantes)

Cuadro 3
Número de hogares por zona

enc	1	2
1984	9 735 338	5 253 213
1989	10 287 361	5 668 175
1992	11 758 365	6 777 902
1994	12 419 712	7 273 138
1996	13 153 712	7 356 927
1998	14 123 164	8 082 762
2000	15 109 712	8 557 767
2002	15 487 829	9 043 802
2004	16 319 636	9 241 811
2005	16 816 308	8 894 013
2006	17 765 469	9 679 887
2008	18 052 200	9 822 425
2010	19 169 933	10 386 839
2012	20 438 849	11 120 530
2014	20 441 585	11 229 417
2016	21 542 934	11 919 664
2018	21 843 450	12 901 368
2020	23 163 480	12 586 179

Fuente: Elaboración propia.

Hogares de acuerdo con el tamaño de la localidad:

1. Localidades con 100.000 y más habitantes
2. Localidades con 15.000 a 99.999 habitantes
3. Localidades con 2.500 a 14.999 habitantes
4. Localidades con menos de 2.500 habitantes

Cuadro 4
Hogares por tamaño de la localidad

enc	1	2	3	4	9
1984	NA	NA	NA	NA	14 988 551
1989	NA	NA	NA	NA	15 955 536
1992	9 262 383	2 495 982	2 430 789	4 347 113	NA
1994	9 607 528	2 812 184	2 635 152	4 637 986	NA
1996	10 420 770	2 732 942	2 764 577	4 592 350	NA
1998	11 213 427	2 909 737	2 964 790	5 117 972	NA
2000	11 952 780	3 156 932	3 161 140	5 396 627	NA
2002	12 201 419	3 286 410	3 271 620	5 772 182	NA
2004	12 783 652	3 535 984	3 490 233	5 751 578	NA
2005	13 221 261	3 595 047	3 205 567	5 688 446	NA
2006	13 732 045	4 033 424	3 578 483	6 101 404	NA
2008	14 014 077	4 038 123	3 851 675	5 970 750	NA
2010	14 913 328	4 256 605	4 073 063	6 313 776	NA
2012	15 917 835	4 521 014	4 202 445	6 918 085	NA
2014	15 766 053	4 675 532	4 264 125	6 965 292	NA
2016	16 690 124	4 852 810	4 650 097	7 269 567	NA
2018	16 735 454	5 107 996	4 876 725	8 024 643	NA
2020	17 855 119	5 308 361	4 876 969	7 709 210	NA

Fuente: Elaboración propia.

III. Base sociodemográfica homologada de la ENIGH

En la base de personas se logró homologar las cifras para diez variables (véase cuadro 5). El sexo y la edad de la persona no representaron un mayor reto, salvo la consideración de que en las encuestas de 1984 al 2004 la edad igual a 97 se refiere a los mayores de 96 años y en las del 2006 al 2020 no hubo edad límite. No obstante, en el resto de las variables no ha sido sencillo su homologación. En el nivel de educación, por ejemplo, ha variado la forma de preguntar. En las encuestas de 1984 al 2006 solo se consideró a la población de 5 años y más, en cambio a partir del ejercicio del 2008 se amplió el rango a 3 años y más. Con el objetivo de uniformar se tuvo que regresar al rango de 5 años y más. En las encuestas de 1984 a 2002 se utilizó la variable “ed_formal”, y para los levantamientos del 2004 al 2020 se tomaron en cuenta las variables de niveles y grados aprobados, en virtud de que en esos ejercicios el nivel de detalle fue mayor (véase cuadro AM.10 del anexo metodológico).

Para la condición de actividad, es decir, si la persona está ocupada, desocupada o económicamente inactiva (personas dedicadas al hogar, estudiantes, jubilados, principalmente), la variable se construyó para la población de 12 años y más, a partir de los siguientes reactivos: si trabajó el mes pasado (más la pregunta de verificación, a partir del 2004) y causas por las cuales no trabajó (véase cuadro AM.11 del anexo metodológico). La posición en el trabajo, para la población ocupada de 12 años y más, se preguntó solo en las encuestas de 1984 a 2006. Por ello, a partir de la encuesta del 2008 se le ha construido con las variables de subordinación, trabajo independiente, tipo de pago y rama de actividad. Para la estimación de la categoría “jornalero o peón”, con el propósito de uniformar la construcción de esta variable, en todas las encuestas se ha restringido a los jornaleros agropecuarios, excluyendo de esta categoría a los peones de la minería y la construcción (véase cuadro AM.12 del anexo metodológico).

Para la variable rama de actividad (sector), se han utilizado los siguientes catálogos para tabular la información:

- 1984: Clasificación Mexicana de Actividades y Productos (CMAP) 1981,
- 1989 a 1992: Clasificación Mexicana de Actividades y Productos (CMAP) 1989,
- 1994 a 1998: Clasificación Mexicana de Actividades y Productos (CMAP) 1994,

- 2000 a 2002: Sistema de Clasificación Industrial de América del Norte (SCIAN), 1997,
- 2004 a 2006: Sistema de Clasificación Industrial de América del Norte (SCIAN), 2002,
- 2008: Sistema de Clasificación Industrial de América del Norte (SCIAN), 2007,
- 2010 a 2018: Clasificaciones del Censo de Población y Vivienda 2010, y
- 2020: Sistema de Clasificación Industrial de América del Norte (SCIAN) 2007.

Para poder homologar la información de todas las encuestas, se tuvo que manejar la codificación original de rama a nivel de tres dígitos, salvo en 1984, en donde se utilizó la codificación original de la encuesta (véase cuadro AM.13 del anexo metodológico). Para la construcción de ocupación (grupo) se utilizó el Catálogo Mexicano de Ocupaciones (CMO) a nivel de dos dígitos, de la encuesta de 1984 al 2008 (salvo en 1984, en donde se utilizó el tabulado original de la encuesta a un dígito). A partir de la encuesta del 2010, se aplicó la tabla de equivalencias, elaborada por el Instituto Nacional de Estadística y Geografía (INEGI, 2011), entre la Clasificación Mexicana de Ocupaciones (CMO) de 1992 (de la encuesta del 2008) y el Sistema Nacional de Clasificación de Ocupaciones (SINCO), del 2011 (véase cuadros AM.14 y AM.15 del anexo metodológico). Para el tipo de contrato, tan solo se tuvo que uniformar el valor de la variable “contrato”, los cuales cambian en los distintos ejercicios de 1984 al 2016, y construirla con las variables “contrato” y “tipo”, a partir del ejercicio del 2018 (véase cuadro AM.16 del anexo metodológico).

La pertenencia a un sindicato (“gremio”), solo se pudo incluir para las encuestas de 1984 al 2006, en virtud de que, lamentablemente, a partir de la encuesta del 2008 no se incluyó a esta pregunta en el cuestionario. En cambio, la variable sobre el tipo de organización (“clas_emp”), en donde trabaja el ocupado de 12 años y más (independiente, personal o familiar; compañía privada; institución del gobierno; o institución privada), se comenzó a preguntar a partir del 2008. En las encuestas de 1998 a 2002 se comenzó a preguntar si la persona trabajó en el sector público o privado; no obstante, en las encuestas del 2004 al 2006 se omitió este reactivo. Por ello, solo se tabuló esta variable a partir del 2008, asignando el valor de perdido (NA), en las encuestas anteriores.

Cuadro 5
Variables de la tabla de persona

Variable	Descripción	Observaciones
enc	Año de la encuesta	Llave
folioviv	Folio de la vivienda	Llave
foliohog	Folio del hogar	Llave
numren	Número de persona	Llave
sexo	Sexo de la persona	
edad	Edad en años cumplidos	1984 al 2014 el valor de 97 se refiere a 97 años y más
educa	Nivel de educación	
pea	Condición de actividad	De la persona ocupada de 12 años y más
ocupa	Posición en el trabajo	De la persona ocupada de 12 años y más
sector	Rama de actividad	De la persona ocupada de 12 años y más
grupo	Ocupación	De la persona ocupada de 12 años y más
convenio	Tipo de contratación	De la persona ocupada de 12 años y más
gremio	Pertenencia a un sindicato	De la persona ocupada de 12 años y más, y solo para las encuestas de 1984 al 2006

Fuente: Elaboración propia.

A. Tabla sociodemográfica de 1984

Tabla de personas:

```
personas <- read.dbf("Bases/1984/pobla.dbf", as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
```

Se preparan las variables:

```
personas <- personas %>%
  mutate(enc=1984)%>%
  mutate(folioviv=substr(folio,5,11))%>%
  mutate(foliohog=1)%>%
  mutate(across(c("num_ren", "edad": "foliohog"), as.numeric))%>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0)))%>%
  mutate(clas_emp=9)
```

Se selecciona la población objetivo (se excluye el jefe ausente, los servidores domésticos y sus parientes, y los abonados o huéspedes, independientemente del parentesco con el jefe del hogar):

```
personas <- personas %>% filter(parentesco!="Q"&parentesco!="D"&parentesco!="A")
```

Nivel de educación:

```
personas <- personas %>%
  mutate(educ=if_else(edad<5,0,9))%>%
  mutate(educ=if_else(edad>=5&(ed_formal==0|ed_formal==1|ed_formal==2),1,educ))%>%
  mutate(educ=if_else(edad>=5&(ed_formal==3|ed_formal==4),2,educ))%>%
  mutate(educ=if_else(edad>=5&(ed_formal==5|ed_formal==6),3,educ))%>%
  mutate(educ=if_else(edad>=5&(ed_formal==7|ed_formal==8),4,educ))%>%
  mutate(educ=if_else(edad>=5&ed_formal==9,5,educ))%>%
  mutate(educ=if_else(edad>=5&ed_formal==10,6,educ))
```

Condición de actividad:

```
personas <- personas %>%
  mutate(pea=if_else(edad<12,0,9))%>%
  mutate(pea=if_else(edad>=12&
    (trab_m_p==1|trab_m_p==2&(causa_no_t==1&causa_no_t<=10)),1,pea))%>%
  mutate(pea=if_else(edad>=12&(trab_m_p==2&causa_no_t==11),2,pea))%>%
  mutate(pea=if_else(edad>=12&(trab_m_p==2&causa_no_t==12),3,pea))%>%
  mutate(pea=if_else(edad>=12&(trab_m_p==2&causa_no_t==13),4,pea))%>%
  mutate(pea=if_else(edad>=12&(trab_m_p==2&causa_no_t==14),5,pea))%>%
  mutate(pea=if_else(edad>=12&(trab_m_p==2&causa_no_t==16),6,pea))%>%
  mutate(pea=if_else(edad>=12&(trab_m_p==2&(causa_no_t==15|causa_no_t==17))),7,pea))
```

Posición en el trabajo:

```
personas <- personas %>%
  mutate(ocupa=if_else(edad<12,0,9))%>%
  mutate(ocupa=if_else(edad>=12&(posicion==1|(posicion==2&rama>=3)),1,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(posicion==2&(rama==1|rama==2)),2,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(posicion==3|posicion==4|posicion==5),3,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&posicion==6,4,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&posicion==7,5,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&posicion==8,6,ocupa))
```

Rama de actividad:

```

personas <- personas %>%
  mutate(sector=if_else(edad<12,0,99))%>%
  mutate(sector=if_else(edad>=12&(rama==1|rama==2|rama==3),1,sector))%>%
  mutate(sector=if_else(edad>=12&rama==4,2,sector))%>%
  mutate(sector=if_else(edad>=12&rama==14,3,sector))%>%
  mutate(sector=if_else(edad>=12&rama==15,4,sector))%>%
  mutate(sector=if_else(edad>=12&rama==5,5,sector))%>%
  mutate(sector=if_else(edad>=12&rama==6,6,sector))%>%
  mutate(sector=if_else(edad>=12&rama==7,7,sector))%>%
  mutate(sector=if_else(edad>=12&rama==8,8,sector))%>%
  mutate(sector=if_else(edad>=12&rama==9,9,sector))%>%
  mutate(sector=if_else(edad>=12&rama==10,10,sector))%>%
  mutate(sector=if_else(edad>=12&rama==11,11,sector))%>%
  mutate(sector=if_else(edad>=12&rama==12,12,sector))%>%
  mutate(sector=if_else(edad>=12&rama==13,13,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==16|rama==17),14,sector))%>%
  mutate(sector=if_else(edad>=12&rama==19,15,sector))%>%
  mutate(sector=if_else(edad>=12&rama==20,18,sector))%>%
  mutate(sector=if_else(edad>=12&rama==21,19,sector))%>%
  mutate(sector=if_else(edad>=12&rama==24,20,sector))%>%
  mutate(sector=if_else(edad>=12&rama==18,21,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==22|rama==23|rama==25),22,sector))

```

Ocupación en el trabajo:

```

personas <- personas %>%
  mutate(grupo=if_else(edad<12,0,99))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==1,1,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==2,2,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==3,3,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==4,4,grupo))%>%
  mutate(grupo=if_else(edad>=12&(ocupacion==5|ocupacion==6),5,grupo))%>%
  mutate(grupo=if_else(edad>=12&(ocupacion>=7 & ocupacion<=10),6,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==11,7,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==12,8,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==13,9,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==19,10,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==14,11,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==15,12,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==16,13,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==17,14,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==18,15,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==20,16,grupo))

```

Tipo de contrato:

```

personas <- personas %>%
  mutate(convenio=if_else(edad<12,0,9))%>%
  mutate(convenio=if_else(edad>=12&contrato==3,1,convenio))%>%
  mutate(convenio=if_else(edad>=12&contrato==2,2,convenio))%>%
  mutate(convenio=if_else(edad>=12&contrato==1,3,convenio))

```

Pertenencia a un sindicato:

```

personas <- personas %>%
  mutate(gremio=if_else(edad<12,0,9))%>%

```



```
mutate(gremio=if_else(edad>=12&sindicato==1,1,gremio))%>%
mutate(gremio=if_else(edad>=12&sindicato==2,2,gremio))
```

Se guarda la tabla sociodemográfica:

```
Personas1984 <- personas %>%
  select(enc,folioviv,foliohog,numren=num_ren,sexo,edad,educa,pea,ocupa,sector,
    grupo,convenio,gremio,clas_emp)
remove(personas)
```

B. Tabla sociodemográfica de 1989

Tabla personas:

```
personas <- read.dbf("Bases/1989/pobla.dbf",as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
```

Se preparan las variables:

```
personas <- personas %>%
  mutate(enc=1989)%>%
  mutate(folioviv=substr(folio,5,11))%>%
  mutate(foliohog=1)%>%
  mutate(rama=substr(rama,1,3))%>%
  mutate(ocupacion=substr(ocupacion,1,2))%>%
  mutate(across(c("num_ren":"foliohog"),as.numeric))%>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0)))%>%
  mutate(clas_emp=9)
```

Se selecciona la población objetivo (se excluye el jefe ausente, los servidores domésticos y sus parientes, y los abonados o huéspedes, independientemente del parentesco con el jefe del hogar):

```
personas <- personas %>% filter(parentesco!=2&parentesco!=8&parentesco!=9)
```

Nivel de educación:

```
personas <- personas %>%
  mutate(educa=if_else(edad<5,0,9))%>%
  mutate(educa=if_else(edad>=5&(ed_formal==0|ed_formal==1),1,educa))%>%
  mutate(educa=if_else(edad>=5&(ed_formal==2|ed_formal==3),2,educa))%>%
  mutate(educa=if_else(edad>=5&(ed_formal==4|ed_formal==5),3,educa))%>%
  mutate(educa=if_else(edad>=5&(ed_formal==6|ed_formal==7),4,educa))%>%
  mutate(educa=if_else(edad>=5&ed_formal==8,5,educa))%>%
  mutate(educa=if_else(edad>=5&ed_formal==9,6,educa))
```

Condición de actividad:

```
personas <- personas %>%
  mutate(pea=if_else(edad<12,0,9))%>%
  mutate(pea=if_else(edad>=12&
    (trab_m_p==1|trab_m_p==2&(causa_no_t==1&causa_no_t<=10)),1,pea))%>%
  mutate(pea=if_else(edad>=12&(trab_m_p==2&causa_no_t==11),2,pea))%>%
  mutate(pea=if_else(edad>=12&(trab_m_p==2&causa_no_t==12),3,pea))%>%
  mutate(pea=if_else(edad>=12&(trab_m_p==2&causa_no_t==13),4,pea))%>%
  mutate(pea=if_else(edad>=12&(trab_m_p==2&causa_no_t==14),5,pea))%>%
  mutate(pea=if_else(edad>=12&(trab_m_p==2&causa_no_t==16),6,pea))%>%
  mutate(pea=if_else(edad>=12&(trab_m_p==2&(causa_no_t==15|causa_no_t==17)),7,pea))
```

Posición en el trabajo:

```

personas <- personas %>%
  mutate(ocupa=if_else(edad<12,0,9))%>%
  mutate(ocupa=if_else(edad>=12&(posicion==1|(posicion==2&rama>=130)),1,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(posicion==2&(rama==111|rama==120)),2,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(posicion==3|posicion==4|posicion==5),3,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&posicion==6,4,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&posicion==7,5,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&posicion==8,6,ocupa))

```

Rama de actividad:

```

personas <- personas %>%
  mutate(sector=if_else(edad<12,0,99))%>%
  mutate(sector=if_else(edad>=12&(rama==111|rama==120|rama==130),1,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==210|rama==220|rama==231|rama==232|
    rama==291|rama==292),2,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==410|rama==420),3,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==501|rama==502|rama==503),4,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==311|rama==312|rama==313|rama==314),5,
    sector))%>%
  mutate(sector=if_else(edad>=12&(rama==321|rama==322|rama==323|rama==324),6,
    sector))%>%
  mutate(sector=if_else(edad>=12&rama==331,7,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==341|rama==342),8,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==351|rama==352|rama==353|rama==354|
    rama==355|rama==356),9,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==361|rama==362|rama==369),10,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==371|rama==372),11,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==381|rama==382|rama==383|rama==384|
    rama==385|rama==332),12,sector))%>%
  mutate(sector=if_else(edad>=12&rama==390,13,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=611 & rama<=626),14,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==711|rama==712|rama==713),15,sector))%>%
  mutate(sector=if_else(edad>=12&rama==720,16,sector))%>%
  mutate(sector=if_else(edad>=12&rama==941,17,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==811|rama==812|rama==813),18,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==821|rama==831),19,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==921|rama==922|rama==923|rama==924),
    20,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==931|rama==932),21,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==910|rama==925|rama==929|rama==942|rama==949|
    rama==951|rama==952|rama==953|rama==954|rama==961|
    rama==971|rama==972|rama==973|rama==974|rama==975|
    rama==979|rama==980),22,sector))

```

Ocupación en el trabajo:

```

personas <- personas %>%
  mutate(grupo=if_else(edad<12,0,99))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==11,1,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==12,2,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==13,3,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==14,4,grupo))%>%
  mutate(grupo=if_else(edad>=12&(ocupacion==21|ocupacion==22),5,grupo))%>%
  mutate(grupo=if_else(edad>=12&(ocupacion==31|(ocupacion>=41&ocupacion<=43)),6,grupo)

```

```

))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==51,7,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==52,8,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==53,9,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==83,10,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==61,11,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==71,12,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==72,13,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==81,14,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==82,15,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==84,16,grupo))

```

Tipo de contrato:

```

personas <- personas %>%
  mutate(convenio=if_else(edad<12,0,9))%>%
  mutate(convenio=if_else(edad>=12&contrato==3,1,convenio))%>%
  mutate(convenio=if_else(edad>=12&contrato==2,2,convenio))%>%
  mutate(convenio=if_else(edad>=12&contrato==1,3,convenio))

```

Pertenencia a un sindicato:

```

personas <- personas %>%
  mutate(gremio=if_else(edad<12,0,9))%>%
  mutate(gremio=if_else(edad>=12&sindicato==1,1,gremio))%>%
  mutate(gremio=if_else(edad>=12&sindicato==2,2,gremio))

```

Se guarda la tabla sociodemográfica:

```

Personas1989 <- personas %>%
  select(enc,folioviv,foliohog,numren=num_ren,sexo,edad,educa,pea,ocupa,sector,
         grupo,convenio,gremio,clas_emp)
remove(personas)

```

C. Tabla sociodemográfica de 1992

Tabla personas:

```

personas <- read.dbf("Bases/1992/pobla.dbf",as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))

```

Se preparan las variables:

```

personas <- personas %>%
  mutate(enc=1992)%>%
  mutate(folioviv=substr(folio,5,10))%>%
  mutate(foliohog=substr(folio,11,11))%>%
  mutate(ocupacion=substr(ocupacion,1,2))%>%
  mutate(rama=substr(rama,1,3))%>%
  mutate(across(c("numren":"foliohog"),as.numeric))%>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0)))%>%
  mutate(foliohog=foliohog+1)%>%
  mutate(clas_emp=9)

```

Se selecciona la población objetivo (se excluye el jefe ausente, los servidores domésticos y sus parientes, y los abonados o huéspedes, independientemente del parentesco con el jefe del hogar):

```

personas <- personas %>% filter(paren!=2&paren!=8&paren!=9)

```

Nivel de educación:

```
personas <- personas %>%
  mutate(educ=if_else(edad<5,0,9))%>%
  mutate(educ=if_else(edad>=5&(ed_formal==0|ed_formal==1),1,educ))%>%
  mutate(educ=if_else(edad>=5&(ed_formal==2|ed_formal==3),2,educ))%>%
  mutate(educ=if_else(edad>=5&(ed_formal==4|ed_formal==5),3,educ))%>%
  mutate(educ=if_else(edad>=5&(ed_formal==6|ed_formal==7),4,educ))%>%
  mutate(educ=if_else(edad>=5&ed_formal==8,5,educ))%>%
  mutate(educ=if_else(edad>=5&ed_formal==9,6,educ))
```

Condición de actividad:

```
personas <- personas %>%
  mutate(pea=if_else(edad<12,0,9))%>%
  mutate(pea=if_else(edad>=12&
    (trab_m_p==1|trab_m_p==2&(causa_no_t==1&causa_no_t<=10)),1,pea))%>%
  mutate(pea=if_else(edad>=12&(trab_m_p==2&causa_no_t==11),2,pea))%>%
  mutate(pea=if_else(edad>=12&(trab_m_p==2&causa_no_t==12),3,pea))%>%
  mutate(pea=if_else(edad>=12&(trab_m_p==2&causa_no_t==13),4,pea))%>%
  mutate(pea=if_else(edad>=12&(trab_m_p==2&causa_no_t==14),5,pea))%>%
  mutate(pea=if_else(edad>=12&(trab_m_p==2&causa_no_t==16),6,pea))%>%
  mutate(pea=if_else(edad>=12&(trab_m_p==2&(causa_no_t==15|causa_no_t==17)),7,pea))
```

Posición en el trabajo:

```
personas <- personas %>%
  mutate(ocupa=ifelse(edad<12,0,9))%>%
  mutate(ocupa=ifelse(edad>=12&(posicion==1|(posicion==2&rama>=130)),1,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(posicion==2&(rama==111|rama==120)),2,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(posicion==3|posicion==4|posicion==5),3,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&posicion==6,4,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&posicion==7,5,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&posicion==8,6,ocupa))
```

Rama de actividad:

```
personas <- personas %>%
  mutate(sector=if_else(edad<12,0,99))%>%
  mutate(sector=if_else(edad>=12&(rama==111|rama==120|rama==130),1,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==210|rama==220|rama==231|rama==232|rama==291|
    rama==292),2,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==410|rama==420),3,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==501|rama==502|rama==503),4,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==311|rama==312|rama==313|rama==314),5,sector))
%>%
  mutate(sector=if_else(edad>=12&(rama==321|rama==322|rama==323|rama==324),6,sector))
%>%
  mutate(sector=if_else(edad>=12&rama==331,7,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==341|rama==342),8,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==351|rama==352|rama==353|rama==354|rama==355|
    rama==356),9,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==361|rama==362|rama==369),10,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==371|rama==372),11,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==381|rama==382|rama==383|rama==384|rama==385|
    rama==332),12,sector))%>%
  mutate(sector=if_else(edad>=12&rama==390,13,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=611 & rama<=626),14,sector))%>%
```

```
mutate(sector=if_else(edad>=12&(rama==711| rama==712 | rama==713),15,sector))%>%
mutate(sector=if_else(edad>=12&rama==720,16,sector))%>%
mutate(sector=if_else(edad>=12&rama==941,17,sector))%>%
mutate(sector=if_else(edad>=12&(rama==811| rama==812 | rama==813),18,sector))%>%
mutate(sector=if_else(edad>=12&(rama==821| rama==831),19,sector))%>%
mutate(sector=if_else(edad>=12&(rama==921| rama==922 | rama==923 | rama==924),20,sector)
)%>%
mutate(sector=if_else(edad>=12&(rama==931| rama==932),21,sector))%>%
mutate(sector=if_else(edad>=12&(rama==910| rama==925 | rama==929 | rama==942 | rama==949 |
rama==951 | rama==952 | rama==953 | rama==954 | rama==961 |
rama==971 | rama==972 | rama==973 | rama==974 | rama==975 |
rama==979 | rama==980),22,sector))
```

Ocupación en el trabajo:

```
personas <- personas %>%
mutate(grupo=if_else(edad<12,0,99))%>%
mutate(grupo=if_else(edad>=12&ocupacion==11,1,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==12,2,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==13,3,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==14,4,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==21,5,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==41,6,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==51,7,grupo))%>%
mutate(grupo=if_else(edad>=12&(ocupacion==52| ocupacion==53),8,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==54,9,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==55,10,grupo))%>%
mutate(grupo=if_else(edad>=12&(ocupacion==61| ocupacion==62),11,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==71,12,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==72,13,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==81,14,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==82,15,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==83,16,grupo))
```

Tipo de contrato:

```
personas <- personas %>%
mutate(convenio=if_else(edad<12,0,9))%>%
mutate(convenio=if_else(edad>=12&contrato==5,1,convenio))%>%
mutate(convenio=if_else(edad>=12&contrato==2,2,convenio))%>%
mutate(convenio=if_else(edad>=12&contrato==1,3,convenio))
```

Pertenencia a un sindicato:

```
personas <- personas %>%
mutate(gremio=if_else(edad<12,0,9))%>%
mutate(gremio=if_else(edad>=12&sindicato==1,1,gremio))%>%
mutate(gremio=if_else(edad>=12&sindicato==2,2,gremio))
```

Se guarda la tabla sociodemográfica:

```
Personas1992 <- personas %>%
select(enc, foliohog, foliohog, numren, sexo, edad, educa, pea, ocupa, sector, grupo,
convenio, gremio, clas_emp)
remove(personas)
```

D. Tabla sociodemográfica de 1994

Tabla personas:

```
personas <- read.dbf("Bases/1994/pobla.dbf", as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
```

Se preparan las variables:

```
personas <- personas %>%
  mutate(enc=1994)%>%
  mutate(folioviv=substr(folio,5,10))%>%
  mutate(foliohog=substr(folio,11,11))%>%
  mutate(rama=substr(rama,1,3))%>%
  mutate(ocupacion=substr(ocupacion,1,2))%>%
  mutate(across(c("num_ren": "foliohog"), as.numeric))%>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0)))%>%
  mutate(foliohog=foliohog+1)%>%
  mutate(clas_emp=9)
```

Se selecciona la población objetivo (se excluye el jefe ausente, los servidores domésticos y sus parientes, y los abonados o huéspedes, independientemente del parentesco con el jefe del hogar):

```
personas <- personas %>% filter(parentesco!=2&parentesco!=8&parentesco!=9)
```

Nivel de educación:

```
personas <- personas %>%
  mutate(educ=if_else(edad<5,0,9))%>%
  mutate(educ=if_else(edad>=5&(ed_formal==0|ed_formal==1),1,educ))%>%
  mutate(educ=if_else(edad>=5&(ed_formal==2|ed_formal==3),2,educ))%>%
  mutate(educ=if_else(edad>=5&(ed_formal==4|ed_formal==5),3,educ))%>%
  mutate(educ=if_else(edad>=5&(ed_formal==6|ed_formal==7),4,educ))%>%
  mutate(educ=if_else(edad>=5&ed_formal==8,5,educ))%>%
  mutate(educ=if_else(edad>=5&ed_formal==9,6,educ))
```

Condición de actividad:

```
personas <- personas %>%
  mutate(pea=if_else(edad<12,0,9))%>%
  mutate(pea=if_else(edad>=12&((trabajo>=111&trabajo<=221)|
    trabajo==222&(no_trabajo>=1&no_trabajo<=10)),1,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==222&(no_trabajo==11|no_trabajo==12)),2,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==222&no_trabajo==13),3,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==222&no_trabajo==14),4,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==222&no_trabajo==15),5,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==222&no_trabajo==17),6,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==222&(no_trabajo==16|no_trabajo==18)),7,pea))
```

Posición en el trabajo:

```
personas <- personas %>%
  mutate(ocupa=if_else(edad<12,0,9))%>%
  mutate(ocupa=if_else(edad>=12&(posicion==1|(posicion==2&rama>=130)),1,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(posicion==2&(rama==111|rama==120)),2,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(posicion==3|posicion==4|posicion==5),3,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&posicion==6,4,ocupa))%>%
```



```
mutate(ocupa=if_else(edad>=12&(posicion==7|posicion==8),5,ocupa))%>%
mutate(ocupa=if_else(edad>=12&posicion==9,6,ocupa))
```

Rama de actividad:

```
personas <- personas %>%
mutate(sector=if_else(edad<12,0,99))%>%
mutate(sector=if_else(edad>=12&(rama==111|rama==120|rama==130),1,sector))%>%
mutate(sector=if_else(edad>=12&(rama==210|rama==220|rama==231|rama==232|rama==291|
rama==292),2,sector))%>%
mutate(sector=if_else(edad>=12&(rama==410|rama==420),3,sector))%>%
mutate(sector=if_else(edad>=12&(rama==501|rama==502|rama==503),4,sector))%>%
mutate(sector=if_else(edad>=12&(rama==311|rama==312|rama==313|rama==314),5,sector))
%>%
mutate(sector=if_else(edad>=12&(rama==321|rama==322|rama==323|rama==324),6,sector))
%>%
mutate(sector=if_else(edad>=12&rama==331,7,sector))%>%
mutate(sector=if_else(edad>=12&(rama==341|rama==342),8,sector))%>%
mutate(sector=if_else(edad>=12&(rama==351|rama==352|rama==353|rama==354|rama==355|
rama==356),9,sector))%>%
mutate(sector=if_else(edad>=12&(rama==361|rama==362|rama==369),10,sector))%>%
mutate(sector=if_else(edad>=12&(rama==371|rama==372),11,sector))%>%
mutate(sector=if_else(edad>=12&(rama==381|rama==382|rama==383|rama==384|rama==385|
rama==332),12,sector))%>%
mutate(sector=if_else(edad>=12&rama==390,13,sector))%>%
mutate(sector=if_else(edad>=12&(rama>=611 & rama<=626),14,sector))%>%
mutate(sector=if_else(edad>=12&(rama==711|rama==712|rama==713),15,sector))%>%
mutate(sector=if_else(edad>=12&rama==720,16,sector))%>%
mutate(sector=if_else(edad>=12&rama==941,17,sector))%>%
mutate(sector=if_else(edad>=12&(rama==811|rama==812|rama==813),18,sector))%>%
mutate(sector=if_else(edad>=12&(rama==821|rama==831),19,sector))%>%
mutate(sector=if_else(edad>=12&(rama==921|rama==922|rama==923|rama==924),20,sector))
)%>%
mutate(sector=if_else(edad>=12&(rama==931|rama==932),21,sector))%>%
mutate(sector=if_else(edad>=12&(rama==910|rama==925|rama==929|rama==942|rama==949|
rama==951|rama==952|rama==953|rama==954|rama==961|
rama==971|rama==972|rama==973|rama==974|rama==975|
rama==979|rama==980),22,sector))
```

Ocupación en el trabajo:

```
personas <- personas %>%
mutate(grupo=if_else(edad<12,0,99))%>%
mutate(grupo=if_else(edad>=12&ocupacion==11,1,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==12,2,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==13,3,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==14,4,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==21,5,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==41,6,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==51,7,grupo))%>%
mutate(grupo=if_else(edad>=12&(ocupacion==52|ocupacion==53),8,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==54,9,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==55,10,grupo))%>%
mutate(grupo=if_else(edad>=12&(ocupacion==61|ocupacion==62),11,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==71,12,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==72,13,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==81,14,grupo))%>%
```

```
mutate(grupo=if_else(edad>=12&ocupacion==82,15,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==83,16,grupo))
```

Tipo de contrato:

```
personas <- personas %>%
  mutate(convenio=if_else(edad<12,0,9))%>%
  mutate(convenio=if_else(edad>=12&contrato1==3,1,convenio))%>%
  mutate(convenio=if_else(edad>=12&contrato1==2,2,convenio))%>%
  mutate(convenio=if_else(edad>=12&contrato1==1,3,convenio))
```

Pertenencia a un sindicato:

```
personas <- personas %>%
  mutate(gremio=if_else(edad<12,0,9))%>%
  mutate(gremio=if_else(edad>=12&sindicato1==1,1,gremio))%>%
  mutate(gremio=if_else(edad>=12&sindicato1==2,2,gremio))
```

Se guarda la tabla sociodemográfica:

```
Personas1994 <- personas %>%
  select(enc,folioviv,foliohog,numren=num_ren,sexo,edad,educa,pea,ocupa,sector,grupo,
         convenio,gremio,clas_emp)
remove(personas)
```

E. Tabla sociodemográfica de 1996

Tabla personas:

```
personas <- read.dbf("Bases/1996/pobla.dbf",as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
```

Se preparan las variables:

```
personas <- personas %>%
  mutate(enc=1996)%>%
  mutate(folioviv=substr(folio,5,10))%>%
  mutate(foliohog=substr(folio,11,11))%>%
  mutate(rama=substr(rama,1,3))%>%
  mutate(ocupacion=substr(ocupacion,1,2))%>%
  mutate(across(c("num_ren":"foliohog"),as.numeric))%>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0)))%>%
  mutate(foliohog=foliohog+1)%>%
  mutate(clas_emp=9)
```

Se selecciona la población objetivo (se excluye el jefe ausente, los servidores domésticos y sus parientes, y los abonados o huéspedes, independientemente del parentesco con el jefe del hogar):

```
personas <- personas %>% filter(parentesco!=2&parentesco!=20&parentesco!=21)
```

Nivel de educación:

```
personas <- personas %>%
  mutate(educa=if_else(edad<5,0,9))%>%
  mutate(educa=if_else(edad>=5&ed_formal<=6,1,educa))%>%
  mutate(educa=if_else(edad>=5&((ed_formal>=7&ed_formal<=9)|ed_formal==16),2,educa))%>%
  mutate(educa=if_else(edad>=5&(ed_formal==10|ed_formal==11),3,educa))%>%
  mutate(educa=if_else(edad>=5&(ed_formal==12|ed_formal==13),4,educa))%>%
```



```
mutate(educ=if_else(edad>=5&ed_formal==14,5,educ))%>%
mutate(educ=if_else(edad>=5&ed_formal==15,6,educ))
```

Condición de actividad:

```
personas <- personas %>%
  mutate(pea=if_else(edad<12,0,9))%>%
  mutate(pea=if_else(edad>=12&((trabajo>=111&trabajo<=221)|
    trabajo==222&(no_trabajo>=1&no_trabajo<=10)),1,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==222&(no_trabajo==11|no_trabajo==12)),2,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==222&no_trabajo==16),3,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==222&no_trabajo==15),4,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==222&no_trabajo==14),5,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==222&no_trabajo==17),6,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==222&(no_trabajo==13|no_trabajo==18)),7,pea))
```

Posición en el trabajo:

```
personas <- personas %>%
  mutate(ocupa=if_else(edad<12,0,9))%>%
  mutate(ocupa=if_else(edad>=12&(posicion==1|(posicion==2&rama>=130)),1,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(posicion==2&(rama==111|rama==120)),2,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(posicion==3|posicion==4|posicion==5),3,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&posicion==6,4,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(posicion==7|posicion==8),5,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&posicion==9,6,ocupa))
```

Rama de actividad:

```
personas <- personas %>%
  mutate(sector=if_else(edad<12,0,99))%>%
  mutate(sector=if_else(edad>=12&(rama==111|rama==120|rama==130),1,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==210|rama==220|rama==231|rama==232|rama==291|
    rama==292),2,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==410|rama==420),3,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==501|rama==502|rama==503),4,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==311|rama==312|rama==313|rama==314),5,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==321|rama==322|rama==323|rama==324),6,sector))%>%
  mutate(sector=if_else(edad>=12&rama==331,7,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==341|rama==342),8,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==351|rama==352|rama==353|rama==354|rama==355|
    rama==356),9,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==361|rama==362|rama==369),10,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==371|rama==372),11,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==381|rama==382|rama==383|rama==384|rama==385|
    rama==332),12,sector))%>%
  mutate(sector=if_else(edad>=12&rama==390,13,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=611 & rama<=626),14,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==711|rama==712|rama==713),15,sector))%>%
  mutate(sector=if_else(edad>=12&rama==720,16,sector))%>%
  mutate(sector=if_else(edad>=12&rama==941,17,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==811|rama==812|rama==813),18,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==821|rama==831),19,sector))%>%
```

```
mutate(sector=if_else(edad>=12&(rama==921| rama==922| rama==923| rama==924), 20, sector))%>%
mutate(sector=if_else(edad>=12&(rama==931| rama==932), 21, sector))%>%
mutate(sector=if_else(edad>=12&(rama==910| rama==925| rama==929| rama==942| rama==949|
rama==951| rama==952| rama==953| rama==954| rama==961|
rama==971| rama==972| rama==973| rama==974| rama==975|
rama==979| rama==980), 22, sector))
```

Ocupación en el trabajo:

```
personas <- personas %>%
mutate(grupo=if_else(edad<12, 0, 99))%>%
mutate(grupo=if_else(edad>=12&ocupacion==11, 1, grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==12, 2, grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==13, 3, grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==14, 4, grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==21, 5, grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==41, 6, grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==51, 7, grupo))%>%
mutate(grupo=if_else(edad>=12&(ocupacion==52| ocupacion==53), 8, grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==54, 9, grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==55, 10, grupo))%>%
mutate(grupo=if_else(edad>=12&(ocupacion==61| ocupacion==62), 11, grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==71, 12, grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==72, 13, grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==81, 14, grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==82, 15, grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==83, 16, grupo))
```

Tipo de contrato:

```
personas <- personas %>%
mutate(convenio=if_else(edad<12, 0, 9))%>%
mutate(convenio=if_else(edad>=12&contrato1==3, 1, convenio))%>%
mutate(convenio=if_else(edad>=12&contrato1==2, 2, convenio))%>%
mutate(convenio=if_else(edad>=12&contrato1==1, 3, convenio))
```

Pertenencia a un sindicato:

```
personas <- personas %>%
mutate(gremio=if_else(edad<12, 0, 9))%>%
mutate(gremio=if_else(edad>=12&sindicato1==1, 1, gremio))%>%
mutate(gremio=if_else(edad>=12&sindicato1==2, 2, gremio))
```

Se guarda la tabla sociodemográfica:

```
Personas1996 <- personas %>%
select(enc, folioviv, foliohog, numren=num_ren, sexo, edad, educa, pea, ocupa, sector,
grupo, convenio, gremio, clas_emp)
remove(personas)
```

F. Tabla sociodemográfica de 1998

Tabla personas:

```
personas <- read.dbf("Bases/1998/pobla.dbf", as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
```

Se preparan las variables:

```

personas <- personas %>%
  mutate(enc=1998)%>%
  mutate(folioviv=substr(folio,5,10))%>%
  mutate(foliohog=substr(folio,11,11))%>%
  mutate(rama=substr(rama,1,3))%>%
  mutate(ocupacion=substr(ocupacion,1,2))%>%
  mutate(across(c("num_ren":"foliohog"),as.numeric))%>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0)))%>%
  mutate(foliohog=foliohog+1)%>%
  mutate(clas_emp=9)

```

Se selecciona la población objetivo (se excluye el jefe ausente, los servidores domésticos y sus parientes, y los abonados o huéspedes, independientemente del parentesco con el jefe del hogar):

```

personas <- personas %>% filter(parentesco!=2&parentesco!=20&parentesco!=21)

```

Nivel de educación:

```

personas <- personas %>%
  mutate(educ=if_else(edad<5,0,9))%>%
  mutate(educ=if_else(edad>=5&ed_formal<=7,1,educ))%>%
  mutate(educ=if_else(edad>=5&(ed_formal>=8 & ed_formal<=10),2,educ))%>%
  mutate(educ=if_else(edad>=5&(ed_formal==11|ed_formal==12),3,educ))%>%
  mutate(educ=if_else(edad>=5&(ed_formal==13|ed_formal==14),4,educ))%>%
  mutate(educ=if_else(edad>=5&ed_formal==15,5,educ))%>%
  mutate(educ=if_else(edad>=5&ed_formal==16,6,educ))

```

Condición de actividad:

```

personas <- personas %>%
  mutate(pea=if_else(edad<12,0,9))%>%
  mutate(pea=if_else(edad>=12&((trabajo>=111&trabajo<=221)|
                                trabajo==222&(no_trabajo>=1&no_trabajo<=10)),1,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==222&(no_trabajo==11|no_trabajo==12)),2,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==222&no_trabajo==16),3,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==222&no_trabajo==15),4,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==222&no_trabajo==14),5,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==222&no_trabajo==17),6,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==222&(no_trabajo==13|no_trabajo==18)),7,pea))

```

Posición en el trabajo:

```

personas <- personas %>%
  mutate(ocupa=if_else(edad<12,0,9))%>%
  mutate(ocupa=if_else(edad>=12&(posicion==1|(posicion==2&rama>=130)),1,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(posicion==2&(rama==111|rama==120)),2,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(posicion==3|posicion==4|posicion==5),3,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&posicion==6,4,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(posicion==7|posicion==8),5,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&posicion==9,6,ocupa))

```

Rama de actividad:

```

personas <- personas %>%
  mutate(sector=if_else(edad<12,0,99))%>%
  mutate(sector=if_else(edad>=12&(rama==111|rama==120|rama==130),1,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==210|rama==220|rama==231|rama==232|rama==291|

```

```

                                rama==292), 2, sector))%>%
mutate(sector=if_else(edad>=12&(rama==410 | rama==420), 3, sector))%>%
mutate(sector=if_else(edad>=12&(rama==501 | rama==502 | rama==503), 4, sector))%>%
mutate(sector=if_else(edad>=12&(rama==311 | rama==312 | rama==313 | rama==314), 5, sector))
%>%
mutate(sector=if_else(edad>=12&(rama==321 | rama==322 | rama==323 | rama==324), 6, sector))
%>%
mutate(sector=if_else(edad>=12&rama==331, 7, sector))%>%
mutate(sector=if_else(edad>=12&(rama==341 | rama==342), 8, sector))%>%
mutate(sector=if_else(edad>=12&(rama==351 | rama==352 | rama==353 | rama==354 | rama==355 |
                                rama==356), 9, sector))%>%
mutate(sector=if_else(edad>=12&(rama==361 | rama==362 | rama==369), 10, sector))%>%
mutate(sector=if_else(edad>=12&(rama==371 | rama==372), 11, sector))%>%
mutate(sector=if_else(edad>=12&(rama==381 | rama==382 | rama==383 | rama==384 | rama==385 |
                                rama==332), 12, sector))%>%
mutate(sector=if_else(edad>=12&rama==390, 13, sector))%>%
mutate(sector=if_else(edad>=12&(rama>=611 & rama<=626), 14, sector))%>%
mutate(sector=if_else(edad>=12&(rama==711 | rama==712 | rama==713), 15, sector))%>%
mutate(sector=if_else(edad>=12&rama==720, 16, sector))%>%
mutate(sector=if_else(edad>=12&rama==941, 17, sector))%>%
mutate(sector=if_else(edad>=12&(rama==811 | rama==812 | rama==813), 18, sector))%>%
mutate(sector=if_else(edad>=12&(rama==821 | rama==831), 19, sector))%>%
mutate(sector=if_else(edad>=12&(rama==921 | rama==922 | rama==923 | rama==924), 20, sector)
)%>%
mutate(sector=if_else(edad>=12&(rama==931 | rama==932), 21, sector))%>%
mutate(sector=if_else(edad>=12&(rama==910 | rama==925 | rama==929 | rama==942 | rama==949 |
                                rama==951 | rama==952 | rama==953 | rama==954 | rama==961 |
                                rama==971 | rama==972 | rama==973 | rama==974 | rama==975 |
                                rama==979 | rama==980), 22, sector))

```

Ocupación en el trabajo:

```

personas <- personas %>%
mutate(grupo=if_else(edad<12, 0, 99))%>%
mutate(grupo=if_else(edad>=12&ocupacion==11, 1, grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==12, 2, grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==13, 3, grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==14, 4, grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==21, 5, grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==41, 6, grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==51, 7, grupo))%>%
mutate(grupo=if_else(edad>=12&(ocupacion==52 | ocupacion==53), 8, grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==54, 9, grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==55, 10, grupo))%>%
mutate(grupo=if_else(edad>=12&(ocupacion==61 | ocupacion==62), 11, grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==71, 12, grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==72, 13, grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==81, 14, grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==82, 15, grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==83, 16, grupo))

```

Tipo de contrato:

```

personas <- personas %>%
mutate(convenio=if_else(edad<12, 0, 9))%>%
mutate(convenio=if_else(edad>=12&contrato1==3, 1, convenio))%>%

```

```
mutate(convenio=if_else(edad>=12&contrato1==2,2,convenio))%>%
mutate(convenio=if_else(edad>=12&contrato1==1,3,convenio))
```

Pertenencia a un sindicato:

```
personas <- personas %>%
mutate(gremio=if_else(edad<12,0,9))%>%
mutate(gremio=if_else(edad>=12&sindicato1==1,1,gremio))%>%
mutate(gremio=if_else(edad>=12&sindicato1==2,2,gremio))
```

Se guarda la tabla sociodemográfica:

```
Personas1998 <- personas %>%
select(enc,folioviv,foliohog,numren=num_ren,sexo,edad,educa,pea,ocupa,sector,
grupo,convenio,gremio,clas_emp)
remove(personas)
```

G. Tabla sociodemográfica de 2000

Tabla personas:

```
personas <- read.dbf("Bases/2000/pobla.dbf",as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
```

Se preparan las variables:

```
personas <- personas %>%
mutate(enc=2000)%>%
mutate(folioviv=substr(folio,5,11))%>%
mutate(foliohog=substr(folio,12,12))%>%
mutate(ocupacion=substr(ocupacion,1,2))%>%
mutate(across(c("num_ren":"foliohog"),as.numeric))%>%
mutate(across(where(is.numeric), ~replace_na(.x, 0)))%>%
mutate(foliohog=foliohog+1)%>%
mutate(clas_emp=9)
```

Se selecciona la población objetivo (se excluye el jefe ausente, los servidores domésticos y sus parientes, y los abonados o huéspedes, independientemente del parentesco con el jefe del hogar):

```
personas <- personas %>% filter(parentesco!=02&parentesco!=20&parentesco!=21)
```

Nivel de educación:

```
personas <- personas %>%
mutate(educ=if_else(edad<5,0,9))%>%
mutate(educ=if_else(edad>=5&ed_formal<=7,1,educ))%>%
mutate(educ=if_else(edad>=5&(ed_formal>=8 & ed_formal<=10),2,educ))%>%
mutate(educ=if_else(edad>=5&(ed_formal==11|ed_formal==12),3,educ))%>%
mutate(educ=if_else(edad>=5&(ed_formal==13|ed_formal==14),4,educ))%>%
mutate(educ=if_else(edad>=5&ed_formal==15,5,educ))%>%
mutate(educ=if_else(edad>=5&ed_formal==16,6,educ))
```

Condición de actividad:

```
personas <- personas %>%
mutate(pea=if_else(edad<12,0,9))%>%
mutate(pea=if_else(edad>=12&((trabajo>=111&trabajo<=221)|
trabajo==222&(no_trabajo>=1&no_trabajo<=10)),1,pea))%
```



```
>%
  mutate(pea=if_else(edad>=12&(trabajo==222&(no_trabajo==11|no_trabajo==12)),2,pea))%
>%
  mutate(pea=if_else(edad>=12&(trabajo==222&no_trabajo==16),3,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==222&no_trabajo==15),4,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==222&no_trabajo==14),5,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==222&no_trabajo==17),6,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==222&(no_trabajo==13|no_trabajo==18)),7,pea))
```

Posición en el trabajo:

```
personas <- personas %>%
  mutate(ocupa=if_else(edad<12,0,9))%>%
  mutate(ocupa=if_else(edad>=12&(posicion==1|(posicion==2&rama>=114)),1,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(posicion==2&(rama==111|rama==112|rama==113)),2,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(posicion==3|posicion==4|posicion==5),3,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&posicion==6,4,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(posicion==7|posicion==8),5,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&posicion==9,6,ocupa))
```

Rama de actividad:

```
personas <- personas %>%
  mutate(sector=if_else(edad<12,0,99))%>%
  mutate(sector=if_else(edad>=12&(rama>=111&rama<=114),1,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==211|rama==212),2,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==221|rama==222),3,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==236|rama==237),4,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==311|rama==312),5,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==313|rama==314|rama==315|rama==316),6,sector))%>%
  mutate(sector=if_else(edad>=12&rama==321,7,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==322|rama==323),8,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==324|rama==325|rama==326),9,sector))%>%
  mutate(sector=if_else(edad>=12&rama==327,10,sector))%>%
  mutate(sector=if_else(edad>=12&rama==331,11,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=332&rama<=337),12,sector))%>%
  mutate(sector=if_else(edad>=12&rama==339,13,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=400|(rama>=431&rama<=469)),14,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=481&rama<=487),15,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==491|rama==492|rama==493),16,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=511&rama<=514),17,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=521&rama<=524),18,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==531|rama==532|rama==533),19,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==611|(rama>=621&rama<=624)),20,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==721|rama==722),21,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==115|rama==213|rama==238|rama==488|rama==541|
    rama==551|rama==561|rama==562|rama==711|rama==712|
    rama==713|rama==811|rama==812|rama==813|rama==814|
    rama==931|rama==932),22,sector))
```

Ocupación en el trabajo:

```
personas <- personas %>%
  mutate(grupo=if_else(edad<12,0,99))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==11,1,grupo))%>%
```

```
mutate(grupo=if_else(edad>=12&ocupacion==12,2,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==13,3,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==14,4,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==21,5,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==41,6,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==51,7,grupo))%>%
mutate(grupo=if_else(edad>=12&(ocupacion==52|ocupacion==53),8,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==54,9,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==55,10,grupo))%>%
mutate(grupo=if_else(edad>=12&(ocupacion==61|ocupacion==62),11,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==71,12,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==72,13,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==81,14,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==82,15,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==83,16,grupo))
```

Tipo de contrato:

```
personas <- personas %>%
mutate(convenio=if_else(edad<12,0,9))%>%
mutate(convenio=if_else(edad>=12&contrato1==3,1,convenio))%>%
mutate(convenio=if_else(edad>=12&contrato1==2,2,convenio))%>%
mutate(convenio=if_else(edad>=12&contrato1==1,3,convenio))
```

Pertenencia a un sindicato:

```
personas <- personas %>%
mutate(gremio=if_else(edad<12,0,9))%>%
mutate(gremio=if_else(edad>=12&sindicato1==1,1,gremio))%>%
mutate(gremio=if_else(edad>=12&sindicato1==2,2,gremio))
```

Se guarda la tabla sociodemográfica:

```
Personas2000 <- personas %>%
select(enc, folioviv, foliohog, numren=num_ren, sexo, edad, educa, pea, ocupa, sector,
grupo, convenio, gremio, clas_emp)
remove(personas)
```

H. Tabla sociodemográfica de 2002

Tabla personas:

```
personas <- read.dbf("Bases/2002/pobla.dbf", as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
```

Se preparan las variables:

```
personas <- personas %>%
mutate(enc=2002)%>%
mutate(folioviv=substr(folio,5,10))%>%
mutate(foliohog=substr(folio,11,11))%>%
mutate(ocupacion=substr(ocupacion,1,2))%>%
mutate(across(c("num_ren":"foliohog"), as.numeric))%>%
mutate(across(where(is.numeric), ~replace_na(.x, 0)))%>%
mutate(foliohog=foliohog+1)%>%
mutate(clas_emp=9)
```

Se selecciona la población objetivo (se excluye el jefe ausente, los servidores domésticos y sus parientes, y los abonados o huéspedes, independientemente del parentesco con el jefe del hogar):

```
personas <- personas %>% filter(parentesco==10|(parentesco>=20&parentesco<=63))
```

Nivel de educación:

```
personas <- personas %>%
  mutate(educ=if_else(edad<5,0,9))%>%
  mutate(educ=if_else(edad>=5&ed_formal<=7,1,educ))%>%
  mutate(educ=if_else(edad>=5&(ed_formal>=8 & ed_formal<=10),2,educ))%>%
  mutate(educ=if_else(edad>=5&(ed_formal>=11 & ed_formal<=17),3,educ))%>%
  mutate(educ=if_else(edad>=5&(ed_formal>=18 & ed_formal<=30),4,educ))%>%
  mutate(educ=if_else(edad>=5&ed_formal==31,5,educ))%>%
  mutate(educ=if_else(edad>=5&ed_formal>=32,6,educ))
```

Condición de actividad:

```
personas <- personas %>%
  mutate(pea=if_else(edad<12,0,9))%>%
  mutate(pea=if_else(edad>=12&((trabajo==11112&trabajo<=22221)|
    trabajo==22222&(no_trabajo>=1&no_trabajo<=9)),1,pea))
%>%
  mutate(pea=if_else(edad>=12&(trabajo==22222&(no_trabajo==10|no_trabajo==11)),2,pea))
%>%
  mutate(pea=if_else(edad>=12&(trabajo==22222&no_trabajo==15),3,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==22222&no_trabajo==14),4,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==22222&no_trabajo==13),5,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==22222&no_trabajo==16),6,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==22222&(no_trabajo==12|no_trabajo==17)),7,pea))
```

Posición en el trabajo:

```
personas <- personas %>%
  mutate(ocupa=if_else(edad<12,0,9))%>%
  mutate(ocupa=if_else(edad>=12&(posicion==1|(posicion==2&rama>=114)),1,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(posicion==2&(rama==111|rama==112|rama==113)),2,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(posicion==5|posicion==6|posicion==7),3,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&posicion==8,4,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&posicion==3,5,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&posicion==4,6,ocupa))
```

Rama de actividad:

```
personas <- personas %>%
  mutate(sector=if_else(edad<12,0,99))%>%
  mutate(sector=if_else(edad>=12&(rama>=111&rama<=114),1,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==211|rama==212),2,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==221|rama==222),3,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==236|rama==237),4,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==311|rama==312),5,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==313|rama==314|rama==315|rama==316),6,sector))
%>%
  mutate(sector=if_else(edad>=12&rama==321,7,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==322|rama==323),8,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==324|rama==325|rama==326),9,sector))%>%
  mutate(sector=if_else(edad>=12&rama==327,10,sector))%>%
```



```
mutate(sector=if_else(edad>=12&rama==331,11,sector))%>%
mutate(sector=if_else(edad>=12&(rama>=332&rama<=337),12,sector))%>%
mutate(sector=if_else(edad>=12&rama==339,13,sector))%>%
mutate(sector=if_else(edad>=12&rama==400,14,sector))%>%
mutate(sector=if_else(edad>=12&(rama>=481&rama<=487),15,sector))%>%
mutate(sector=if_else(edad>=12&(rama==491|rama==492|rama==493),16,sector))%>%
mutate(sector=if_else(edad>=12&(rama>=511&rama<=514),17,sector))%>%
mutate(sector=if_else(edad>=12&(rama>=521&rama<=524),18,sector))%>%
mutate(sector=if_else(edad>=12&(rama==531|rama==532|rama==533),19,sector))%>%
mutate(sector=if_else(edad>=12&(rama==611|(rama>=621&rama<=624)),20,sector))%>%
mutate(sector=if_else(edad>=12&(rama==721|rama==722),21,sector))%>%
mutate(sector=if_else(edad>=12&(rama==115|rama==213|rama==238|rama==488|rama==541|
rama==551|rama==561|rama==562|rama==711|rama==712|
rama==713|rama==811|rama==812|rama==813|rama==814|
rama==931|rama==932),22,sector))
```

Ocupación en el trabajo:

```
personas <- personas %>%
mutate(grupo=if_else(edad<12,0,99))%>%
mutate(grupo=if_else(edad>=12&ocupacion==11,1,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==12,2,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==13,3,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==14,4,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==21,5,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==41,6,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==51,7,grupo))%>%
mutate(grupo=if_else(edad>=12&(ocupacion==52|ocupacion==53),8,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==54,9,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==55,10,grupo))%>%
mutate(grupo=if_else(edad>=12&(ocupacion==61|ocupacion==62),11,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==71,12,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==72,13,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==81,14,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==82,15,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==83,16,grupo))
```

Tipo de contrato:

```
personas <- personas %>%
mutate(convenio=if_else(edad<12,0,9))%>%
mutate(convenio=if_else(edad>=12&contrato1==3,1,convenio))%>%
mutate(convenio=if_else(edad>=12&contrato1==2,2,convenio))%>%
mutate(convenio=if_else(edad>=12&contrato1==1,3,convenio))
```

Pertenencia a un sindicato:

```
personas <- personas %>%
mutate(gremio=if_else(edad<12,0,9))%>%
mutate(gremio=if_else(edad>=12&sindicato1==1,1,gremio))%>%
mutate(gremio=if_else(edad>=12&sindicato1==2,2,gremio))
```

Se guarda la tabla sociodemográfica:

```
Personas2002 <- personas %>%
select(enc, folioviv, foliohog, numren=num_ren, sexo, edad, educa, pea, ocupa, sector,
grupo, convenio, gremio, clas_emp)
remove(personas)
```

I. Tabla sociodemográfica de 2004

Tabla personas:

```
personas <- read.dbf("Bases/2004/pobla.dbf", as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
```

Se preparan las variables:

```
personas <- personas %>%
  mutate(enc=2004)%>%
  mutate(folioviv=substr(folio,5,10))%>%
  mutate(foliohog=substr(folio,11,11))%>%
  mutate(bus_trab=substr(bus_trab,1,1))%>%
  mutate(rama=substr(scian151,1,3))%>%
  mutate(ocupacion=substr(cmo121,1,2))%>%
  mutate(across(c("num_ren": "ocupacion"), as.numeric))%>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0)))%>%
  mutate(foliohog=foliohog+1)%>%
  mutate(clas_emp=9)
```

Se selecciona la población objetivo (se excluye el jefe ausente, los servidores domésticos y sus parientes, y los abonados o huéspedes, independientemente del parentesco con el jefe del hogar):

```
personas <- personas %>%
  filter(parentesco!=400&parentesco!=420&parentesco!=430&parentesco!=440&parentesco!=700)
```

Nivel de educación:

```
personas <- personas %>%
  mutate(educ=if_else(edad<5,0,9))%>%
  mutate(educ=if_else(edad>=5&(n_instr161==0|n_instr161==1|
    (n_instr161==2&n_instr162<=5)),1,educ))%>%
  mutate(educ=if_else(edad>=5&((n_instr161==2 & n_instr162==6)|
    (n_instr161==3&n_instr162<=2)),2,educ))%>%
  mutate(educ=if_else(edad>=5&((n_instr161==3 & n_instr162==3)|
    (n_instr161==4&n_instr162<=2)|
    (n_instr161==5 & n_instr162<=3)),3,educ))%>%
  mutate(educ=if_else(edad>=5&((n_instr161==4 & n_instr162>=3)|
    (n_instr161==5&n_instr162>=4)|n_instr161==6|
    (n_instr161==7&n_instr162<=3)),4,educ))%>%
  mutate(educ=if_else(edad>=5&(n_instr161==7 & n_instr162>=4),5,educ))%>%
  mutate(educ=if_else(edad>=5&n_instr161>=8,6,educ))
```

Condición de actividad:

```
personas <- personas %>%
  mutate(pea=if_else(edad<12,0,9))%>%
  mutate(pea=if_else(edad>=12&(trabajo==1|
    (trabajo==2&(verific>=1&verific<=3))|
    trabajo==2&verific==4&(mot_ausen>=1&mot_ausen<=6)),1,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==2&verific==4&mot_ausen==7&bus_trab==1),2,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==2&verific==4&mot_ausen==7&bus_trab==4),3,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==2&verific==4&mot_ausen==7&bus_trab==5),4,pea))
```

```

)%>%
  mutate(pea=if_else(edad>=12&(trabajo==2&verific==4&mot_ausen==7&bus_trab==3),5,pea))
)%>%
  mutate(pea=if_else(edad>=12&(trabajo==2&verific==4&mot_ausen==7&bus_trab==6),6,pea))
)%>%
  mutate(pea=if_else(edad>=12&(trabajo==2&verific==4&mot_ausen==7&(bus_trab==2|bus_trab==7)),7,pea))

```

Posición en el trabajo:

```

personas <- personas %>%
  mutate(ocupa=if_else(edad<12,0,9))%>%
  mutate(ocupa=if_else(edad>=12&(posicion09==1|(posicion09==2&rama==114)),1,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(posicion09==2&(rama==111|rama==112|rama==113)),2,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(posicion09==5|posicion09==6),3,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&posicion09==4,4,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&posicion09==3,5,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&posicion09==7,6,ocupa))

```

Rama de actividad:

```

personas <- personas %>%
  mutate(sector=if_else(edad<12,0,99))%>%
  mutate(sector=if_else(edad>=12&(rama>=111&rama<=114),1,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==211|rama==212),2,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==221|rama==222),3,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==236|rama==237),4,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==311|rama==312),5,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==313|rama==314|rama==315|rama==316),6,sector))%>%
  mutate(sector=if_else(edad>=12&rama==321,7,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==322|rama==323),8,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==324|rama==325|rama==326),9,sector))%>%
  mutate(sector=if_else(edad>=12&rama==327,10,sector))%>%
  mutate(sector=if_else(edad>=12&rama==331,11,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=332&rama<=337),12,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==338|rama==339),13,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=431 & rama<=469),14,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=481&rama<=487),15,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==491|rama==492|rama==493),16,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=511&rama<=519),17,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=521&rama<=524),18,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==531|rama==532|rama==533),19,sector))%>%
  mutate(sector=if_else(edad>=12&((rama>=611&rama<=619)|(rama>=621&rama<=625)),20,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==721|rama==722),21,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==115|rama==213|rama==238|rama==488|rama==541|
    rama==551|rama==561|rama==562|rama==711|rama==712|
    rama==713|rama==811|rama==812|rama==813|rama==814|
    rama==931|rama==932),22,sector))%>%
  mutate(sector=if_else(edad>=12&rama==980,23,sector))

```

Ocupación en el trabajo:

```
personas <- personas %>%
  mutate(grupo=if_else(edad<12,0,99))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==11,1,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==12,2,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==13,3,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==14,4,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==21,5,grupo))%>%
  mutate(grupo=if_else(edad>=12&(ocupacion==41|ocupacion==42),6,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==51,7,grupo))%>%
  mutate(grupo=if_else(edad>=12&(ocupacion==52|ocupacion==53),8,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==54,9,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==55,10,grupo))%>%
  mutate(grupo=if_else(edad>=12&(ocupacion==61|ocupacion==62),11,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==71,12,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==72,13,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==81,14,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==82,15,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==83,16,grupo))
```

Tipo de contrato:

```
personas <- personas %>%
  mutate(convenio=if_else(edad<12,0,9))%>%
  mutate(convenio=if_else(edad>=12&contr171==3,1,convenio))%>%
  mutate(convenio=if_else(edad>=12&contr171==1,2,convenio))%>%
  mutate(convenio=if_else(edad>=12&contr171==2,3,convenio))
```

Pertenencia a un sindicato:

```
personas <- personas %>%
  mutate(gremio=if_else(edad<12,0,9))%>%
  mutate(gremio=if_else(edad>=12&sindica18==1,1,gremio))%>%
  mutate(gremio=if_else(edad>=12&sindica18==2,2,gremio))
```

Se guarda la tabla sociodemográfica:

```
Personas2004 <- personas %>%
  select(enc, folioviv, foliohog, numren=num_ren, sexo, edad, educa, pea, ocupa, sector,
         grupo, convenio, gremio, clas_emp)
remove(personas)
```

J. Tabla sociodemográfica de 2005

Tabla personas:

```
personas <- read.dbf("Bases/2005/pobla.dbf", as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
```

Se preparan las variables:

```
personas <- personas %>%
  mutate(enc=2005)%>%
  mutate(folioviv=substr(folio,5,10))%>%
  mutate(foliohog=substr(folio,11,11))%>%
  mutate(bus_trab=substr(bus_trab,1,1))%>%
  mutate(rama=substr(scian151,1,3))%>%
  mutate(ocupacion=substr(cmo121,1,2))%>%
```

```
mutate(across(c("num_ren":"ocupacion"),as.numeric))%>%
mutate(across(where(is.numeric), ~replace_na(.x, 0)))%>%
mutate(foliohog=foliohog+1)%>%
mutate(clas_emp=9)
```

Se selecciona la población objetivo (se excluye el jefe ausente, los servidores domésticos y sus parientes, y los abonados o huéspedes, independientemente del parentesco con el jefe del hogar):

```
personas <- personas %>%
  filter(parentesco!=400&parentesco!=420&parentesco!=430&parentesco!=440&parentesco!=
700)
```

Nivel de educación:

```
personas <- personas %>%
  mutate(educ=if_else(edad<5,0,9))%>%
  mutate(educ=if_else(edad>=5&(n_instr161==0|n_instr161==1|
(n_instr161==2&n_instr162<=5)),1,educ))%>%
  mutate(educ=if_else(edad>=5&((n_instr161==2&n_instr162==6)|
(n_instr161==3&n_instr162<=2)),2,educ))%>%
  mutate(educ=if_else(edad>=5&((n_instr161==3&n_instr162>=3)|
(n_instr161==4&n_instr162<=2)|
(n_instr161==5&n_instr162<=3)),3,educ))%>%
  mutate(educ=if_else(edad>=5&((n_instr161==4&n_instr162>=3)|
(n_instr161==5&n_instr162>=4)|n_instr161==6|
(n_instr161==7&n_instr162<=3)),4,educ))%>%
  mutate(educ=if_else(edad>=5&(n_instr161==7&n_instr162>=4),5,educ))%>%
  mutate(educ=if_else(edad>=5&n_instr161>=8,6,educ))
```

Condición de actividad:

```
personas <- personas %>%
  mutate(pea=if_else(edad<12,0,9))%>%
  mutate(pea=if_else(edad>=12&(trabajo==1|
(trabajo==2&(verific==1&verific<=3))|
trabajo==2&verific==4&(mot_ausen==1&mot_ausen<=6))),1,
pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==2&verific==4&mot_ausen==7&bus_trab==1),2,pea)
)%>%
  mutate(pea=if_else(edad>=12&(trabajo==2&verific==4&mot_ausen==7&bus_trab==4),3,pea)
)%>%
  mutate(pea=if_else(edad>=12&(trabajo==2&verific==4&mot_ausen==7&bus_trab==5),4,pea)
)%>%
  mutate(pea=if_else(edad>=12&(trabajo==2&verific==4&mot_ausen==7&bus_trab==3),5,pea)
)%>%
  mutate(pea=if_else(edad>=12&(trabajo==2&verific==4&mot_ausen==7&bus_trab==6),6,pea)
)%>%
  mutate(pea=if_else(edad>=12&(trabajo==2&verific==4&mot_ausen==7&(bus_trab==2|bus_trab==7))),7,pea))
```

Posición en el trabajo:

```
personas <- personas %>%
  mutate(ocupa=if_else(edad<12,0,9))%>%
  mutate(ocupa=if_else(edad>=12&(posicion09==1|(posicion09==2&rama>=114)),1,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(posicion09==2&(rama==111|rama==112|rama==113)),2,ocupa))%>%
```



```
mutate(ocupa=if_else(edad>=12&(posicion09==5|posicion09==6),3,ocupa))%>%
mutate(ocupa=if_else(edad>=12&posicion09==4,4,ocupa))%>%
mutate(ocupa=if_else(edad>=12&posicion09==3,5,ocupa))%>%
mutate(ocupa=if_else(edad>=12&posicion09==7,6,ocupa))
```

Rama de actividad:

```
personas <- personas %>%
  mutate(sector=if_else(edad<12,0,99))%>%
  mutate(sector=if_else(edad>=12&(rama>=111&rama<=114),1,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==211|rama==212),2,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==221|rama==222),3,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==236|rama==237|rama==239),4,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==311|rama==312),5,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==313|rama==314|rama==315|rama==316),6,sector))
)%>%
  mutate(sector=if_else(edad>=12&rama==321,7,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==322|rama==323),8,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==324|rama==325|rama==326),9,sector))%>%
  mutate(sector=if_else(edad>=12&rama==327,10,sector))%>%
  mutate(sector=if_else(edad>=12&rama==331,11,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=332&rama<=337),12,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==338|rama==339),13,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=431 & rama<=469),14,sector))%>%
  mutate(sector=if_else(edad>=12&((rama>=481&rama<=487)|rama==489),15,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==491|rama==492|rama==493),16,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=511&rama<=519),17,sector))%>%
  mutate(sector=if_else(edad>=12&((rama>=521&rama<=524)|rama==529),18,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==531|rama==532|rama==533|rama==539),19,sector)
)%>%
  mutate(sector=if_else(edad>=12&((rama>=611&rama<=619)|(rama>=621&rama<=625)|
    rama==629),20,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==721|rama==722),21,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==115|rama==213|rama==238|rama==488|rama==541|
    rama==551|rama==561|rama==562|rama==711|rama==712|
    rama==713|rama==811|rama==812|rama==813|rama==814|
    rama==931|rama==932),22,sector))%>%
  mutate(sector=if_else(edad>=12&rama==980,23,sector))
```

Ocupación en el trabajo:

```
personas <- personas %>%
  mutate(grupo=if_else(edad<12,0,99))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==11,1,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==12,2,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==13,3,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==14,4,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==21,5,grupo))%>%
  mutate(grupo=if_else(edad>=12&(ocupacion==41|ocupacion==42),6,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==51,7,grupo))%>%
  mutate(grupo=if_else(edad>=12&(ocupacion==52|ocupacion==53),8,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==54,9,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==55,10,grupo))%>%
  mutate(grupo=if_else(edad>=12&(ocupacion==61|ocupacion==62),11,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==71,12,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==72,13,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==81,14,grupo))%>%
```

```
mutate(grupo=if_else(edad>=12&ocupacion==82,15,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==83,16,grupo))
```

Tipo de contrato:

```
personas <- personas %>%
  mutate(convenio=if_else(edad<12,0,9))%>%
  mutate(convenio=if_else(edad>=12&contr171==3,1,convenio))%>%
  mutate(convenio=if_else(edad>=12&contr171==1,2,convenio))%>%
  mutate(convenio=if_else(edad>=12&contr171==2,3,convenio))
```

Pertenencia a un sindicato:

```
personas <- personas %>%
  mutate(gremio=if_else(edad<12,0,9))%>%
  mutate(gremio=if_else(edad>=12&sindica18==1,1,gremio))%>%
  mutate(gremio=if_else(edad>=12&sindica18==2,2,gremio))
```

Se guarda la tabla sociodemográfica:

```
Personas2005 <- personas %>%
  select(enc,folioviv,foliohog,numren=num_ren,sexo,edad,educa,pea,ocupa,sector,
        grupo,convenio,gremio,clas_emp)
remove(personas)
```

K. Tabla sociodemográfica de 2006

Tabla personas:

```
personas <- read.dbf("Bases/2006/pobla.dbf",as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
```

Se preparan las variables:

```
personas <- personas %>%
  mutate(enc=2006)%>%
  mutate(folioviv=substr(folio,5,10))%>%
  mutate(foliohog=substr(folio,11,11))%>%
  mutate(bus_trab=substr(bus_trab,1,1))%>%
  mutate(rama=substr(scian101,1,3))%>%
  mutate(ocupacion=substr(cmo091,1,2))%>%
  mutate(across(c("num_ren":"posicion3","presta1_01":"ocupacion"),as.numeric))%>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0)))%>%
  mutate(foliohog=foliohog+1)%>%
  mutate(clas_emp=9)
```

Se selecciona la población objetivo (se excluye el jefe ausente, los servidores domésticos y sus parientes, y los abonados o huéspedes, independientemente del parentesco con el jefe del hogar):

```
personas <- personas %>%
  filter(parentesco!=400&parentesco!=420&parentesco!=430&parentesco!=440&parentesco!=700)
```

Nivel de educación:

```
personas <- personas %>%
  mutate(educa=if_else(edad<5,0,9))%>%
  mutate(educa=if_else(edad>=5&(n_instr141==0|n_instr141==1|
    (n_instr141==2&n_instr142<=5)),1,educa))%>%
  mutate(educa=if_else(edad>=5&((n_instr141==2&n_instr142==6)|
```

```

mutate(educa=if_else(edad>=5&((n_instr141==3&n_instr142<=2)),2,educ))%>%
mutate(educa=if_else(edad>=5&((n_instr141==3&n_instr142>=3)|
(n_instr141==4&n_instr142<=2)|
(n_instr141==5&n_instr142<=3)),3,educ))%>%
mutate(educa=if_else(edad>=5&((n_instr141==4&n_instr142>=3)|
(n_instr141==5&n_instr142>=4)|n_instr141==6|
(n_instr141==7&n_instr142<=3)),4,educ))%>%
mutate(educa=if_else(edad>=5&(n_instr141==7&n_instr142>=4),5,educ))%>%
mutate(educa=if_else(edad>=5&n_instr141>=8,6,educ))

```

Condición de actividad:

```

personas <- personas %>%
mutate(pea=if_else(edad<12,0,9))%>%
mutate(pea=if_else(edad>=12&
(trabajo==1|(trabajo==2&(verific>=1&verific<=3))|
trabajo==2&verific==4&(mot_ausen>=1&mot_ausen<=6)),1,pea))%>%
mutate(pea=if_else(edad>=12&(trabajo==2&verific==4&mot_ausen==7&bus_trab==1),2,pea))%>%
mutate(pea=if_else(edad>=12&(trabajo==2&verific==4&mot_ausen==7&bus_trab==4),3,pea))%>%
mutate(pea=if_else(edad>=12&(trabajo==2&verific==4&mot_ausen==7&bus_trab==5),4,pea))%>%
mutate(pea=if_else(edad>=12&(trabajo==2&verific==4&mot_ausen==7&bus_trab==3),5,pea))%>%
mutate(pea=if_else(edad>=12&(trabajo==2&verific==4&mot_ausen==7&bus_trab==6),6,pea))%>%
mutate(pea=if_else(edad>=12&(trabajo==2&verific==4&mot_ausen==7&(bus_trab==2|bus_trab==7)),7,pea))

```

Posición en el trabajo:

```

personas <- personas %>%
mutate(ocupa=if_else(edad<12,0,9))%>%
mutate(ocupa=if_else(edad>=12&(posicion07==1|(posicion07==2&rama>=114)),1,ocupa))%>%
mutate(ocupa=if_else(edad>=12&(posicion07==2&(rama==111|rama==112|rama==113)),2,ocupa))%>%
mutate(ocupa=if_else(edad>=12&(posicion07==5|posicion07==6),3,ocupa))%>%
mutate(ocupa=if_else(edad>=12&posicion07==4,4,ocupa))%>%
mutate(ocupa=if_else(edad>=12&posicion07==3,5,ocupa))%>%
mutate(ocupa=if_else(edad>=12&posicion07==7,6,ocupa))

```

Rama de actividad:

```

personas <- personas %>%
mutate(sector=if_else(edad<12,0,99))%>%
mutate(sector=if_else(edad>=12&((rama>=111&rama<=114)|rama==119),1,sector))%>%
mutate(sector=if_else(edad>=12&(rama==211|rama==212),2,sector))%>%
mutate(sector=if_else(edad>=12&(rama==221|rama==222),3,sector))%>%
mutate(sector=if_else(edad>=12&(rama==236|rama==237|rama==239),4,sector))%>%
mutate(sector=if_else(edad>=12&(rama==311|rama==312),5,sector))%>%
mutate(sector=if_else(edad>=12&(rama==313|rama==314|rama==315|rama==316),6,sector))%>%
mutate(sector=if_else(edad>=12&rama==321,7,sector))%>%
mutate(sector=if_else(edad>=12&(rama==322|rama==323),8,sector))%>%

```



```

mutate(sector=if_else(edad>=12&(rama==324|rama==325|rama==326),9,sector))%>%
mutate(sector=if_else(edad>=12&rama==327,10,sector))%>%
mutate(sector=if_else(edad>=12&rama==331,11,sector))%>%
mutate(sector=if_else(edad>=12&(rama>=332&rama<=337),12,sector))%>%
mutate(sector=if_else(edad>=12&(rama==338|rama==339),13,sector))%>%
mutate(sector=if_else(edad>=12&(rama==414|(rama>=431&rama<=469)),14,sector))%>%
mutate(sector=if_else(edad>=12&(rama>=481&rama<=487),15,sector))%>%
mutate(sector=if_else(edad>=12&(rama==491|rama==492|rama==493),16,sector))%>%
mutate(sector=if_else(edad>=12&(rama>=511&rama<=519),17,sector))%>%
mutate(sector=if_else(edad>=12&(rama>=521&rama<=524),18,sector))%>%
mutate(sector=if_else(edad>=12&(rama==531|rama==532|rama==533),19,sector))%>%
mutate(sector=if_else(edad>=12&((rama>=611&rama<=619)|(rama>=621&rama<=625)|
  rama==629),20,sector))%>%
mutate(sector=if_else(edad>=12&(rama==721|rama==722),21,sector))%>%
mutate(sector=if_else(edad>=12&(rama==115|rama==213|rama==238|rama==488|rama==541|
  rama==551|rama==561|rama==562|rama==711|rama==712|
  rama==713|rama==811|rama==812|rama==813|rama==814|
  rama==931|rama==932),22,sector))%>%
mutate(sector=if_else(edad>=12&rama==980,23,sector))

```

Ocupación en el trabajo:

```

personas <- personas %>%
mutate(grupo=if_else(edad<12,0,99))%>%
mutate(grupo=if_else(edad>=12&ocupacion==11,1,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==12,2,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==13,3,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==14,4,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==21,5,grupo))%>%
mutate(grupo=if_else(edad>=12&(ocupacion==41|ocupacion==42),6,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==51,7,grupo))%>%
mutate(grupo=if_else(edad>=12&(ocupacion==52|ocupacion==53),8,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==54,9,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==55,10,grupo))%>%
mutate(grupo=if_else(edad>=12&(ocupacion==61|ocupacion==62),11,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==71,12,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==72,13,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==81,14,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==82,15,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==83,16,grupo))

```

Tipo de contrato:

```

personas <- personas %>%
mutate(convenio=if_else(edad<12,0,9))%>%
mutate(convenio=if_else(edad>=12&contr141==3,1,convenio))%>%
mutate(convenio=if_else(edad>=12&contr141==1,2,convenio))%>%
mutate(convenio=if_else(edad>=12&contr141==2,3,convenio))

```

Pertenencia a un sindicato:

```

personas <- personas %>%
mutate(gremio=if_else(edad<12,0,9))%>%
mutate(gremio=if_else(edad>=12&sindica15==1,1,gremio))%>%
mutate(gremio=if_else(edad>=12&sindica15==2,2,gremio))

```

Se guarda la tabla sociodemográfica:

```
Personas2006 <- personas %>%
  select(enc, folioviv, foliohog, numren=num_ren, sexo, edad, educa, pea, ocupa, sector,
         grupo, convenio, gremio, clas_emp)
remove(personas)
```

L. Tabla sociodemográfica de 2008

Tabla personas:

```
personas <- read.dbf("Bases/2008/pobla.dbf", as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
```

Se agrega la tabla de trabajo:

```
trabajo <- read.dbf("Bases/2008/trabajos.dbf", as.is=TRUE)
colnames(trabajo) <- tolower(colnames(trabajo))
trabajo <- trabajo %>% filter(numtrab=="1")
personas <- personas %>% left_join(trabajo, by=c("folioviv", "foliohog", "numren"))
remove(trabajo)
```

Se preparan las variables:

```
personas <- personas %>%
  mutate(enc=2008)%>%
  mutate(rama=substr(scian,1,3))%>%
  mutate(ocupacion=substr(cmo,1,2))%>%
  mutate(across(c("folioviv": "ocupacion"), as.numeric))%>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0)))%>%
  mutate(foliohog=foliohog+1)%>%
  mutate(bus_trab=if_else(bustrab_7==7, 7, 9))%>%
  mutate(bus_trab=if_else(bustrab_6==6, 6, bus_trab))%>%
  mutate(bus_trab=if_else(bustrab_5==5, 5, bus_trab))%>%
  mutate(bus_trab=if_else(bustrab_4==4, 4, bus_trab))%>%
  mutate(bus_trab=if_else(bustrab_3==3, 3, bus_trab))%>%
  mutate(bus_trab=if_else(bustrab_2==2, 2, bus_trab))%>%
  mutate(bus_trab=if_else(bustrab_1==1, 1, bus_trab))%>%
  mutate(gremio=9)
```

Se selecciona la población objetivo (se excluye el jefe ausente, los servidores domésticos y sus parientes, y los abonados o huéspedes, independientemente del parentesco con el jefe del hogar):

```
personas <- personas %>%
  mutate(parentesco=as.integer(parentesco))%>%
  filter((parentesco<401|parentesco>461)&(parentesco<701|parentesco>715))
```

Nivel de educación:

```
personas <- personas %>%
  mutate(educ=if_else(edad<5, 0, 9))%>%
  mutate(educ=if_else(edad>=5 & (n_instr161==0|n_instr161==1|
    (n_instr161==2 & n_instr162<=5)), 1, educ))%>%
  mutate(educ=if_else(edad>=5 & ((n_instr161==2 & n_instr162==6)|
    (n_instr161==3 & n_instr162<=2)), 2, educ))%>%
  mutate(educ=if_else(edad>=5 & ((n_instr161==3 & n_instr162>=3)|
    (n_instr161==4 & n_instr162<=2)|
    (n_instr161==5 & n_instr162<=3)), 3, educ))%>%
  mutate(educ=if_else(edad>=5 & ((n_instr161==4 & n_instr162>=3)|
    (n_instr161==5 & n_instr162>=4)|n_instr161==6|
```

```

                                (n_instr161==7&n_instr162<=3)),4,educa))%>%
mutate(educa=if_else(edad>=5&(n_instr161==7&n_instr162>=4),5,educa))%>%
mutate(educa=if_else(edad>=5&n_instr161>=8,6,educa))

```

Condición de actividad:

```

personas <- personas %>%
  mutate(pea=if_else(edad<12,0,9))%>%
  mutate(pea=if_else(edad>=12&(trabajo==1|
                                (trabajo==2&(verifica>=1&verifica<=4))|
                                trabajo==2&verifica==5&(motivo>=1&motivo<=6)),1,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==2&((verifica==5&motivo==7)|verifica==6)&bus_trab==1),2,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==2&((verifica==5&motivo==7)|verifica==6)&bus_trab==4),3,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==2&((verifica==5&motivo==7)|verifica==6)&bus_trab==5),4,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==2&((verifica==5&motivo==7)|verifica==6)&bus_trab==3),5,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==2&((verifica==5&motivo==7)|verifica==6)&bus_trab==6),6,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==2&((verifica==5&motivo==7)|verifica==6)&(bus_trab==2|bus_trab==7)),7,pea))

```

Posición en el trabajo:

```

personas <- personas %>%
  mutate(ocupa=if_else(edad<12,0,9))%>%
  mutate(ocupa=if_else(edad>=12&(subor==1&pago==1&rama>=114),1,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==1&pago==1&(rama==111|rama==112|rama==113)),2,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==2&indep==1),3,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==1&pago==2),4,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==1&pago==3),5,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==2&indep==2),6,ocupa))

```

Rama de actividad:

```

personas <- personas %>%
  mutate(sector=if_else(edad<12,0,99))%>%
  mutate(sector=if_else(edad>=12&((rama>=111&rama<=114)|rama==119),1,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==211|rama==212|rama==219),2,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==221|rama==222),3,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==236|rama==237|rama==239),4,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==311|rama==312),5,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=313&rama<=316),6,sector))%>%
  mutate(sector=if_else(edad>=12&rama==321,7,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==322|rama==323),8,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==324|rama==325|rama==326),9,sector))%>%
  mutate(sector=if_else(edad>=12&rama==327,10,sector))%>%
  mutate(sector=if_else(edad>=12&rama==331,11,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=332&rama<=337),12,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==338|rama==339),13,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=431&rama<=469),14,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=481&rama<=487),15,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==491|rama==492|rama==493),16,sector))%>%

```

```

mutate(sector=if_else(edad>=12&(rama>=511&rama<=519),17,sector))%>%
mutate(sector=if_else(edad>=12&(rama>=521&rama<=524),18,sector))%>%
mutate(sector=if_else(edad>=12&(rama==531|rama==532|rama==533|rama==539),19,sector)
)%>%
mutate(sector=if_else(edad>=12&((rama>=611&rama<=619)|(rama>=621&rama<=625)),20,sec
tor))%>%
mutate(sector=if_else(edad>=12&(rama==721|rama==722),21,sector))%>%
mutate(sector=if_else(edad>=12&(rama==115|rama==213|rama==238|rama==488|rama==541|
rama==551|rama==561|rama==562|rama==711|rama==712|
rama==713|rama==811|rama==812|rama==813|rama==814|
rama==931|rama==932|rama==939),22,sector))%>%
mutate(sector=if_else(edad>=12&(rama==98|rama==980),23,sector))

```

Ocupación en el trabajo:

```

personas <- personas %>%
mutate(grupo=if_else(edad<12,0,99))%>%
mutate(grupo=if_else(edad>=12&ocupacion==11,1,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==12,2,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==13,3,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==14,4,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==21,5,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==41,6,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==51,7,grupo))%>%
mutate(grupo=if_else(edad>=12&(ocupacion==52|ocupacion==53),8,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==54,9,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==55,10,grupo))%>%
mutate(grupo=if_else(edad>=12&(ocupacion==61|ocupacion==62),11,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==71,12,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==72,13,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==81,14,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==82,15,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==83,16,grupo))

```

Tipo de contrato:

```

personas <- personas %>%
mutate(convenio=if_else(edad<12,0,9))%>%
mutate(convenio=if_else(edad>=12&contrato==2,1,convenio))%>%
mutate(convenio=if_else(edad>=12&(contrato==1&tipocontr==1),2,convenio))%>%
mutate(convenio=if_else(edad>=12&(contrato==1&tipocontr==2),3,convenio))%>%
mutate(convenio=if_else(edad>=12&(contrato==1&tipocontr==3),4,convenio))

```

Tipo de organización:

```

personas <- personas %>%
mutate(clas_emp=if_else(edad>=12&clas_emp==0,9,clas_emp))

```

Se guarda la tabla sociodemográfica:

```

Personas2008 <- personas %>%
select(enc, folioiviv, foliohog, numren, sexo, edad, educa, pea, ocupa, sector, grupo,
convenio, gremio, clas_emp)
remove(personas)

```

M. Tabla sociodemográfica de 2010

Tabla personas:

```
personas <- read.dbf("Bases/2010/pobla.dbf", as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
```

Se agrega la tabla de trabajo:

```
trabajo <- read.dbf("Bases/2010/trabajos.dbf", as.is=TRUE)
colnames(trabajo) <- tolower(colnames(trabajo))
trabajo <- trabajo %>% filter(numtrab=="1")
personas <- personas %>% left_join(trabajo, by=c("folioviv", "foliohog", "numren"))
remove(trabajo)
```

Se agrega la tabla de equivalencias de ocupación:

```
claves <- read.csv(file="Bases/cmosinco.csv")
personas <- personas %>% mutate(sinco=as.integer(cuo))
personas <- personas %>% left_join(claves, by="sinco")
remove (claves)
```

Se preparan las variables:

```
personas <- personas %>%
  mutate(enc=2010)%>%
  mutate(rama=substr(scian,1,3))%>%
  mutate(across(c("folioviv":"rama"), as.numeric))%>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0)))%>%
  mutate(foliohog=foliohog+1)%>%
  mutate(bus_trab=if_else(bustrab_7==7, 7, 9))%>%
  mutate(bus_trab=if_else(bustrab_6==6, 6, bus_trab))%>%
  mutate(bus_trab=if_else(bustrab_5==5, 5, bus_trab))%>%
  mutate(bus_trab=if_else(bustrab_4==4, 4, bus_trab))%>%
  mutate(bus_trab=if_else(bustrab_3==3, 3, bus_trab))%>%
  mutate(bus_trab=if_else(bustrab_2==2, 2, bus_trab))%>%
  mutate(bus_trab=if_else(bustrab_1==1, 1, bus_trab))%>%
  mutate(gremio=9)
```

Se selecciona la población objetivo (se excluye el jefe ausente, los servidores domésticos y sus parientes, y los abonados o huéspedes, independientemente del parentesco con el jefe del hogar):

```
personas <- personas %>%
  mutate (parentesco=as.integer(parentesco))%>%
  filter((parentesco<401|parentesco>461)&(parentesco<701|parentesco>715))
```

Nivel de educación:

```
personas <- personas %>%
  mutate(educ=if_else(edad<5, 0, 9))%>%
  mutate(educ=if_else(edad>=5&(nivelaprob==0|nivelaprob==1|(nivelaprob==2&gradoaprob
<=5)), 1, educ))%>%
  mutate(educ=if_else(edad>=5&((nivelaprob==2&gradoaprob==6)|(nivelaprob==3&gradoaprob
ob<=2)), 2, educ))%>%
  mutate(educ=if_else(edad>=5&((nivelaprob==3&gradoaprob>=3)|(nivelaprob==4&gradoaprob
ob<=2)|
(nivelaprob==5&gradoaprob<=3)), 3, educ))%>%
  mutate(educ=if_else(edad>=5&((nivelaprob==4&gradoaprob>=3)|(nivelaprob==5&gradoaprob
ob>=4)|nivelaprob==6|
```

```

                                (nivelaprob==7&gradoaprob<=3)),4,educa))%>%
mutate(educa=if_else(edad>=5&(nivelaprob==7&gradoaprob>=4),5,educa))%>%
mutate(educa=if_else(edad>=5&nivelaprob>=8,6,educa))

```

Condición de actividad:

```

personas <- personas %>%
  mutate(pea=if_else(edad<12,0,9))%>%
  mutate(pea=if_else(edad>=12&(trabajo==1|
                                (trabajo==2&(verifica>=1&verifica<=4))|
                                trabajo==2&verifica==5&(motivo>=1&motivo<=6))),1,pea))
%>%
  mutate(pea=if_else(edad>=12&(trabajo==2&((verifica==5&motivo==7)|verifica==6)&bus_t
rab==1),2,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==2&((verifica==5&motivo==7)|verifica==6)&bus_t
rab==4),3,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==2&((verifica==5&motivo==7)|verifica==6)&bus_t
rab==5),4,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==2&((verifica==5&motivo==7)|verifica==6)&bus_t
rab==3),5,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==2&((verifica==5&motivo==7)|verifica==6)&bus_t
rab==6),6,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo==2&((verifica==5&motivo==7)|verifica==6)&(bus_
trab==2|bus_trab==7))),7,pea))

```

Posición en el trabajo:

```

personas <- personas %>%
  mutate(ocupa=if_else(edad<12,0,9))%>%
  mutate(ocupa=if_else(edad>=12&(subor==1&pago==1&rama>=114),1,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==1&pago==1&(rama==111|rama==112|rama==113))),2,
ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==2&indep==1),3,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==1&pago==2),4,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==1&pago==3),5,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==2&indep==2),6,ocupa))

```

Rama de actividad:

```

personas <- personas %>%
  mutate(sector=if_else(edad<12,0,99))%>%
  mutate(sector=if_else(edad>=12&((rama>=111&rama<=114)|rama==119),1,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==211|rama==212|rama==219),2,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==221|rama==222),3,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==236|rama==237|rama==239),4,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==311|rama==312),5,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=313&rama<=316),6,sector))%>%
  mutate(sector=if_else(edad>=12&rama==321,7,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==322|rama==323),8,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==324|rama==325|rama==326),9,sector))%>%
  mutate(sector=if_else(edad>=12&rama==327,10,sector))%>%
  mutate(sector=if_else(edad>=12&rama==331,11,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=332&rama<=337),12,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==338|rama==339),13,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=431&rama<=469),14,sector))%>%
  mutate(sector=if_else(edad>=12&((rama>=481&rama<=487)|rama==489),15,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==491|rama==492|rama==493),16,sector))%>%

```



```

mutate(sector=if_else(edad>=12&(rama>=511&rama<=519),17,sector))%>%
mutate(sector=if_else(edad>=12&((rama>=521&rama<=524)|rama==529),18,sector))%>%
mutate(sector=if_else(edad>=12&(rama==531|rama==532|rama==533|rama==539),19,sector)
)%>%
mutate(sector=if_else(edad>=12&((rama>=611&rama<=619)|(rama>=621&rama<=625)|
rama==629),20,sector))%>%
mutate(sector=if_else(edad>=12&(rama==721|rama==722),21,sector))%>%
mutate(sector=if_else(edad>=12&(rama==115|rama==213|rama==238|rama==488|rama==541|
rama==551|rama==561|rama==562|rama==615|rama==711|
rama==712|rama==713|rama==811|rama==812|rama==813|
rama==814|rama==931|rama==932|rama==939),22,sector
))%>%
mutate(sector=if_else(edad>=12&(rama==98|rama==980),23,sector))

```

Ocupación en el trabajo:

```

personas <- personas %>%
mutate(grupo=if_else(edad<12,0,99))%>%
mutate(grupo=if_else(edad>=12&ocupacion==11,1,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==12,2,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==13,3,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==14,4,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==21,5,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==41,6,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==51,7,grupo))%>%
mutate(grupo=if_else(edad>=12&(ocupacion==52|ocupacion==53),8,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==54,9,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==55,10,grupo))%>%
mutate(grupo=if_else(edad>=12&(ocupacion==61|ocupacion==62),11,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==71,12,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==72,13,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==81,14,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==82,15,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==83,16,grupo))

```

Tipo de contrato:

```

personas <- personas %>%
mutate(convenio=if_else(edad<12,0,9))%>%
mutate(convenio=if_else(edad>=12&contrato==2,1,convenio))%>%
mutate(convenio=if_else(edad>=12&(contrato==1&tipocontr==1),2,convenio))%>%
mutate(convenio=if_else(edad>=12&(contrato==1&tipocontr==2),3,convenio))%>%
mutate(convenio=if_else(edad>=12&(contrato==1&tipocontr==3),4,convenio))

```

Tipo de organización:

```

personas <- personas %>%
mutate(clas_emp=if_else(edad>=12&clas_emp==0,9,clas_emp))

```

Se guarda la tabla sociodemográfica:

```

Personas2010 <- personas %>%
select(enc, foliohog, foliohog, numren, sexo, edad, educa, pea, ocupa, sector, grupo,
convenio, gremio, clas_emp)
remove(personas)

```

N. Tabla sociodemográfica de 2012

Tabla personas:

```
personas <- read.dbf("Bases/2012/pobla.dbf",as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
```

Se agrega la tabla de trabajo:

```
trabajo <- read.dbf("Bases/2012/trabajos.dbf",as.is=TRUE)
colnames(trabajo) <- tolower(colnames(trabajo))
trabajo <- trabajo %>% filter(id_trabajo=="1")
personas <- personas %>% left_join(trabajo,by=c("folioviv","foliohog","numren"))
remove(trabajo)
```

Se agrega la tabla de equivalencias de ocupación:

```
claves <- read.csv(file="Bases/cmosinco.csv")
personas <- personas %>% mutate(sinco=as.integer(sinco))
personas <- personas %>% left_join(claves,by="sinco")
remove (claves)
```

Se preparan las variables:

```
personas <- personas %>%
  mutate(enc=2012)%>%
  mutate(rama=substr(scian,1,3))%>%
  mutate(across(c("folioviv":"rama"),as.numeric))%>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0)))%>%
  mutate(foliohog=foliohog+1)%>%
  mutate(bus_trab=if_else(act_otra==7,7,9))%>%
  mutate(bus_trab=if_else(act_discap==6,6,bus_trab))%>%
  mutate(bus_trab=if_else(act_estudi==5,5,bus_trab))%>%
  mutate(bus_trab=if_else(act_quehac==4,4,bus_trab))%>%
  mutate(bus_trab=if_else(act_pensio==3,3,bus_trab))%>%
  mutate(bus_trab=if_else(act_rento==2,2,bus_trab))%>%
  mutate(bus_trab=if_else(act_buscot==1,1,bus_trab))%>%
  mutate(gremio=9)
```

Se selecciona la población objetivo (se excluye el jefe ausente, los servidores domésticos y sus parientes, y los abonados o huéspedes, independientemente del parentesco con el jefe del hogar):

```
personas <- personas %>%
  mutate (parentesco=as.integer(parentesco))%>%
  filter((parentesco<401|parentesco>461)&(parentesco<701|parentesco>715))
```

Nivel de educación:

```
personas <- personas %>%
  mutate(educ=if_else(edad<5,0,9))%>%
  mutate(educ=if_else(edad>=5&(nivelaprob==0|nivelaprob==1|(nivelaprob==2&gradoaprob
<=5)),1,educ))%>%
  mutate(educ=if_else(edad>=5&((nivelaprob==2&gradoaprob==6)|(nivelaprob==3&gradoaprob
ob<=2)),2,educ))%>%
  mutate(educ=if_else(edad>=5&((nivelaprob==3&gradoaprob>=3)|(nivelaprob==4&gradoaprob
ob<=2)|
(nivelaprob==5&gradoaprob<=3)),3,educ))%>%
  mutate(educ=if_else(edad>=5&((nivelaprob==4&gradoaprob>=3)|(nivelaprob==5&gradoaprob
ob>=4)|nivelaprob==6|
```



```

                                (nivelaprob==7&gradoaprob<=3)),4,educa))%>%
mutate(educa=if_else(edad>=5&(nivelaprob==7&gradoaprob>=4),5,educa))%>%
mutate(educa=if_else(edad>=5&nivelaprob>=8,6,educa))

```

Condición de actividad:

```

personas <- personas %>%
  mutate(pea=if_else(edad<12,0,9))%>%
  mutate(pea=if_else(edad>=12&(trabajo_mp==1|
                                (trabajo_mp==2&(motivo_aus>=1&motivo_aus<=6))),1,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo_mp==2&bus_trab==1),2,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo_mp==2&bus_trab==4),3,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo_mp==2&bus_trab==5),4,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo_mp==2&bus_trab==3),5,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo_mp==2&bus_trab==6),6,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo_mp==2&(bus_trab==2|bus_trab==7)),7,pea))

```

Posición en el trabajo:

```

personas <- personas %>%
  mutate(ocupa=if_else(edad<12,0,9))%>%
  mutate(ocupa=if_else(edad>=12&(subor==1&pago==1&rama>=114),1,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==1&pago==1&(rama==111|rama==112|rama==113)),2,
ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==2&indep==1),3,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==1&pago==2),4,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==1&pago==3),5,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==2&indep==2),6,ocupa))

```

Rama de actividad:

```

personas <- personas %>%
  mutate(sector=if_else(edad<12,0,99))%>%
  mutate(sector=if_else(edad>=12&((rama>=111&rama<=114)|rama==119),1,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==211|rama==212|rama==219),2,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==221|rama==222),3,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==236|rama==237|rama==239),4,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==311|rama==312),5,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=313&rama<=316),6,sector))%>%
  mutate(sector=if_else(edad>=12&rama==321,7,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==322|rama==323),8,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==324|rama==325|rama==326),9,sector))%>%
  mutate(sector=if_else(edad>=12&rama==327,10,sector))%>%
  mutate(sector=if_else(edad>=12&rama==331,11,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=332&rama<=337),12,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==338|rama==339),13,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=431&rama<=469),14,sector))%>%
  mutate(sector=if_else(edad>=12&((rama>=481&rama<=487)|rama==489),15,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==491|rama==492|rama==493),16,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=511&rama<=519),17,sector))%>%
  mutate(sector=if_else(edad>=12&((rama>=521&rama<=524)|rama==529),18,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==531|rama==532|rama==533|rama==539),19,sector))%>%
  mutate(sector=if_else(edad>=12&((rama>=611&rama<=619)|(rama>=621&rama<=625)|
                                rama==629),20,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==721|rama==722),21,sector))%>%

```

```
mutate(sector=if_else(edad>=12&(rama==115|rama==213|rama==238|rama==488|rama==541|
                           rama==551|rama==561|rama==562|rama==615|rama==711|
                           rama==712|rama==713|rama==811|rama==812|rama==813|
                           rama==814|rama==931|rama==932|rama==939),22,sector
))%>%
mutate(sector=if_else(edad>=12&(rama==98|rama==980),23,sector))
```

Ocupación en el trabajo:

```
personas <- personas %>%
  mutate(grupo=if_else(edad<12,0,99))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==11,1,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==12,2,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==13,3,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==14,4,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==21,5,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==41,6,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==51,7,grupo))%>%
  mutate(grupo=if_else(edad>=12&(ocupacion==52|ocupacion==53),8,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==54,9,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==55,10,grupo))%>%
  mutate(grupo=if_else(edad>=12&(ocupacion==61|ocupacion==62),11,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==71,12,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==72,13,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==81,14,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==82,15,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==83,16,grupo))
```

Tipo de contrato:

```
personas <- personas %>%
  mutate(convenio=if_else(edad<12,0,9))%>%
  mutate(convenio=if_else(edad>=12&contrato==2,1,convenio))%>%
  mutate(convenio=if_else(edad>=12&(contrato==1&tipocontr==1),2,convenio))%>%
  mutate(convenio=if_else(edad>=12&(contrato==1&tipocontr==2),3,convenio))%>%
  mutate(convenio=if_else(edad>=12&(contrato==1&tipocontr==3),4,convenio))
```

Tipo de organización:

```
personas <- personas %>%
  mutate(clas_emp=if_else(edad>=12&clas_emp==0,9,clas_emp))
```

Se guarda la tabla sociodemográfica:

```
Personas2012 <- personas %>%
  select(enc, folioviv, foliohog, numren, sexo, edad, educa, pea, ocupa, sector, grupo,
         convenio, gremio, clas_emp)
remove(personas)
```

O. Tabla sociodemográfica de 2014

Tabla personas:

```
personas <- read.dbf("Bases/2014/pobla.dbf", as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
```

Se agrega la tabla de trabajo:

```
trabajo <- read.dbf("Bases/2014/trabajos.dbf",as.is=TRUE)
colnames(trabajo) <- tolower(colnames(trabajo))
trabajo <- trabajo %>% filter(id_trabajo=="1")
personas <- personas %>% left_join(trabajo,by=c("folioviv","foliohog","numren"))
remove(trabajo)
```

Se agrega la tabla de equivalencias de ocupación:

```
claves <- read.csv(file="Bases/cmosinco.csv")
personas <- personas %>% mutate(sinco=as.integer(sinco))
personas <- personas %>% left_join(claves,by="sinco")
remove (claves)
```

Se preparan las variables:

```
personas <- personas %>%
  mutate(enc=2014)%>%
  mutate(rama=substr(scian,1,3))%>%
  mutate(across(c("folioviv":"rama"),as.numeric))%>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0)))%>%
  mutate(gremio=9)
```

Se selecciona la población objetivo (se excluye el jefe ausente, los servidores domésticos y sus parientes, y los abonados o huéspedes, independientemente del parentesco con el jefe del hogar):

```
personas <- personas %>%
  mutate (parentesco=as.integer(parentesco))%>%
  filter((parentesco<401|parentesco>461)&(parentesco<701|parentesco>715))
```

Nivel de educación:

```
personas <- personas %>%
  mutate(educ=if_else(edad<5,0,9))%>%
  mutate(educ=if_else(edad>=5&(nivelaprob==0|nivelaprob==1|(nivelaprob==2&gradoaprob
<=5)),1,educ))%>%
  mutate(educ=if_else(edad>=5&((nivelaprob==2&gradoaprob==6)|(nivelaprob==3&gradoaprob
ob<=2)),2,educ))%>%
  mutate(educ=if_else(edad>=5&((nivelaprob==3&gradoaprob>=3)|(nivelaprob==4&gradoaprob
ob<=2)|
(nivelaprob==5&gradoaprob<=3)),3,educ))%>%
  mutate(educ=if_else(edad>=5&((nivelaprob==4&gradoaprob>=3)|(nivelaprob==5&gradoaprob
ob>=4)|nivelaprob==6|
(nivelaprob==7&gradoaprob<=3)),4,educ))%>%
  mutate(educ=if_else(edad>=5&(nivelaprob==7&gradoaprob>=4),5,educ))%>%
  mutate(educ=if_else(edad>=5&nivelaprob>=8,6,educ))
```

Condición de actividad:

```
personas <- personas %>%
  mutate(pea=if_else(edad<12,0,9))%>%
  mutate(pea=if_else(edad>=12&
(trabajo_mp==1|(trabajo_mp==2&(motivo_aus>=1&motivo_aus<=11))),1,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo_mp==2&act_pnea1==1),2,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo_mp==2&act_pnea1==3),3,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo_mp==2&act_pnea1==4),4,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo_mp==2&act_pnea1==2),5,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo_mp==2&act_pnea1==5),6,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo_mp==2&act_pnea1==6),7,pea))
```

Posición en el trabajo:

```

personas <- personas %>%
  mutate(ocupa=if_else(edad<12,0,9))%>%
  mutate(ocupa=if_else(edad>=12&(subor==1&pago==1&rama>=114),1,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==1&pago==1&(rama==111|rama==112|rama==113)),2,
ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==2&indep==1),3,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==1&pago==2),4,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==1&pago==3),5,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==2&indep==2),6,ocupa))

```

Rama de actividad:

```

personas <- personas %>%
  mutate(sector=if_else(edad<12,0,99))%>%
  mutate(sector=if_else(edad>=12&((rama>=111&rama<=114)|rama==119),1,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==211|rama==212|rama==219),2,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==221|rama==222),3,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==236|rama==237|rama==239),4,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==311|rama==312),5,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=313&rama<=316),6,sector))%>%
  mutate(sector=if_else(edad>=12&rama==321,7,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==322|rama==323),8,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==324|rama==325|rama==326),9,sector))%>%
  mutate(sector=if_else(edad>=12&rama==327,10,sector))%>%
  mutate(sector=if_else(edad>=12&rama==331,11,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=332&rama<=337),12,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==338|rama==339),13,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=431&rama<=469),14,sector))%>%
  mutate(sector=if_else(edad>=12&((rama>=481&rama<=487)|rama==489),15,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==491|rama==492|rama==493),16,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=511&rama<=519),17,sector))%>%
  mutate(sector=if_else(edad>=12&((rama>=521&rama<=524)|rama==529),18,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==531|rama==532|rama==533|rama==539),19,sector)
)%>%
  mutate(sector=if_else(edad>=12&((rama>=611&rama<=619)|(rama>=621&rama<=625)|
rama==629),20,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==721|rama==722),21,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==115|rama==213|rama==238|rama==488|rama==541|
rama==551|rama==561|rama==562|rama==615|rama==711|
rama==712|rama==713|rama==811|rama==812|rama==813|
rama==814|rama==931|rama==932|rama==939),22,sector
))%>%
  mutate(sector=if_else(edad>=12&(rama==98|rama==980),23,sector))

```

Ocupación en el trabajo:

```

personas <- personas %>%
  mutate(grupo=if_else(edad<12,0,99))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==11,1,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==12,2,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==13,3,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==14,4,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==21,5,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==41,6,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==51,7,grupo))%>%
  mutate(grupo=if_else(edad>=12&(ocupacion==52|ocupacion==53),8,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==54,9,grupo))%>%

```

```
mutate(grupo=if_else(edad>=12&ocupacion==55,10,grupo))%>%
mutate(grupo=if_else(edad>=12&(ocupacion==61|ocupacion==62),11,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==71,12,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==72,13,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==81,14,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==82,15,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==83,16,grupo))
```

Tipo de contrato:

```
personas <- personas %>%
  mutate(convenio=if_else(edad<12,0,9))%>%
  mutate(convenio=if_else(edad>=12&contrato==2,1,convenio))%>%
  mutate(convenio=if_else(edad>=12&(contrato==1&tipocontr==1),2,convenio))%>%
  mutate(convenio=if_else(edad>=12&(contrato==1&tipocontr==2),3,convenio))%>%
  mutate(convenio=if_else(edad>=12&(contrato==1&tipocontr==3),4,convenio))
```

Tipo de organización:

```
personas <- personas %>%
  mutate(clas_emp=if_else(edad>=12&clas_emp==0,9,clas_emp))
```

Se guarda la tabla sociodemográfica:

```
Personas2014 <- personas %>%
  select(enc, folioviv, foliohog, numren, sexo, edad, educa, pea, ocupa, sector, grupo,
         convenio, gremio, clas_emp)
remove(personas)
```

P. Tabla sociodemográfica de 2016

Tabla personas:

```
personas <- read.dbf("Bases/2016/pobla.dbf",as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
```

Se agrega la tabla de trabajo:

```
trabajo <- read.dbf("Bases/2016/trabajos.dbf",as.is=TRUE)
colnames(trabajo) <- tolower(colnames(trabajo))
trabajo <- trabajo %>% filter(id_trabajo=="1")
personas <- personas %>% left_join(trabajo,by=c("folioviv","foliohog","numren"))
remove(trabajo)
```

Se agrega la tabla de equivalencias de ocupación:

```
claves <- read.csv(file="Bases/cmosinco.csv")
personas <- personas %>% mutate(sinco=as.integer(sinco))
personas <- personas %>% left_join(claves,by="sinco")
remove(claves)
```

Se preparan las variables:

```
personas <- personas %>%
  mutate(enc=2016)%>%
  mutate(rama=substr(scian,1,3))%>%
  mutate(across(c("folioviv":"rama"),as.numeric))%>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0)))%>%
  mutate(gremio=9)
```


Se selecciona la población objetivo (se excluye el jefe ausente, los servidores domésticos y sus parientes, y los abonados o huéspedes, independientemente del parentesco con el jefe del hogar):

```
personas <- personas %>%
  mutate(parentesco=as.integer(parentesco))%>%
  filter((parentesco<401|parentesco>461)&(parentesco<701|parentesco>715))
```

Nivel de educación:

```
personas <- personas %>%
  mutate(educ=if_else(edad<5,0,9))%>%
  mutate(educ=if_else(edad>=5&(niveleprob==0|niveleprob==1|(niveleprob==2&gradoaprob
<=5)),1,educ))%>%
  mutate(educ=if_else(edad>=5&((niveleprob==2&gradoaprob==6)|(niveleprob==3&gradoaprob
ob<=2)),2,educ))%>%
  mutate(educ=if_else(edad>=5&((niveleprob==3&gradoaprob>=3)|(niveleprob==4&gradoaprob
ob<=2)|
(niveleprob==5&gradoaprob<=3)),3,educ))%>%
  mutate(educ=if_else(edad>=5&((niveleprob==4&gradoaprob>=3)|(niveleprob==5&gradoaprob
ob>=4)|niveleprob==6|
(niveleprob==7&gradoaprob<=3)),4,educ))%>%
  mutate(educ=if_else(edad>=5&(niveleprob==7&gradoaprob>=4),5,educ))%>%
  mutate(educ=if_else(edad>=5&niveleprob>=8,6,educ))
```

Condición de actividad:

```
personas <- personas %>%
  mutate(pea=if_else(edad<12,0,9))%>%
  mutate(pea=if_else(edad>=12&
(trabajo_mp==1|(trabajo_mp==2&(motivo_aus>=1&motivo_aus<=12))),
1,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo_mp==2&act_pnea1==1),2,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo_mp==2&act_pnea1==3),3,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo_mp==2&act_pnea1==4),4,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo_mp==2&act_pnea1==2),5,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo_mp==2&act_pnea1==5),6,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo_mp==2&act_pnea1==6),7,pea))
```

Posición en el trabajo:

```
personas <- personas %>%
  mutate(ocupa=if_else(edad<12,0,9))%>%
  mutate(ocupa=if_else(edad>=12&(subor==1&pago==1&rama>=114),1,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==1&pago==1&(rama==111|rama==112|rama==113)),2,
ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==2&indep==1),3,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==1&pago==2),4,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==1&pago==3),5,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==2&indep==2),6,ocupa))
```

Rama de actividad:

```
personas <- personas %>%
  mutate(sect=if_else(edad<12,0,99))%>%
  mutate(sect=if_else(edad>=12&((rama>=111&rama<=114)|rama==119),1,sect))%>%
  mutate(sect=if_else(edad>=12&(rama==211|rama==212|rama==219),2,sect))%>%
  mutate(sect=if_else(edad>=12&(rama==221|rama==222),3,sect))%>%
  mutate(sect=if_else(edad>=12&(rama==236|rama==237|rama==239),4,sect))%>%
  mutate(sect=if_else(edad>=12&(rama==311|rama==312),5,sect))%>%
```

```

mutate(sector=if_else(edad>=12&(rama>=313&rama<=316),6,sector))%>%
mutate(sector=if_else(edad>=12&rama==321,7,sector))%>%
mutate(sector=if_else(edad>=12&(rama==322|rama==323),8,sector))%>%
mutate(sector=if_else(edad>=12&(rama==324|rama==325|rama==326),9,sector))%>%
mutate(sector=if_else(edad>=12&rama==327,10,sector))%>%
mutate(sector=if_else(edad>=12&rama==331,11,sector))%>%
mutate(sector=if_else(edad>=12&(rama>=332&rama<=337),12,sector))%>%
mutate(sector=if_else(edad>=12&(rama==338|rama==339),13,sector))%>%
mutate(sector=if_else(edad>=12&(rama>=431&rama<=469),14,sector))%>%
mutate(sector=if_else(edad>=12&((rama>=481&rama<=487)|rama==489),15,sector))%>%
mutate(sector=if_else(edad>=12&(rama==491|rama==492|rama==493),16,sector))%>%
mutate(sector=if_else(edad>=12&(rama>=511&rama<=519),17,sector))%>%
mutate(sector=if_else(edad>=12&((rama>=521&rama<=524)|rama==529),18,sector))%>%
mutate(sector=if_else(edad>=12&(rama==531|rama==532|rama==533|rama==539),19,sector)
)%>%
mutate(sector=if_else(edad>=12&((rama>=611&rama<=619)|(rama>=621&rama<=625)|
rama==629),20,sector))%>%
mutate(sector=if_else(edad>=12&(rama==721|rama==722),21,sector))%>%
mutate(sector=if_else(edad>=12&(rama==115|rama==213|rama==238|rama==488|rama==541|
rama==551|rama==561|rama==562|rama==615|rama==711|
rama==712|rama==713|rama==811|rama==812|rama==813|
rama==814|rama==931|rama==932|rama==939),22,sector
))%>%
mutate(sector=if_else(edad>=12&(rama==98|rama==980),23,sector))

```

Ocupación en el trabajo:

```

personas <- personas %>%
mutate(grupo=if_else(edad<12,0,99))%>%
mutate(grupo=if_else(edad>=12&ocupacion==11,1,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==12,2,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==13,3,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==14,4,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==21,5,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==41,6,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==51,7,grupo))%>%
mutate(grupo=if_else(edad>=12&(ocupacion==52|ocupacion==53),8,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==54,9,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==55,10,grupo))%>%
mutate(grupo=if_else(edad>=12&(ocupacion==61|ocupacion==62),11,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==71,12,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==72,13,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==81,14,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==82,15,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==83,16,grupo))

```

Tipo de contrato:

```

personas <- personas %>%
mutate(convenio=if_else(edad<12,0,9))%>%
mutate(convenio=if_else(edad>=12&contrato==2,1,convenio))%>%
mutate(convenio=if_else(edad>=12&(contrato==1&tipocontr==1),2,convenio))%>%
mutate(convenio=if_else(edad>=12&(contrato==1&tipocontr==2),3,convenio))%>%
mutate(convenio=if_else(edad>=12&(contrato==1&tipocontr==3),4,convenio))

```

Tipo de organización:

```
personas <- personas %>%
  mutate(clas_emp=if_else(edad>=12&clas_emp==0,9,clas_emp))
```

Se guarda la tabla sociodemográfica:

```
Personas2016 <- personas %>%
  select(enc, folioviv, foliohog, numren, sexo, edad, educa, pea, ocupa, sector, grupo,
         convenio, gremio, clas_emp)
remove(personas)
```

Q. Tabla sociodemográfica de 2018

Tabla personas:

```
personas <- read.dbf("Bases/2018/pobla.dbf", as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
```

Se agrega la tabla de trabajo:

```
trabajo <- read.dbf("Bases/2018/trabajos.dbf", as.is=TRUE)
colnames(trabajo) <- tolower(colnames(trabajo))
trabajo <- trabajo %>% filter(id_trabajo=="1")
personas <- personas %>% left_join(trabajo, by=c("folioviv", "foliohog", "numren"))
remove(trabajo)
```

Se agrega la tabla de equivalencias de ocupación:

```
claves <- read.csv(file="Bases/cmosinco.csv")
personas <- personas %>% mutate(sinco=as.integer(sinco))
personas <- personas %>% left_join(claves, by="sinco")
remove (claves)
```

Se preparan las variables:

```
personas <- personas %>%
  mutate(enc=2018)%>%
  mutate(rama=substr(scian,1,3))%>%
  mutate(across(c("folioviv": "rama"), as.numeric))%>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0)))%>%
  mutate(gremio=9)
```

Se selecciona la población objetivo (se excluye el jefe ausente, los servidores domésticos y sus parientes, y los abonados o huéspedes, independientemente del parentesco con el jefe del hogar):

```
personas <- personas %>%
  mutate (parentesco=as.integer(parentesco))%>%
  filter((parentesco<401|parentesco>461)&(parentesco<701|parentesco>715))
```

Nivel de educación:

```
personas <- personas %>%
  mutate(educu=if_else(edad<5,0,9))%>%
  mutate(educu=if_else(edad>=5&(nivelaprob==0|nivelaprob==1|(nivelaprob==2&gradoaprob
<=5)),1,educu))%>%
  mutate(educu=if_else(edad>=5&((nivelaprob==2&gradoaprob==6)|(nivelaprob==3&gradoaprob
ob<=2)),2,educu))%>%
  mutate(educu=if_else(edad>=5&((nivelaprob==3&gradoaprob>=3)|(nivelaprob==4&gradoaprob
ob<=2)|
```



```

                                (nivelaprob==5&gradoaprob<=3)),3,educa))%>%
mutate(educa=if_else(edad>=5&((nivelaprob==4&gradoaprob>=3)|(nivelaprob==5&gradoaprob>=4)|nivelaprob==6|
                                (nivelaprob==7&gradoaprob<=3)),4,educa))%>%
mutate(educa=if_else(edad>=5&(nivelaprob==7&gradoaprob>=4),5,educa))%>%
mutate(educa=if_else(edad>=5&nivelaprob>=8,6,educa))

```

Condición de actividad:

```

personas <- personas %>%
mutate(pea=if_else(edad<12,0,9))%>%
mutate(pea=if_else(edad>=12&
                    (trabajo_mp==1|(trabajo_mp==2&(motivo_aus>=1&motivo_aus<=12))),
1,pea))%>%
mutate(pea=if_else(edad>=12&(trabajo_mp==2&act_pnea1==1),2,pea))%>%
mutate(pea=if_else(edad>=12&(trabajo_mp==2&act_pnea1==3),3,pea))%>%
mutate(pea=if_else(edad>=12&(trabajo_mp==2&act_pnea1==4),4,pea))%>%
mutate(pea=if_else(edad>=12&(trabajo_mp==2&act_pnea1==2),5,pea))%>%
mutate(pea=if_else(edad>=12&(trabajo_mp==2&act_pnea1==5),6,pea))%>%
mutate(pea=if_else(edad>=12&(trabajo_mp==2&act_pnea1==6),7,pea))

```

Posición en el trabajo:

```

personas <- personas %>%
mutate(ocupa=if_else(edad<12,0,9))%>%
mutate(ocupa=if_else(edad>=12&(subor==1&pago==1&rama>=114),1,ocupa))%>%
mutate(ocupa=if_else(edad>=12&(subor==1&pago==1&(rama==111|rama==112|rama==113))),2,
ocupa))%>%
mutate(ocupa=if_else(edad>=12&(subor==2&indep==1),3,ocupa))%>%
mutate(ocupa=if_else(edad>=12&(subor==1&pago==2),4,ocupa))%>%
mutate(ocupa=if_else(edad>=12&(subor==1&pago==3),5,ocupa))%>%
mutate(ocupa=if_else(edad>=12&(subor==2&indep==2),6,ocupa))

```

Rama de actividad:

```

personas <- personas %>%
mutate(sector=if_else(edad<12,0,99))%>%
mutate(sector=if_else(edad>=12&((rama>=111&rama<=114)|rama==119),1,sector))%>%
mutate(sector=if_else(edad>=12&(rama==211|rama==212|rama==219),2,sector))%>%
mutate(sector=if_else(edad>=12&(rama==221|rama==222),3,sector))%>%
mutate(sector=if_else(edad>=12&(rama==236|rama==237|rama==239),4,sector))%>%
mutate(sector=if_else(edad>=12&(rama==311|rama==312),5,sector))%>%
mutate(sector=if_else(edad>=12&(rama>=313&rama<=316),6,sector))%>%
mutate(sector=if_else(edad>=12&rama==321,7,sector))%>%
mutate(sector=if_else(edad>=12&(rama==322|rama==323),8,sector))%>%
mutate(sector=if_else(edad>=12&(rama==324|rama==325|rama==326),9,sector))%>%
mutate(sector=if_else(edad>=12&rama==327,10,sector))%>%
mutate(sector=if_else(edad>=12&rama==331,11,sector))%>%
mutate(sector=if_else(edad>=12&(rama>=332&rama<=337),12,sector))%>%
mutate(sector=if_else(edad>=12&(rama==338|rama==339),13,sector))%>%
mutate(sector=if_else(edad>=12&(rama>=431&rama<=469),14,sector))%>%
mutate(sector=if_else(edad>=12&((rama>=481&rama<=487)|rama==489),15,sector))%>%
mutate(sector=if_else(edad>=12&(rama==491|rama==492|rama==493),16,sector))%>%
mutate(sector=if_else(edad>=12&(rama>=511&rama<=519),17,sector))%>%
mutate(sector=if_else(edad>=12&((rama>=521&rama<=524)|rama==529),18,sector))%>%
mutate(sector=if_else(edad>=12&(rama==531|rama==532|rama==533|rama==539),19,sector))%>%
mutate(sector=if_else(edad>=12&((rama>=611&rama<=619)|(rama>=621&rama<=625)|

```

```

                                rama==629),20,sector))%>%
mutate(sector=if_else(edad>=12&(rama==721| rama==722),21,sector))%>%
mutate(sector=if_else(edad>=12&(rama==115| rama==213| rama==238| rama==488| rama==541|
                                rama==551| rama==561| rama==562| rama==615| rama==711|
                                rama==712| rama==713| rama==811| rama==812| rama==813|
                                rama==814| rama==931| rama==932| rama==939),22,sector
))%>%
mutate(sector=if_else(edad>=12&(rama==98| rama==980),23,sector))

```

Ocupación en el trabajo:

```

personas <- personas %>%
mutate(grupo=if_else(edad<12,0,99))%>%
mutate(grupo=if_else(edad>=12&ocupacion==11,1,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==12,2,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==13,3,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==14,4,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==21,5,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==41,6,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==51,7,grupo))%>%
mutate(grupo=if_else(edad>=12&(ocupacion==52|ocupacion==53),8,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==54,9,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==55,10,grupo))%>%
mutate(grupo=if_else(edad>=12&(ocupacion==61|ocupacion==62),11,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==71,12,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==72,13,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==81,14,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==82,15,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==83,16,grupo))

```

Tipo de contrato:

```

personas <- personas %>%
mutate(convenio=if_else(edad<12,0,9))%>%
mutate(convenio=if_else(edad>=12&contrato==2,1,convenio))%>%
mutate(convenio=if_else(edad>=12&(contrato==1&tipocontr==1),2,convenio))%>%
mutate(convenio=if_else(edad>=12&(contrato==1&tipocontr==2),3,convenio))%>%
mutate(convenio=if_else(edad>=12&(contrato==1&tipocontr==3),4,convenio))

```

Tipo de organización:

```

personas <- personas %>%
mutate(clas_emp=if_else(edad>=12&clas_emp==0,9,clas_emp))

```

Se guarda la tabla sociodemográfica:

```

Personas2018 <- personas %>%
select(enc, folioviv, foliohog, numren, sexo, edad, educa, pea, ocupa, sector, grupo,
convenio, gremio, clas_emp)
remove(personas)

```

R. Tabla sociodemográfica de 2020

Tabla personas:

```

personas <- read.dbf("Bases/2020/pobla.dbf",as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))

```

Se agrega la tabla de trabajo:

```
trabajo <- read.dbf("Bases/2020/trabajos.dbf", as.is=TRUE)
colnames(trabajo) <- tolower(colnames(trabajo))
trabajo <- trabajo %>% filter(id_trabajo=="1")
personas <- personas %>% left_join(trabajo, by=c("folioviv", "foliohog", "numren"))
remove(trabajo)
```

Se agrega la tabla de equivalencias de ocupación:

```
claves <- read.csv(file="Bases/cmosinco.csv")
personas <- personas %>% mutate(sinco=as.integer(sinco))
personas <- personas %>% left_join(claves, by="sinco")
remove (claves)
```

Se preparan las variables:

```
personas <- personas %>%
  mutate(enc=2020)%>%
  mutate(rama=substr(scian,1,3))%>%
  mutate(across(c("folioviv":"rama"), as.numeric))%>%
  mutate(across(where(is.numeric), ~replace_na(.x, 0)))%>%
  mutate(gremio=9)
```

Se selecciona la población objetivo (se excluye el jefe ausente, los servidores domésticos y sus parientes, y los abonados o huéspedes, independientemente del parentesco con el jefe del hogar):

```
personas <- personas %>%
  mutate (parentesco=as.integer(parentesco))%>%
  filter((parentesco<401|parentesco>461)&(parentesco<701|parentesco>715))
```

Nivel de educación:

```
personas <- personas %>%
  mutate(educ=if_else(edad<5,0,9))%>%
  mutate(educ=if_else(edad>=5&(nivelaprob==0|nivelaprob==1|(nivelaprob==2&gradoaprob
<=5)),1,educ))%>%
  mutate(educ=if_else(edad>=5&((nivelaprob==2&gradoaprob==6)|(nivelaprob==3&gradoaprob
ob<=2)),2,educ))%>%
  mutate(educ=if_else(edad>=5&((nivelaprob==3&gradoaprob>=3)|(nivelaprob==4&gradoaprob
ob<=2)|
(nivelaprob==5&gradoaprob<=3)),3,educ))%>%
  mutate(educ=if_else(edad>=5&((nivelaprob==4&gradoaprob>=3)|(nivelaprob==5&gradoaprob
ob>=4)|nivelaprob==6|
(nivelaprob==7&gradoaprob<=3)),4,educ))%>%
  mutate(educ=if_else(edad>=5&(nivelaprob==7&gradoaprob>=4),5,educ))%>%
  mutate(educ=if_else(edad>=5&nivelaprob>=8,6,educ))
```

Condición de actividad:

```
personas <- personas %>%
  mutate(pea=if_else(edad<12,0,9))%>%
  mutate(pea=if_else(edad>=12&
(trabajo_mp==1|(trabajo_mp==2&(motivo_aus>=1&motivo_aus<=12))),
1,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo_mp==2&act_pnea1==1),2,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo_mp==2&act_pnea1==3),3,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo_mp==2&act_pnea1==4),4,pea))%>%
  mutate(pea=if_else(edad>=12&(trabajo_mp==2&act_pnea1==2),5,pea))%>%
```

```
mutate(pea=if_else(edad>=12&(trabajo_mp==2&act_pnea1==5),6,pea))%>%
mutate(pea=if_else(edad>=12&(trabajo_mp==2&act_pnea1==6),7,pea))
```

Posición en el trabajo:

```
personas <- personas %>%
  mutate(ocupa=if_else(edad<12,0,9))%>%
  mutate(ocupa=if_else(edad>=12&(subor==1&pago==1&rama>=114),1,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==1&pago==1&(rama==111|rama==112|rama==113)),2,
ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==2&indep==1),3,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==1&pago==2),4,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==1&pago==3),5,ocupa))%>%
  mutate(ocupa=if_else(edad>=12&(subor==2&indep==2),6,ocupa))
```

Rama de actividad:

```
personas <- personas %>%
  mutate(sector=if_else(edad<12,0,99))%>%
  mutate(sector=if_else(edad>=12&((rama>=111&rama<=114)|rama==119),1,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==211|rama==212|rama==219),2,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==221|rama==222),3,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==236|rama==237|rama==239),4,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==311|rama==312),5,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=313&rama<=316),6,sector))%>%
  mutate(sector=if_else(edad>=12&rama==321,7,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==322|rama==323),8,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==324|rama==325|rama==326),9,sector))%>%
  mutate(sector=if_else(edad>=12&rama==327,10,sector))%>%
  mutate(sector=if_else(edad>=12&rama==331,11,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=332&rama<=337),12,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==338|rama==339),13,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=431&rama<=469),14,sector))%>%
  mutate(sector=if_else(edad>=12&((rama>=481&rama<=487)|rama==489),15,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==491|rama==492|rama==493),16,sector))%>%
  mutate(sector=if_else(edad>=12&(rama>=511&rama<=519),17,sector))%>%
  mutate(sector=if_else(edad>=12&((rama>=521&rama<=524)|rama==529),18,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==531|rama==532|rama==533|rama==539),19,sector)
)%>%
  mutate(sector=if_else(edad>=12&((rama>=611&rama<=619)|(rama>=621&rama<=625)|
rama==629),20,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==721|rama==722),21,sector))%>%
  mutate(sector=if_else(edad>=12&(rama==115|rama==213|rama==238|rama==488|rama==541|
rama==551|rama==561|rama==562|rama==615|rama==711|
rama==712|rama==713|rama==811|rama==812|rama==813|
rama==814|rama==931|rama==932|rama==939),22,sector
))%>%
  mutate(sector=if_else(edad>=12&(rama==98|rama==980),23,sector))
```

Ocupación en el trabajo:

```
personas <- personas %>%
  mutate(grupo=if_else(edad<12,0,99))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==11,1,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==12,2,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==13,3,grupo))%>%
  mutate(grupo=if_else(edad>=12&ocupacion==14,4,grupo))%>%
```

```
mutate(grupo=if_else(edad>=12&ocupacion==21,5,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==41,6,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==51,7,grupo))%>%
mutate(grupo=if_else(edad>=12&(ocupacion==52|ocupacion==53),8,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==54,9,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==55,10,grupo))%>%
mutate(grupo=if_else(edad>=12&(ocupacion==61|ocupacion==62),11,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==71,12,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==72,13,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==81,14,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==82,15,grupo))%>%
mutate(grupo=if_else(edad>=12&ocupacion==83,16,grupo))
```

Tipo de contrato:

```
personas <- personas %>%
mutate(convenio=if_else(edad<12,0,9))%>%
mutate(convenio=if_else(edad>=12&contrato==2,1,convenio))%>%
mutate(convenio=if_else(edad>=12&(contrato==1&tipocontr==1),2,convenio))%>%
mutate(convenio=if_else(edad>=12&(contrato==1&tipocontr==2),3,convenio))%>%
mutate(convenio=if_else(edad>=12&(contrato==1&tipocontr==3),4,convenio))
```

Tipo de organización:

```
personas <- personas %>%
mutate(clas_emp=if_else(edad>=12&clas_emp==0,9,clas_emp))
```

Se guarda la tabla sociodemográfica:

```
Personas2020 <- personas %>%
select(enc, folioviv, foliohog, numren, sexo, edad, educa, pea, ocupa, sector, grupo,
convenio, gremio, clas_emp)
remove(personas)
```

Se generan los cuadros de control

Cuadro 6
Número de personas

enc	Personas
1984	75 972 257
1989	78 739 029
1992	86 900 545
1994	89 773 052
1996	92 695 009
1998	95 261 153
2000	98 310 615
2002	100 854 320
2004	102 988 791
2005	103 934 163
2006	108 578 347
2008	111 611 544
2010	114 559 931
2012	117 284 429
2014	119 906 312
2016	122 643 890
2018	125 091 790
2020	126 760 856

Fuente: Elaboración propia.

Educación:

- No aplica = 0
- Sin instrucción o primaria incompleta = 1
- Primaria completa = 2
- Secundaria completa = 3
- Bachillerato completo = 4
- Licenciatura completa = 5
- Posgrado = 6

Cuadro 7
Nivel de escolaridad
(En número de personas)

enc	0	1	2	3	4	5	6
1984	10 295 132	38 809 530	15 451 867	7 145 048	3 037 243	1 200 826	32 611
1989	9 695 878	34 684 422	17 044 863	10 919 358	4 564 244	1 725 346	104 918
1992	10 505 564	36 796 058	18 736 784	13 331 783	5 256 165	2 097 142	177 049
1994	10 674 304	36 964 499	19 406 554	14 045 722	6 153 512	2 312 444	216 017
1996	11 191 815	36 243 497	19 833 893	15 867 615	6 793 983	2 478 480	285 726
1998	10 418 272	36 259 758	21 277 393	16 862 595	7 261 249	2 902 079	279 807
2000	9 990 581	35 852 272	21 251 220	18 381 516	8 443 522	4 013 859	377 645
2002	9 785 944	35 387 877	21 638 460	20 049 176	9 929 609	3 632 412	430 842
2004	10 190 199	34 874 469	21 000 804	18 596 889	12 344 999	5 373 518	607 913
2005	9 794 419	34 195 473	21 280 126	19 297 232	13 052 654	5 649 042	665 217
2006	10 762 037	34 221 389	22 208 095	20 834 264	13 991 853	5 743 468	817 241
2008	10 066 618	34 942 864	22 678 022	22 600 863	14 602 271	5 960 436	760 470
2010	10 202 664	34 118 537	22 538 644	23 575 344	15 873 945	7 315 412	935 385
2012	10 522 801	32 890 572	22 439 142	25 778 675	17 307 370	7 216 467	1 129 402
2014	10 253 997	32 483 266	22 153 493	26 985 578	18 697 015	8 187 120	1 145 843
2016	10 219 638	30 887 121	22 302 478	29 033 178	20 149 448	8 678 545	1 373 482
2018	9 795 559	30 102 398	21 697 813	30 394 579	21 746 262	9 927 322	1 427 857
2020	8 652 239	28 658 741	21 501 295	30 872 234	24 468 380	10 973 600	1 634 367

Fuente: Elaboración propia.

Condición de actividad:

- Menores 12 años = 0
- Ocupado = 1
- Buscó trabajo = 2
- Dedicados a los quehaceres domésticos = 3
- Estudiante = 4
- Pensionado o jubilado = 5
- Incapacidad permanente (no está en condiciones físicas o mentales para trabajar) = 6
- Otros = 7

Cuadro 8
Condición de actividad
(Personas de 12 años y más)

enc	0	1	2	3	4	5	6	7	9
1984	26 163 050	22 845 004	863 877	13 873 800	10 077 865	472 767	1 103 977	571 917	NA
1989	24 170 093	26 081 079	705 233	14 725 670	10 154 497	815 882	1 301 629	784 946	NA
1992	26 130 402	30 265 685	1 169 400	15 993 889	10 132 279	1 003 868	1 357 931	847 091	NA
1994	26 142 818	33 014 439	1 326 076	15 830 112	10 277 523	1 079 612	689 310	1 413 162	NA
1996	26 991 415	35 434 975	1 612 129	15 272 800	10 181 315	1 117 204	1 082 160	1 003 011	NA
1998	26 552 466	38 154 968	1 010 417	15 514 521	10 413 055	1 350 252	1 207 380	1 058 094	NA
2000	26 116 322	39 483 706	908 256	16 522 661	11 454 992	1 578 169	1 364 555	881 954	NA
2002	25 312 392	41 741 274	1 269 203	16 331 970	12 302 080	1 566 177	1 183 220	1 148 004	NA
2004	25 764 880	42 339 263	1 690 791	16 906 447	11 655 344	1 797 047	993 345	1 839 593	2 081
2005	24 988 531	43 632 592	1 721 107	16 647 649	12 249 481	1 853 545	987 193	1 854 065	NA
2006	26 558 043	47 439 869	1 645 066	15 841 755	12 363 305	1 988 835	1 196 610	1 544 864	NA
2008	26 182 710	47 402 530	2 236 746	18 275 386	12 024 094	2 326 734	1 361 877	1 801 467	NA
2010	26 290 591	47 586 866	2 876 173	19 282 693	12 811 264	2 555 226	1 496 041	1 661 077	NA
2012	26 034 031	53 596 942	2 391 768	16 946 299	12 360 121	2 927 859	1 481 031	1 546 378	NA
2014	26 593 980	52 671 045	2 583 814	19 249 848	13 119 273	2 730 088	1 527 617	1 430 647	NA
2016	26 346 102	57 399 128	1 850 601	18 460 222	12 370 857	3 313 457	1 623 217	1 280 306	NA
2018	25 505 391	59 858 149	1 828 000	18 177 467	13 090 379	3 498 349	1 889 808	1 244 247	NA
2020	23 546 006	59 684 281	3 285 442	20 667 026	11 694 667	4 384 529	1 979 010	1 519 895	NA

Fuente: Elaboración propia.

Posición en el trabajo:

- No aplica = 0
- Obrero o empleado = 1
- Jornalero o peón de campo = 2
- Patrón o empresario, o trabajador por su cuenta = 3
- Trabajador sin retribución de una empresa que no es del hogar = 4
- Trabajador familiar en un negocio familiar = 5
- Miembro de una cooperativa (No es subordinado ni trabaja por su cuenta) = 6
- No trabaja o no especificado = 9

Cuadro 9
Posición en el trabajo
(Ocupados de 12 años y más)

enc	0	1	2	3	4	5	6	9
1984	26 163 050	11 598 729	2 342 849	6 650 388	2 072 256	103 931	59 459	26 981 595
1989	24 170 093	15 024 119	2 406 071	6 543 741	1 895 548	114 530	58 987	28 525 940
1992	26 130 402	18 185 507	1 948 357	7 696 199	2 233 734	145 551	30 591	30 530 204
1994	26 142 818	18 819 659	2 409 176	8 842 546	2 680 236	222 524	40 298	30 615 795
1996	26 991 415	19 736 709	2 542 127	9 600 071	3 245 442	281 995	28 631	30 268 619
1998	26 552 466	21 237 795	2 551 501	10 319 367	3 645 062	349 943	51 300	30 553 719
2000	26 116 322	23 207 525	2 684 719	10 271 833	3 010 716	251 827	57 086	32 710 587
2002	25 312 392	24 629 541	2 555 309	11 134 342	3 179 477	197 966	44 639	33 800 654
2004	25 764 880	27 398 342	2 223 947	10 191 995	2 267 390	215 855	41 734	34 884 648
2005	24 988 531	27 683 994	2 234 159	10 789 452	2 655 363	227 183	42 441	35 313 040
2006	26 558 043	29 466 632	2 179 255	12 439 580	2 975 255	350 369	28 778	34 580 435
2008	26 182 710	31 218 972	2 615 737	10 580 597	2 407 320	286 333	293 010	38 026 865
2010	26 290 591	31 600 347	2 953 177	10 415 234	1 920 966	313 820	381 999	40 683 797
2012	26 034 031	33 638 635	2 644 955	13 592 142	2 736 629	337 166	471 408	37 829 463
2014	26 593 980	34 907 802	3 057 307	11 410 446	2 340 259	363 726	414 854	40 817 938
2016	26 346 102	37 993 689	3 422 739	12 789 024	2 339 373	349 795	292 159	39 111 009
2018	25 505 391	39 660 751	3 663 817	13 331 409	2 382 125	341 205	331 792	39 875 300
2020	23 546 006	38 241 973	3 680 017	14 060 013	2 926 566	323 401	314 199	43 668 681

Fuente: Elaboración propia.

Rama de actividad:

- No aplica = 0
- Agricultura, ganadería, pesca, silvicultura y pesca = 1
- Minería y extracción de petróleo y gas = 2
- Electricidad, agua y gas por ductos = 3
- Construcción = 4
- Industria alimenticia = 5
- Textiles, prendas de vestir y calzado = 6
- Industria de madera = 7
- Industria de papel e impresión = 8
- Industria química y productos derivados del petróleo y del carbón = 9
- Productos de minerales no metálicos = 10
- Industria metálica básica = 11
- Fabricación de productos de madera, metálicos, maquinaria y equipo = 12
- Otras industrias manufactureras = 13
- Comercio al mayoreo y menudeo = 14
- Transporte y comunicaciones = 15
- Comunicaciones = 16
- Medios de comunicación = 17
- Servicios financieros = 18
- Servicios de alquiler = 19
- Servicios educativos, de salud y asistencia social = 20
- Servicios de alojamiento temporal y preparación de alimentos y bebidas = 21
- Otros = 22
- Trabajó fuera del país = 23
- No especificada = 99

Cuadro 10
Rama de actividad
(Ocupados de 12 años y más)

enc	0	1	2	3	4	5	6	7	8
1984	26 163 050	7 351 298	104 731	291 290	1 250 411	680 251	711 206	328 975	141 602
1989	24 170 093	6 789 929	352 366	129 209	1 683 071	836 977	944 137	100 965	278 288
1992	26 130 402	6 189 339	252 713	146 512	2 327 002	1 282 452	1 278 222	126 021	205 089
1994	26 142 818	7 274 779	172 278	165 533	2 444 196	1 559 197	1 207 657	197 601	233 132
1996	26 991 415	7 493 983	212 706	178 640	2 158 715	1 569 110	1 517 148	164 864	261 229
1998	26 552 466	7 559 396	197 884	232 379	2 099 416	1 416 229	1 773 257	247 102	339 197
2000	26 116 322	7 122 390	119 790	210 906	2 189 288	1 500 213	2 081 233	373 291	167 777
2002	25 312 392	7 034 841	132 261	157 455	2 248 232	1 745 382	1 688 561	270 616	340 775

enc	0	1	2	3	4	5	6	7	8
2004	25 764 880	5 736 820	126 574	122 566	2 142 496	2 145 930	1 549 978	230 749	376 970
2005	24 988 531	6 169 710	174 527	183 232	2 565 303	1 885 235	1 624 160	112 109	297 372
2006	26 558 043	6 597 992	148 173	248 920	3 178 391	1 863 942	1 869 133	89 117	381 926
2008	26 182 710	6 624 934	143 587	244 452	2 776 104	1 798 621	1 632 137	121 518	336 161
2010	26 290 591	6 420 989	190 612	182 709	2 421 863	1 941 771	1 547 223	158 622	320 860
2012	26 034 031	8 402 179	219 087	284 146	1 681 419	1 900 869	1 867 987	223 109	376 585
2014	26 593 980	7 713 624	252 447	190 046	1 986 463	2 233 049	1 497 345	167 656	258 052
2016	26 346 102	8 414 817	200 940	228 125	2 640 198	2 164 737	1 702 928	162 019	346 813
2018	25 505 391	8 925 235	170 351	221 330	3 052 463	2 448 111	1 519 040	179 425	370 468
2020	23 546 006	9 048 811	166 191	251 371	2 863 250	2 649 077	1 327 084	281 133	308 594

enc	9	10	11	12	13	14	15	18	19
1984	325 673	260 734	114 008	679 511	100 167	3 426 710	1 016 425	325 954	63 977
1989	492 313	266 335	106 552	1 101 994	65 518	4 354 577	818 746	354 226	76 332
1992	646 347	620 236	80 568	1 406 378	68 583	5 264 839	928 845	304 192	135 963
1994	464 685	511 663	82 706	1 536 242	129 985	5 584 207	1 128 985	308 487	120 729
1996	463 454	366 444	75 131	1 816 187	135 465	6 012 150	1 304 539	262 686	133 705
1998	668 645	357 641	96 294	1 809 587	78 665	7 212 374	1 251 160	294 692	137 521
2000	698 257	285 232	277 991	2 052 760	204 173	7 132 810	1 349 112	329 277	241 288
2002	590 312	544 472	156 094	1 769 265	150 482	8 473 363	1 479 828	288 764	217 405
2004	704 032	390 892	234 542	1 980 072	185 231	8 669 781	1 602 173	292 803	267 117
2005	541 865	466 048	110 726	1 963 211	415 710	8 596 294	1 662 450	345 060	282 117
2006	633 332	575 308	149 764	2 191 436	372 834	9 251 320	1 752 623	410 516	266 340
2008	611 938	456 639	118 000	2 143 519	407 322	9 194 257	1 589 479	424 332	270 215
2010	493 876	359 422	112 878	2 283 786	332 231	9 085 498	1 782 238	487 883	233 026
2012	440 255	408 125	100 382	2 342 337	366 377	10 578 847	1 898 569	685 104	302 239
2014	666 424	377 974	68 272	2 723 518	308 802	10 186 002	1 903 035	560 072	351 283
2016	736 010	471 111	86 154	3 294 292	406 061	10 795 218	1 971 217	579 010	308 040
2018	727 614	466 722	98 140	3 360 713	398 163	11 038 583	2 102 629	559 298	377 339
2020	711 067	491 665	102 349	3 206 471	385 077	11 557 132	2 052 849	565 950	372 796

enc	20	21	22	99	16	17	23
1984	1 760 852	689 937	3 203 900	26 981 595	NA	NA	NA
1989	2 194 263	998 160	3 824 158	28 525 940	117 259	157 621	NA
1992	2 363 664	1 244 961	5 029 797	30 530 204	135 251	202 965	NA
1994	2 858 592	1 330 296	5 396 589	30 615 795	140 323	166 577	NA
1996	2 793 622	1 647 924	6 469 434	30 268 619	181 377	216 462	NA
1998	2 899 735	1 772 746	7 250 954	30 553 719	234 197	225 897	NA
2000	3 020 120	1 701 702	8 091 655	32 710 587	43 002	291 439	NA
2002	3 269 370	1 978 163	8 723 889	33 800 654	145 237	336 507	NA
2004	3 256 393	2 453 619	9 407 333	34 884 648	109 710	349 212	4 270
2005	3 544 783	3 008 261	9 158 061	35 313 040	106 829	410 682	8 847
2006	3 761 650	3 257 658	9 966 204	34 585 225	116 105	344 210	8 185
2008	3 773 151	3 285 642	10 865 893	38 052 547	128 068	411 755	18 563
2010	3 970 206	3 368 527	11 314 723	40 691 767	102 998	397 050	68 582
2012	3 788 892	3 848 516	13 042 739	37 701 723	94 682	478 876	217 354
2014	4 059 050	3 794 055	12 575 571	40 659 669	109 229	463 938	206 756
2016	4 326 894	4 423 743	13 226 321	38 967 098	138 802	483 047	224 193
2018	4 484 016	4 935 518	13 545 416	39 851 847	135 901	470 479	147 598
2020	4 277 866	4 596 546	13 573 349	43 549 852	254 012	489 004	133 354

Fuente: Elaboración propia.

Ocupación:

- No aplica = 0
- Profesionales = 1
- Técnicos y auxiliares = 2

- Trabajadores de la educación = 3
- Trabajadores del arte, espectáculos y deportes = 4
- Funcionarios y directivos de los sectores público, privado y social = 5
- Trabajadores agropecuarios = 6
- Jefes y supervisores en la industria = 7
- Operadores, obreros o artesanos = 8
- Ayudantes o peones en industria = 9
- Conductores y operadores = 10
- Jefes y trabajadores administrativos = 11
- Empleados de comercio = 12
- Vendedores ambulantes = 13
- Trabajadores en servicios = 13
- Trabajadores domésticos = 14
- Trabajadores en seguridad = 15
- Otros = 99

Cuadro 11
Tipo de ocupación
(Ocupados de 12 años y más)

enc	0	1	2	3	4	5	6	7	8
1984	26 163 050	321 902	657 661	841 885	165 644	338 664	7 354 273	342 485	3 783 537
1989	24 170 093	696 463	869 998	1 057 273	225 019	477 732	6 921 875	489 771	4 495 092
1992	26 130 402	629 633	1 125 400	910 293	259 700	690 350	6 261 463	500 135	5 723 138
1994	26 142 818	726 878	1 370 043	1 059 224	232 386	677 186	7 230 614	427 425	5 699 156
1996	26 991 415	830 701	1 107 934	1 126 906	268 946	774 785	7 424 095	572 506	6 146 638
1998	26 552 466	939 549	1 124 709	1 230 582	283 812	835 008	7 448 891	637 922	6 705 681
2000	26 116 322	1 064 388	1 459 733	1 392 309	259 915	932 038	7 079 753	825 819	7 527 113
2002	25 312 392	1 190 903	1 218 019	1 357 627	252 849	794 809	6 927 720	701 045	7 280 294
2004	25 764 880	1 477 570	1 454 521	1 463 353	332 037	837 480	5 765 026	806 396	7 226 997
2005	24 988 531	1 277 957	1 560 777	1 571 634	338 205	1 071 809	6 034 823	791 123	7 409 242
2006	26 558 043	1 409 554	1 677 541	1 659 473	395 021	1 175 046	6 444 814	781 963	8 347 947
2008	26 182 710	1 531 405	1 792 123	1 739 130	394 260	1 056 643	6 455 226	815 844	8 136 307
2010	26 290 591	2 127 018	1 762 386	1 690 996	356 082	1 127 389	6 235 057	951 141	7 945 394
2012	26 034 031	2 061 238	2 111 175	1 659 409	532 982	1 021 678	8 332 705	971 788	8 189 162
2014	26 593 980	2 012 976	2 266 383	1 828 975	445 334	1 270 899	7 636 616	1 216 908	8 071 753
2016	26 346 102	2 235 134	2 559 599	1 791 969	494 125	1 218 675	8 239 838	1 251 383	8 590 197
2018	25 505 391	2 496 058	2 464 019	1 889 088	481 797	1 310 093	8 706 223	1 232 889	9 051 335
2020	23 546 006	2 140 381	2 611 952	1 797 442	434 520	1 177 640	8 809 888	1 224 859	8 533 894

enc	9	10	11	12	13	14	15	16	99
1984	1 091 487	788 409	1 900 186	2 587 072	341 545	1 420 731	638 724	253 407	26 981 595
1989	1 087 791	1 003 774	2 197 763	3 101 537	631 359	1 533 182	827 660	415 703	28 536 944
1992	2 076 305	1 394 918	2 611 551	3 655 658	989 341	1 583 312	1 180 300	648 442	30 530 204
1994	2 552 538	1 430 971	2 654 997	3 803 788	1 346 096	1 884 002	1 366 402	552 733	30 615 795
1996	2 344 546	1 611 649	2 864 786	4 316 230	1 383 950	2 263 200	1 636 345	761 758	30 268 619
1998	2 577 588	1 600 422	3 135 810	4 986 508	1 522 985	2 446 025	1 767 996	709 995	30 755 204
2000	2 675 043	1 815 571	3 594 086	5 061 284	1 307 101	2 215 614	1 511 319	762 620	32 710 587
2002	2 852 237	1 945 167	3 508 256	5 944 517	1 920 982	3 075 668	1 892 801	878 380	33 800 654
2004	3 034 745	2 083 292	3 506 785	6 231 852	1 974 055	3 266 996	1 919 961	958 197	34 884 648
2005	3 131 650	2 086 897	3 889 826	6 105 406	1 766 064	3 649 239	1 977 363	963 878	35 319 739

enc	9	10	11	12	13	14	15	16	99
2006	3 780 730	2 319 897	4 090 931	6 360 441	2 081 932	3 919 973	2 014 482	972 715	34 587 844
2008	3 640 506	2 201 659	4 161 911	6 185 106	1 745 340	4 372 609	2 107 628	1 048 818	38 044 319
2010	3 697 705	2 460 240	3 836 939	6 300 705	1 803 228	3 940 105	2 174 273	1 155 114	40 705 568
2012	4 165 434	2 605 252	3 978 861	7 087 127	2 571 009	4 173 509	2 588 311	1 287 290	37 913 468
2014	4 345 693	2 526 601	3 866 523	7 215 945	1 993 117	3 968 220	2 580 689	1 212 136	40 853 564
2016	5 231 216	2 678 513	4 377 491	7 480 617	2 071 827	4 727 851	2 849 810	1 348 602	39 150 941
2018	5 566 597	2 841 659	4 424 889	7 720 171	2 014 742	5 188 060	2 856 261	1 417 928	39 924 590
2020	5 951 681	2 912 646	4 532 227	8 302 950	2 121 326	4 582 904	2 596 600	1 331 022	44 152 918

Fuente: Elaboración propia.

Tipo de contratación:

- No aplica = 0
- Sin contrato = 1
- Obra o tiempo determinado = 2
- Por tiempo indeterminado = 3
- Con contrato, pero se desconoce el tipo = 4
- No trabajo o no especificado = 9

Cuadro 12
Tipo de contratación
(Personas de 12 años y más)

enc	0	1	2	3	4	9
1984	26 163 050	8 556 508	1 553 733	6 058 714	NA	33 640 252
1989	24 170 093	7 606 164	2 098 860	7 814 591	NA	37 049 321
1992	26 130 402	11 393 075	2 077 731	9 042 343	NA	38 256 994
1994	26 142 818	10 029 952	2 009 070	8 927 234	NA	42 663 978
1996	26 991 415	10 702 448	1 967 395	9 558 690	NA	43 475 061
1998	26 552 466	11 253 829	2 139 819	10 138 522	NA	45 176 517
2000	26 116 322	12 682 709	2 109 382	11 049 161	NA	46 353 041
2002	25 312 392	12 809 832	3 222 641	11 152 377	NA	48 357 078
2004	25 764 880	12 997 200	5 128 863	11 495 905	NA	47 601 943
2005	24 988 531	13 263 685	4 919 351	11 736 414	NA	49 026 182
2006	26 558 043	14 654 231	5 108 551	11 883 105	NA	50 374 417
2008	26 182 710	18 665 839	4 230 135	10 723 670	65 331	51 743 859
2010	26 290 591	19 142 747	3 715 503	11 637 877	44 611	53 728 602
2012	26 034 031	20 649 754	3 897 062	11 730 085	58 321	54 915 176
2014	26 593 980	20 219 816	4 392 920	13 579 504	NA	55 120 092
2016	26 346 102	22 614 285	4 522 789	14 534 166	NA	54 626 548
2018	25 505 391	23 513 019	4 933 916	15 074 170	NA	56 065 294
2020	23 546 006	21 559 412	4 926 880	15 611 768	NA	61 116 790

Fuente: Elaboración propia.

Pertenencia a un sindicato:

- No aplica = 0
- Sindicalizado = 1
- No sindicalizado = 2
- No trabaja o no especificado = 9

Cuadro 13
Sindicalización
(Ocupados de 12 años y más)

enc	0	1	2	9
1984	26 163 050	3 931 976	18 878 188	26 999 043
1989	24 170 093	4 768 132	21 274 648	28 526 156
1992	26 130 402	4 347 029	15 817 426	40 605 688
1994	26 142 818	3 771 636	17 457 199	42 401 399
1996	26 991 415	3 574 622	18 709 666	43 419 306
1998	26 552 466	3 794 833	19 994 463	44 919 391
2000	26 116 322	4 068 381	21 823 863	46 302 049
2002	25 312 392	4 187 750	22 997 100	48 357 078
2004	25 764 880	4 823 336	24 798 632	47 601 943
2005	24 988 531	4 768 048	25 151 402	49 026 182
2006	26 558 043	4 609 319	27 036 568	50 374 417
2008	NA	NA	NA	111 611 544
2010	NA	NA	NA	114 559 931
2012	NA	NA	NA	117 284 429
2014	NA	NA	NA	119 906 312
2016	NA	NA	NA	122 643 890
2018	NA	NA	NA	125 091 790
2020	NA	NA	NA	126 760 856

Fuente: Elaboración propia.

Tipo de organización:

- No aplica = 0
- Independiente, personas o familiar = 1
- Compañía privada = 2
- Institución del gobierno = 3
- Institución privada = 4
- No trabajo o no especificado = 5

Cuadro 14
Tipo de organización
(Ocupados de 12 años y más)

enc	0	1	2	3	4	9
1984	NA	NA	NA	NA	NA	75 972 257
1989	NA	NA	NA	NA	NA	78 739 029
1992	NA	NA	NA	NA	NA	86 900 545
1994	NA	NA	NA	NA	NA	89 773 052
1996	NA	NA	NA	NA	NA	92 695 009
1998	NA	NA	NA	NA	NA	95 261 153
2000	NA	NA	NA	NA	NA	98 310 615
2002	NA	NA	NA	NA	NA	100 854 320
2004	NA	NA	NA	NA	NA	102 988 791
2005	NA	NA	NA	NA	NA	103 934 163
2006	NA	NA	NA	NA	NA	108 578 347
2008	26 182 710	26 033 681	15 415 475	5 359 949	592 864	38 026 865
2010	26 290 591	17 068 611	14 301 672	5 247 984	553 365	51 097 708
2012	26 034 031	19 816 670	14 385 046	5 238 917	564 167	51 245 598
2014	26 593 980	15 158 227	17 034 748	5 279 040	544 863	55 295 454
2016	26 346 102	16 832 305	17 529 165	5 453 400	587 328	55 895 590
2018	25 505 391	18 135 372	18 405 145	5 374 791	525 168	57 145 923
2020	23 546 006	18 037 125	17 973 503	5 314 699	590 984	61 298 539

Fuente: Elaboración propia.

IV. Base de ingreso homologada de la ENIGH

Un primer aspecto para considerar, al momento de construir la tabla Ingresos, es analizar cómo se debe estimar un ingreso trimestral normalizado, a partir de las percepciones que el entrevistado declara haber tenido en los últimos seis meses, o una vez al año para las variables que tienen otro tipo de frecuencia. En las encuestas de 1984 al 2006 el Instituto Nacional de Estadística y Geografía (INEGI) no distingue, al momento de estimar el ingreso trimestral normalizado, las percepciones que se obtienen una vez al año, por ejemplo, aguinaldo y reparto de utilidades, de aquellas que tienen una periodización mensual, y aplica la misma fórmula para todas. Por otro lado, a partir del 2005 el instituto aplicó un factor de corrección, probablemente con el propósito de obtener una cifra en términos reales. Con el objetivo de homologar y aplicar en todas las encuestas el mismo criterio, en esta investigación se estimó el ingreso trimestral de acuerdo con la siguiente fórmula:

$$ing_{trim} = \left[\frac{ing_1 + ing_2 + ing_3 + ing_4 + ing_5 + ing_6}{6} \right] * 3$$

En donde ing_1 son los ingresos en el mes de la entrevista, ing_2 el ingreso del mes anterior, y así sucesivamente, hasta llegar al sexto mes ing_6 . Para los ingresos anuales usó la siguiente fórmula:

$$ing_{trim} = \left[\frac{ing_1 + ing_2 + ing_3 + ing_4 + ing_5 + ing_6}{12} \right] * 3$$

En virtud de que, además de los criterios para la construcción de variables, han cambiado las claves a lo largo de las encuestas de 1984 a 2020, se ha tenido que llevar a cabo un ejercicio de conciliación y homologación. Por ejemplo, en los levantamientos de 1984 a 1996 había una sola clave para los sueldos, salarios y horas extras (P001); en cambio, a partir de la encuesta de 1998, se desglosó en dos: sueldos, salarios y jornal (P001), y horas extras (P004) (en el cuadro AM.17 del anexo metodológico, se presenta el detalle de la asignación de claves originales de la ENIGH, para las 38 variables construidas).

Cuadro 15
Variables que conforman la tabla de Ingresos

Clave	Descripción
enc	Año de la encuesta
folioviv	Folio de la vivienda
foliohog	Folio del hogar
numren	Número de persona
X001	Sueldos, salarios, jornal y horas extras
X002	Comisiones, propinas y destajo
X003	Aguinaldo, incentivos, gratificaciones, premios y bonos
X004	Primas vacacionales y otras prestaciones en efectivo
X005	Reparto de utilidades
X006	Ingresos por un trabajo secundario subordinado
X007	Ingreso de cooperativas, sociedades y cuasi sociedades
X008	Ingreso de cooperativas, sociedades y cuasi sociedades por un trabajo secundario
X009	Ingresos por negocios del hogar de tipo industrial
X010	Ingresos por negocios del hogar de tipo comercial
X011	Ingresos por negocios del hogar de tipo servicios
X012	Ingresos por negocios del hogar de tipo agrícolas
X013	Ingresos por negocios del hogar de tipo pecuario, forestal, pesca y caza
X014	Ingresos por negocios del hogar en un trabajo secundario
X015	Ingresos de otros trabajos (monetarios y no monetarios)
X016	Alquiler de tierras y terrenos
X017	Alquiler de casas, edificios e inmuebles
X018	Intereses provenientes de inversiones a plazo fijo
X019	Intereses provenientes de cuentas de ahorro
X020	Intereses provenientes de préstamos a terceros
X021	Intereses provenientes de acciones, bonos y cédulas
X022	Alquiler de marcas, patentes y derechos de autor
X023	Otros ingresos por renta de la propiedad no considerados anteriormente
X024	Jubilaciones o pensiones
X025	Indemnizaciones recibidas contra riesgos a terceros
X026	Indemnizaciones por despido y accidentes de trabajo
X027	Becas provenientes de instituciones privadas o de organismos no gubernamentales
X028	Becas provenientes del gobierno
X029	Regalos o donativos de organizaciones no gubernamentales
X030	Ingresos provenientes de otros países
X031	Beneficios de los programas Progresá y Oportunidades
X032	Beneficios del programa Procampo
X033	Beneficios del programa Adultos mayores
X034	Beneficios del programa Alimentario
X035	Beneficios del programa empleo temporal
X036	Donativos del gobierno y beneficios de otros programas sociales
X037	Otros ingresos no considerados anteriormente
X038	Ingresos de personas menores de 12 años

Fuente: Elaboración propia.

Por último, se incluyó en esta base a los ingresos por retiros de capital, herencias, seguros de vida, préstamos y ventas de activos físicos y financieros, mismos que si bien no serán considerados en la construcción del ingreso corriente, por las razones que se han expuesto, si serán utilizados para el análisis como percepciones de capital (véase cuadros 4.15 y AM.18 del anexo metodológico).

Cuadro 16
Variables de percepciones de capital de la tabla de Ingresos

Clave	Descripción
enc	Año de la encuesta
folioviv	Folio de la vivienda
foliohog	Folio del hogar
numren	Número de persona
X039	Retiro de inversiones, ahorros, tandas, cajas de ahorro entre otros.
X040	Herencias, dotes, loterías, juegos de azar y legados
X041	Seguros de vida
X042	Ingresos por préstamos
X043	Ingresos por préstamos hipotecarios
X044	Venta de monedas, metales preciosos, joyas y obras de arte, entre otros
X045	Venta de acciones, bonos y cédulas
X046	Venta de marcas, patentes y derechos de autor
X047	Venta de casas, terrenos y condominios, entre otros
X048	Venta de maquinaria, equipos y animales
X049	Venta de vehículos y aparatos eléctricos
X050	Otras percepciones financieras y de capital

Fuente: Elaboración propia.

A. Tabla de ingreso de 1984

```
ingresos <- read.dbf("Bases/1984/ingresos.dbf", as.is=TRUE)
colnames(ingresos) <- tolower(colnames(ingresos))
```

Cálculo del ingreso trimestral:

```
ingresos[5:9] [is.na(ingresos[5:9])] <- 0
ingresos[11:12] [is.na(ingresos[11:12])] <- 0
ingresos <- ingresos %>%
  mutate (t=((in_m1+in_m2+in_m3+in_m4+in_m5+in_mp)/2)/1000)%>%
  mutate (t=if_else(clave=="P005",((in_m1+in_m2+in_m3+in_m4+in_m5+in_mp)/4)/1000,t))%
  >%
  mutate (t=if_else(clave=="P024",((in_m1+in_m2+in_m3+in_m4+in_m5+in_mp)/4)/1000,t))%>%
  mutate (t=if_else(clave=="P025",((in_m1+in_m2+in_m3+in_m4+in_m5+in_mp)/4)/1000,t))
ingresos <- ingresos %>% arrange(clave)
ingresos <- ingresos %>% pivot_wider(id_cols=c(folio,num_ren),values_from=t,names_from=clave)
```

Se agrega edad:

```
personas <- read.dbf("Bases/1984/pobla.dbf", as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
personas <- personas %>% select(folio,num_ren,edad)
ingresos <- ingresos %>% left_join(personas,by=c("folio","num_ren"))
remove(personas)
```

Lista de las variables para considerar en la construcción:

```
ls(ingresos)

[1] "edad"      "folio"     "num_ren"   "P001"      "P002"      "P003"      "P004"
[8] "P005"      "P008"      "P009"      "P010"      "P011"      "P012"      "P013"
[15] "P015"      "P016"      "P017"      "P018"      "P019"      "P020"      "P022"
[22] "P023"      "P024"      "P025"      "P026"      "P027"      "P028"      "P029"
[29] "P030"      "P031"      "P032"      "P033"      "P034"
```

Propuesta de construcción:

```

ingresos[3:33][is.na(ingresos[3:33])] <- 0
ingresos <- ingresos %>%
  mutate(X001=if_else(edad>=12,P001,0))%>%
  mutate(X001a=0)%>%
  mutate(X001b=0)%>%
  mutate(X002=if_else(edad>=12,P002,0))%>%
  mutate(X002a=0)%>%
  mutate(X002b=0)%>%
  mutate(X003=if_else(edad>=12,P003,0))%>%
  mutate(X004=if_else(edad>=12,P004,0))%>%
  mutate(X005=if_else(edad>=12,P005,0))%>%
  mutate(X006=0)%>%
  mutate(X007=if_else(edad>=12,P022,0))%>%
  mutate(X007a=0)%>%
  mutate(X007b=0)%>%
  mutate(X007c=0)%>%
  mutate(X008=0)%>%
  mutate(X008a=0)%>%
  mutate(X008b=0)%>%
  mutate(X008c=0)%>%
  mutate(X009=P008)%>%
  mutate(X010=P009)%>%
  mutate(X011=P010+P011)%>%
  mutate(X012=P012)%>%
  mutate(X013=P013)%>%
  mutate(X014=0)%>%
  mutate(X015=0)%>%
  mutate(X016=P015)%>%
  mutate(X017=P016)%>%
  mutate(X018=P017)%>%
  mutate(X019=P018)%>%
  mutate(X020=P019)%>%
  mutate(X021=P020)%>%
  mutate(X021a=0)%>%
  mutate(X022=0)%>%
  mutate(X023=0)%>%
  mutate(X024=P023)%>%
  mutate(X024a=0)%>%
  mutate(X024b=0)%>%
  mutate(X025=P024)%>%
  mutate(X026=P025)%>%
  mutate(X027=P026)%>%
  mutate(X028=0)%>%
  mutate(X029=P027)%>%
  mutate(X030=P028)%>%
  mutate(X031=0)%>%
  mutate(X032=0)%>%
  mutate(X033=0)%>%
  mutate(X034=0)%>%
  mutate(X035=0)%>%
  mutate(X036=0)%>%
  mutate(X037=0)%>%
  mutate(X038=if_else(edad<12,(P001+P002+P003+P004+P005+P022),0))%>%

```



```
mutate(X039=P032)%>%
mutate(X040=0)%>%
mutate(X041=0)%>%
mutate(X042=P033)%>%
mutate(X043=0)%>%
mutate(X044=0)%>%
mutate(X045=0)%>%
mutate(X046=0)%>%
mutate(X047=P030)%>%
mutate(X048=P031)%>%
mutate(X049=P029)%>%
mutate(X050=P034)
```

Se guarda la tabla de ingreso:

```
ingresos <- ingresos %>%
  mutate(enc=1984)%>%
  mutate(folioviv=substr(folio,5,11))%>%
  mutate(folioviv=as.numeric(folioviv))%>%
  mutate(foliohog=1)%>%
  mutate(numren=as.numeric(num_ren))
Ingreso1984 <- ingresos %>%
  select(enc,folioviv,foliohog,numren,X001,X001a,X001b,X002,X002a,X002b,X003,X004,
        X005,X006,X007,X007a,X007b,X007c,X008,X008a,X008b,X008c,X009,X010,X011,
        X012,X013,X014,X015,X016,X017,X018,X019,X020,X021,X021a,X022,X023,X024,
        X024a,X024b,X025,X026,X027,X028,X029,X030,X031,X032,X033,X034,X035,X036,
        X037,X038,X039,X040,X041,X042,X043,X044,X045,X046,X047,X048,X049,X050)
remove(ingresos)
```

B. Tabla de ingreso de 1989

```
ingresos <- read.dbf("Bases/1989/ingresos.dbf",as.is=TRUE)
colnames(ingresos) <- tolower(colnames(ingresos))
```

Cálculo del ingreso trimestral:

```
ingresos[5:11] [is.na(ingresos[5:11])] <- 0
ingresos <- ingresos %>%
  mutate (t=((in_m1+in_m2+in_m3+in_m4+in_m5+in_mp)/2)/1000)%>%
  mutate (t=if_else(clave=="P005",((in_m1+in_m2+in_m3+in_m4+in_m5+in_mp)/4)/1000,t))%>%
  mutate (t=if_else(clave=="P024",((in_m1+in_m2+in_m3+in_m4+in_m5+in_mp)/4)/1000,t))%>%
  mutate (t=if_else(clave=="P025",((in_m1+in_m2+in_m3+in_m4+in_m5+in_mp)/4)/1000,t))
ingresos <- ingresos %>%
  arrange(clave)%>%
  pivot_wider(id_cols=c(folio,num_ren),values_from=t,names_from=clave)
```

Se agrega edad:

```
personas <- read.dbf("Bases/1989/pobla.dbf",as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
personas <- personas %>% select(folio,num_ren,edad)
ingresos <- ingresos %>% left_join(personas,by=c("folio","num_ren"))
remove(personas)
```

Lista de las variables para considerar en la construcción:

```
ls(ingresos)
```

[1]	"edad"	"folio"	"num_ren"	"P001"	"P002"	"P003"	"P004"
[8]	"P005"	"P008"	"P009"	"P010"	"P011"	"P012"	"P013"
[15]	"P015"	"P016"	"P017"	"P018"	"P019"	"P020"	"P022"
[22]	"P023"	"P024"	"P025"	"P026"	"P027"	"P028"	"P029"
[29]	"P030"	"P031"	"P032"	"P033"	"P034"		

Propuesta de construcción:

```

ingresos[3:33][is.na(ingresos[3:33])] <- 0
ingresos <- ingresos %>%
  mutate(X001=if_else(edad>=12,P001,0))%>%
  mutate(X001a=0)%>%
  mutate(X001b=0)%>%
  mutate(X002=if_else(edad>=12,P002,0))%>%
  mutate(X002a=0)%>%
  mutate(X002b=0)%>%
  mutate(X003=if_else(edad>=12,P003,0))%>%
  mutate(X004=if_else(edad>=12,P004,0))%>%
  mutate(X005=if_else(edad>=12,P005,0))%>%
  mutate(X006=0)%>%
  mutate(X007=if_else(edad>=12,P022,0))%>%
  mutate(X007a=0)%>%
  mutate(X007b=0)%>%
  mutate(X007c=0)%>%
  mutate(X008=0)%>%
  mutate(X008a=0)%>%
  mutate(X008b=0)%>%
  mutate(X008c=0)%>%
  mutate(X009=P008)%>%
  mutate(X010=P009)%>%
  mutate(X011=P010+P011)%>%
  mutate(X012=P012)%>%
  mutate(X013=P013)%>%
  mutate(X014=0)%>%
  mutate(X015=0)%>%
  mutate(X016=P015)%>%
  mutate(X017=P016)%>%
  mutate(X018=P017)%>%
  mutate(X019=P018)%>%
  mutate(X020=P019)%>%
  mutate(X021=P020)%>%
  mutate(X021a=0)%>%
  mutate(X022=0)%>%
  mutate(X023=0)%>%
  mutate(X024=P023)%>%
  mutate(X024a=0)%>%
  mutate(X024b=0)%>%
  mutate(X025=P024)%>%
  mutate(X026=P025)%>%
  mutate(X027=P026)%>%
  mutate(X028=0)%>%
  mutate(X029=P027)%>%
  mutate(X030=P028)%>%

```

```

mutate(X031=0)%>%
mutate(X032=0)%>%
mutate(X033=0)%>%
mutate(X034=0)%>%
mutate(X035=0)%>%
mutate(X036=0)%>%
mutate(X037=0)%>%
mutate(X038=if_else(edad<12,(P001+P002+P003+P004+P005+P022),0))%>%
mutate(X039=P032)%>%
mutate(X040=0)%>%
mutate(X041=0)%>%
mutate(X042=P033)%>%
mutate(X043=0)%>%
mutate(X044=0)%>%
mutate(X045=0)%>%
mutate(X046=0)%>%
mutate(X047=P030)%>%
mutate(X048=P031)%>%
mutate(X049=P029)%>%
mutate(X050=P034)

```

Se guarda la tabla de ingreso:

```

ingresos <- ingresos %>%
  mutate(enc=1989)%>%
  mutate(folioviv=substr(folio,5,11))%>%
  mutate(folioviv=as.numeric(folioviv))%>%
  mutate(foliohog=1)%>%
  mutate(numren=as.numeric(num_ren))
Ingreso1989 <- ingresos %>%
  select(enc,folioviv,foliohog,numren,X001,X001a,X001b,X002,X002a,X002b,X003,X004,
        X005,X006,X007,X007a,X007b,X007c,X008,X008a,X008b,X008c,X009,X010,X011,
        X012,X013,X014,X015,X016,X017,X018,X019,X020,X021,X021a,X022,X023,X024,
        X024a,X024b,X025,X026,X027,X028,X029,X030,X031,X032,X033,X034,X035,X036,
        X037,X038,X039,X040,X041,X042,X043,X044,X045,X046,X047,X048,X049,X050)
remove(ingresos)

```

C. Tabla de ingreso de 1992

```

ingresos <- read.dbf("Bases/1992/ingresos.dbf",as.is=TRUE)
colnames(ingresos) <- tolower(colnames(ingresos))

```

Cálculo del ingreso trimestral. Nota: En las encuestas de 1992 a 2006, necesitamos diferenciar entre el ingreso del trabajo principal, el secundario y del resto de los trabajos:

```

ingresos[6:12][is.na(ingresos[6:12])] <- 0
ingresos <- ingresos %>%
  mutate(t=((mes1+mes2+mes3+mes4+mes5+ing_mp)/2)/1000)%>%
  mutate(t=if_else(clave=="P005",((mes1+mes2+mes3+mes4+mes5+ing_mp)/4)/1000,t))%>%
  mutate(t=if_else(clave=="P023",((mes1+mes2+mes3+mes4+mes5+ing_mp)/4)/1000,t))%>%
  mutate(t=if_else(clave=="P024",((mes1+mes2+mes3+mes4+mes5+ing_mp)/4)/1000,t))
ingresos$numren[is.na(ingresos$numren)] <- "01"
ingresos$ocupacion[is.na(ingresos$ocupacion)] <- "0"
ingresos <- ingresos %>%
  mutate(clave_ocu=paste(clave,ocupacion,sep=".")%>%

```

```
arrange(clave_ocu)%>%
pivot_wider(id_cols=c(folio,numren),values_from=t,names_from=clave_ocu)
```

Se agrega edad:

```
personas <- read.dbf("Bases/1992/pobla.dbf",as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
personas <- personas %>% select(folio,numren,edad)
ingresos <- ingresos %>% left_join(personas,by=c("folio","numren"))
remove(personas)
```

Lista de las variables para considerar en la construcción:

```
ls(ingresos)

[1] "edad"      "folio"     "numren"    "P001.0"    "P001.1"    "P001.2"    "P002.0"    "P002.1"
[9] "P002.2"    "P003.0"    "P003.1"    "P003.2"    "P004.0"    "P004.1"    "P004.2"    "P005.0"
[17] "P005.1"    "P005.2"    "P006.0"    "P006.1"    "P006.2"    "P007.1"    "P007.2"    "P008.0"
[25] "P008.1"    "P008.2"    "P009.0"    "P009.1"    "P009.2"    "P010.1"    "P010.2"    "P011.0"
[33] "P011.1"    "P011.2"    "P012.1"    "P012.2"    "P013.0"    "P013.1"    "P013.2"    "P014.0"
[41] "P014.1"    "P014.2"    "P015.0"    "P015.1"    "P016.0"    "P016.1"    "P017.0"    "P017.1"
[49] "P018.0"    "P018.1"    "P019.0"    "P019.1"    "P020.0"    "P021.0"    "P022.0"    "P022.1"
[57] "P023.0"    "P023.1"    "P024.0"    "P024.1"    "P025.0"    "P025.1"    "P026.0"    "P026.1"
[65] "P027.0"    "P027.1"    "P028.0"    "P028.1"    "P029.0"    "P029.1"    "Q001.0"    "Q002.0"
[73] "Q003.0"    "Q004.0"    "Q005.0"    "Q006.0"    "Q007.0"    "Q008.0"    "Q009.0"    "Q010.0"
[81] "Q011.0"    "Q012.0"    "Q013.0"    "Q014.0"    "Q015.0"    "Q016.0"    "Q017.0"    "Q018.0"
[89] "Q019.0"    "Q020.0"    "Q021.0"    "T021.0"
```

Propuesta de construcción:

```
ingresos[3:91][is.na(ingresos[3:91])] <- 0
ingresos <- ingresos %>%
  mutate(X001=if_else(edad>=12,P001.1,0))%>%
  mutate(X001a=0)%>%
  mutate(X001b=0)%>%
  mutate(X002=if_else(edad>=12,P002.1,0))%>%
  mutate(X002a=0)%>%
  mutate(X002b=0)%>%
  mutate(X003=if_else(edad>=12,P003.1,0))%>%
  mutate(X004=if_else(edad>=12,P004.1,0))%>%
  mutate(X005=if_else(edad>=12,P005.1,0))%>%
  mutate(X006=if_else(edad>=12,P001.2+P002.2+P003.2+P004.2+P005.2,0))%>%
  mutate(X007=if_else(edad>=12,P006.1,0))%>%
  mutate(X007a=0)%>%
  mutate(X007b=0)%>%
  mutate(X007c=0)%>%
  mutate(X008=if_else(edad>=12,P006.2,0))%>%
  mutate(X008a=0)%>%
  mutate(X008b=0)%>%
  mutate(X008c=0)%>%
  mutate(X009=P007.1)%>%
  mutate(X010=P008.1)%>%
  mutate(X011=P009.1+P010.1)%>%
  mutate(X012=P011.1)%>%
  mutate(X013=P013.1)%>%
  mutate(X014=P007.2+P008.2+P009.2+P010.2+P011.2+P013.2)%>%
  mutate(X015=0)%>%
  mutate(X016=P015.0+P015.1)%>%
```

```

mutate(X017=P016.0+P016.1)%>%
mutate(X018=P017.0+P017.1)%>%
mutate(X019=P018.0+P018.1)%>%
mutate(X020=P019.0+P019.1)%>%
mutate(X021=P020.0)%>%
mutate(X021a=0)%>%
mutate(X022=P021.0)%>%
mutate(X023=0)%>%
mutate(X024=P022.0+P022.1)%>%
mutate(X024a=0)%>%
mutate(X024b=0)%>%
mutate(X025=P023.0+P023.1)%>%
mutate(X026=P024.0+P024.1)%>%
mutate(X027=P025.0+P025.1)%>%
mutate(X028=0)%>%
mutate(X029=P026.0+P026.1)%>%
mutate(X030=P027.0+P027.1)%>%
mutate(X031=0)%>%
mutate(X032=0)%>%
mutate(X033=0)%>%
mutate(X034=0)%>%
mutate(X035=0)%>%
mutate(X036=0)%>%
mutate(X037=P001.0+P002.0+P003.0+P004.0+P005.0+P006.0+P008.0+P009.0+P011.0+P013.0+
  P029.0+P029.1)%>%
mutate(X038=if_else(edad<12,P001.0+P001.1+P001.2+P002.0+P002.1+P002.2+P003.0+P003.1
+
  P003.2+P004.0+P004.1+P004.2+P005.0+P005.1+P005.2+P006.0+P006.1
+
  P006.2,0))%>%
mutate(X039=Q013.0)%>%
mutate(X040=0)%>%
mutate(X041=0)%>%
mutate(X042=Q014.0+Q016.0)%>%
mutate(X043=0)%>%
mutate(X044=Q017.0)%>%
mutate(X045=0)%>%
mutate(X046=0)%>%
mutate(X047=Q019.0)%>%
mutate(X048=Q020.0)%>%
mutate(X049=P028.0+P028.1)%>%
mutate(X050=Q018.0+Q021.0)

```

Se guarda la tabla de ingreso:

```

ingresos <- ingresos %>%
  mutate(enc=1992)%>%
  mutate(folioviv=substr(folio,5,10))%>%
  mutate(foliohog=substr(folio,11,11))%>%
  mutate(folioviv=as.numeric(folioviv))%>%
  drop_na(folioviv)%>%
  mutate(foliohog=as.numeric(foliohog))%>%
  mutate(foliohog=foliohog+1)%>%
  mutate(numren=as.numeric(numren))
Ingreso1992 <- ingresos %>%
  select(enc,folioviv,foliohog,numren,X001,X001a,X001b,X002,X002a,X002b,X003,X004,

```

```
X005,X006,X007,X007a,X007b,X007c,X008,X008a,X008b,X008c,X009,X010,X011,
X012,X013,X014,X015,X016,X017,X018,X019,X020,X021,X021a,X022,X023,X024,
X024a,X024b,X025,X026,X027,X028,X029,X030,X031,X032,X033,X034,X035,X036,
X037,X038,X039,X040,X041,X042,X043,X044,X045,X046,X047,X048,X049,X050)
remove(ingresos)
```

D. Tabla de ingreso de 1994

```
ingresos <- read.dbf("Bases/1994/ingresos.dbf",as.is=TRUE)
colnames(ingresos) <- tolower(colnames(ingresos))
```

Cálculo del ingreso trimestral:

```
ingresos[6:12][is.na(ingresos[6:12])] <- 0
ingresos <- ingresos %>%
  mutate(t=(ing1+mes2+mes3+mes4+mes5+mes6)/2)%>%
  mutate(t=if_else(clave=="P005",(ing1+mes2+mes3+mes4+mes5+mes6)/4,t))%>%
  mutate(t=if_else(clave=="P024",(ing1+mes2+mes3+mes4+mes5+mes6)/4,t))%>%
  mutate(t=if_else(clave=="P025",(ing1+mes2+mes3+mes4+mes5+mes6)/4,t))
ingresos <- ingresos %>%
  mutate(empleo=as.numeric(empleo))%>%
  mutate(empleo=if_else(empleo>=3,3,empleo))
agregado <- ingresos %>% group_by(folio,num_ren,empleo,clave)%>%
  summarise(t=sum(t),.groups="drop")
remove(ingresos)
agregado <- agregado %>%
  mutate(clave_ocu=paste(clave,empleo,sep="."))%>%
  arrange(clave_ocu)%>%
  pivot_wider(id_cols=c(folio,num_ren),values_from=t,names_from=clave_ocu)
```

Se agrega edad:

```
personas <- read.dbf("Bases/1994/pobla.dbf",as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
personas <- personas %>% select(folio,num_ren,edad)
agregado <- agregado %>% left_join(personas,by=c("folio","num_ren"))
remove(personas)
```

Lista de las variables para considerar en la construcción:

```
ls(agregado)

[1] "edad"      "folio"     "num_ren"   "P001.0"    "P001.1"    "P001.2"    "P001.3"
[8] "P002.0"    "P002.1"    "P002.2"    "P002.3"    "P003.0"    "P003.1"    "P003.2"
[15] "P004.0"    "P004.1"    "P004.2"    "P004.3"    "P005.0"    "P005.1"    "P005.2"
[22] "P006.0"    "P006.1"    "P006.2"    "P006.3"    "P007.0"    "P007.1"    "P007.2"
[29] "P007.3"    "P008.0"    "P008.1"    "P008.2"    "P008.3"    "P009.0"    "P009.1"
[36] "P009.2"    "P009.3"    "P010.0"    "P010.1"    "P010.2"    "P010.3"    "P015.1"
[43] "P015.2"    "P015.3"    "P016.0"    "P016.1"    "P017.0"    "P017.1"    "P018.0"
[50] "P018.1"    "P019.0"    "P019.1"    "P020.0"    "P020.1"    "P021.0"    "P021.1"
[57] "P022.0"    "P022.1"    "P023.0"    "P023.1"    "P024.1"    "P025.0"    "P025.1"
[64] "P026.0"    "P026.1"    "P027.0"    "P027.1"    "P028.0"    "P028.1"    "P029.0"
[71] "P029.1"    "P030.0"    "P030.1"    "P031.0"    "P031.1"    "P032.0"    "P032.1"
[78] "P033.0"    "P033.1"    "P034.0"    "P034.1"    "P035.0"    "P035.1"    "P038.0"
[85] "P038.1"    "P039.0"    "P039.1"    "P040.0"    "P040.1"    "P042.0"    "P042.1"
[92] "P043.0"    "P043.1"    "P043.2"
```

Propuesta de construcción:

```

agregado[3:93] [is.na(agregado[3:93])] <- 0
agregado <- agregado %>%
  mutate(X001=if_else(edad>=12,P001.1,0))%>%
  mutate(X001a=0)%>%
  mutate(X001b=0)%>%
  mutate(X002=if_else(edad>=12,P002.1,0))%>%
  mutate(X002a=0)%>%
  mutate(X002b=0)%>%
  mutate(X003=if_else(edad>=12,P003.1,0))%>%
  mutate(X004=if_else(edad>=12,P004.1,0))%>%
  mutate(X005=if_else(edad>=12,P005.1,0))%>%
  mutate(X006=if_else(edad>=12,P001.2+P002.2+P003.2+P004.2+P005.2,0))%>%
  mutate(X007=if_else(edad>=12,P015.1,0))%>%
  mutate(X007a=0)%>%
  mutate(X007b=if_else(edad>=12,P015.1,0))%>%
  mutate(X007c=0)%>%
  mutate(X008=if_else(edad>=12,P015.2,0))%>%
  mutate(X008a=0)%>%
  mutate(X008b=if_else(edad>=12,P015.2,0))%>%
  mutate(X008c=0)%>%
  mutate(X009=P006.1)%>%
  mutate(X010=P007.1)%>%
  mutate(X011=P008.1)%>%
  mutate(X012=P009.1)%>%
  mutate(X013=P010.1)%>%
  mutate(X014=P006.2+P007.2+P008.2+P009.2+P010.2)%>%
  mutate(X015=P001.3+P002.3+P004.3+P006.3+P007.3+P008.3+P009.3+P010.3+P015.3)%>%
  mutate(X016=P016.0+P016.1)%>%
  mutate(X017=P017.0+P017.1)%>%
  mutate(X018=P018.0+P018.1)%>%
  mutate(X019=P019.0+P019.1)%>%
  mutate(X020=P020.0+P020.1)%>%
  mutate(X021=P021.0+P021.1)%>%
  mutate(X021a=0)%>%
  mutate(X022=P022.0+P022.1)%>%
  mutate(X023=0)%>%
  mutate(X024=P023.0+P023.1)%>%
  mutate(X024a=0)%>%
  mutate(X024b=0)%>%
  mutate(X025=P024.1)%>%
  mutate(X026=P025.0+P025.1)%>%
  mutate(X027=P026.0+P026.1)%>%
  mutate(X028=0)%>%
  mutate(X029=P027.0+P027.1)%>%
  mutate(X030=P028.0+P028.1)%>%
  mutate(X031=0)%>%
  mutate(X032=P043.0+P043.1+P043.2)%>%
  mutate(X033=0)%>%
  mutate(X034=0)%>%
  mutate(X035=0)%>%
  mutate(X036=0)%>%
  mutate(X037=P001.0+P002.0+P003.0+P004.0+P005.0+P006.0+P007.0+P008.0+P009.0+P010.0+
    P030.0+P030.1)%>%

```



```
mutate(X038=if_else(edad<12,P001.0+P001.1+P001.2+P001.3+P002.0+P002.1+P002.2+P002.3+
  P003.0+P003.1+P003.2+P004.0+P004.1+P004.2+P004.3+P005.0+P005.1+
  P005.2+P015.1+P015.2+P015.3,0))%>%
mutate(X039=P031.0+P031.1)%>%
mutate(X040=0)%>%
mutate(X041=0)%>%
mutate(X042=P032.0+P032.1+P033.0+P033.1)%>%
mutate(X043=P040.0+P040.1)%>%
mutate(X044=P034.0+P034.1)%>%
mutate(X045=P035.0+P035.1)%>%
mutate(X046=0)%>%
mutate(X047=P038.0+P038.1)%>%
mutate(X048=P039.0+P039.1)%>%
mutate(X049=P029.0+P029.1)%>%
mutate(X050=P042.0+P042.1)
```

Se guarda la tabla de ingreso:

```
agregado <- agregado %>%
  mutate(enc=1994)%>%
  mutate(folioviv=substr(folio,5,10))%>%
  mutate(foliohog=substr(folio,11,11))%>%
  mutate(folioviv=as.numeric(folioviv))%>%
  mutate(foliohog=as.numeric(foliohog))%>%
  mutate(foliohog=foliohog+1)%>%
  mutate(numren=as.numeric(num_ren))
Ingreso1994 <- agregado %>%
  select(enc,folioviv,foliohog,numren,X001,X001a,X001b,X002,X002a,X002b,X003,X004,
    X005,X006,X007,X007a,X007b,X007c,X008,X008a,X008b,X008c,X009,X010,X011,
    X012,X013,X014,X015,X016,X017,X018,X019,X020,X021,X021a,X022,X023,X024,
    X024a,X024b,X025,X026,X027,X028,X029,X030,X031,X032,X033,X034,X035,X036,
    X037,X038,X039,X040,X041,X042,X043,X044,X045,X046,X047,X048,X049,X050)
remove(agregado)
```

E. Tabla de ingreso de 1996

```
ingresos <- read.dbf("Bases/1996/ingresos.dbf",as.is=TRUE)
colnames(ingresos) <- tolower(colnames(ingresos))
```

Cálculo del ingreso trimestral:

```
ingresos[6:12][is.na(ingresos[6:12])] <- 0
ingresos <- ingresos %>%
  mutate(t=(ing1+ing2+ing3+ing4+ing5+ing6)/2)%>%
  mutate(t=if_else(clave=="P005",(ing1+ing2+ing3+ing4+ing5+ing6)/4,t))%>%
  mutate(t=if_else(clave=="P024",(ing1+ing2+ing3+ing4+ing5+ing6)/4,t))%>%
  mutate(t=if_else(clave=="P025",(ing1+ing2+ing3+ing4+ing5+ing6)/4,t))
ingresos <- ingresos %>%
  mutate(empleo=as.numeric(empleo))%>%
  mutate(empleo=if_else(empleo>=3 & empleo<=7,3,empleo))%>%
  mutate(empleo=if_else(empleo==8 | empleo==9,0,empleo))
agregado <- ingresos %>% group_by(folio,num_ren,empleo,clave)%>%
  summarise(t=sum(t),.groups="drop")
remove(ingresos)
agregado <- agregado %>%
  mutate(clave_ocu=paste(clave,empleo,sep="."))%>%
```



```
arrange(clave_ocu)%>%
pivot_wider(id_cols=c(folio,num_ren),values_from=t,names_from=clave_ocu)
```

Se agrega edad:

```
personas <- read.dbf("Bases/1996/pobla.dbf",as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
personas <- personas %>% select(folio,num_ren,edad)
agregado <- agregado %>% left_join(personas,by=c("folio","num_ren"))
remove(personas)
```

Lista de las variables para considerar en la construcción:

```
ls(agregado)

[1] "edad"      "folio"      "num_ren"    "P001.0"     "P001.1"     "P001.2"     "P001.3"
[8] "P002.0"     "P002.1"     "P002.2"     "P002.3"     "P003.0"     "P003.1"     "P003.2"
[15] "P003.3"     "P004.0"     "P004.1"     "P004.2"     "P004.3"     "P005.0"     "P005.1"
[22] "P005.2"     "P006.0"     "P006.1"     "P006.2"     "P006.3"     "P007.0"     "P007.1"
[29] "P007.2"     "P007.3"     "P008.0"     "P008.1"     "P008.2"     "P008.3"     "P009.0"
[36] "P009.1"     "P009.2"     "P009.3"     "P010.0"     "P010.1"     "P010.2"     "P010.3"
[43] "P011.0"     "P011.1"     "P011.2"     "P011.3"     "P012.0"     "P012.1"     "P012.2"
[50] "P012.3"     "P013.0"     "P013.1"     "P013.2"     "P013.3"     "P014.0"     "P014.1"
[57] "P015.0"     "P015.1"     "P015.3"     "P016.0"     "P016.1"     "P017.0"     "P017.1"
[64] "P018.0"     "P018.1"     "P019.0"     "P019.1"     "P020.0"     "P020.1"     "P021.1"
[71] "P022.1"     "P023.0"     "P023.1"     "P024.0"     "P024.1"     "P025.0"     "P025.1"
[78] "P026.0"     "P026.1"     "P027.0"     "P027.1"     "P028.0"     "P028.1"     "P029.0"
[85] "P029.1"     "P029.2"     "P030.0"     "P030.1"     "P031.0"     "P031.1"     "P032.0"
[92] "P032.1"     "P033.0"     "P033.1"     "P034.0"     "P034.1"     "P035.0"     "P035.1"
[99] "P038.0"     "P038.1"     "P039.0"     "P039.1"     "P040.0"     "P040.1"     "P041.1"
[106] "P042.0"     "P042.1"     "P043.0"     "P043.1"     "P043.2"
```

Propuesta de construcción:

```
agregado[3:109] [is.na(agregado[3:109])] <- 0
agregado <- agregado %>%
  mutate(X001=if_else(edad>=12,P001.1,0))%>%
  mutate(X001a=0)%>%
  mutate(X001b=0)%>%
  mutate(X002=if_else(edad>=12,P002.1,0))%>%
  mutate(X002a=0)%>%
  mutate(X002b=0)%>%
  mutate(X003=if_else(edad>=12,P003.1,0))%>%
  mutate(X004=if_else(edad>=12,P004.1,0))%>%
  mutate(X005=if_else(edad>=12,P005.1,0))%>%
  mutate(X006=if_else(edad>=12,P001.2+P002.2+P003.2+P004.2+P005.2,0))%>%
  mutate(X007=if_else(edad>=12,P014.1+P015.1,0))%>%
  mutate(X007a=if_else(edad>=12,P014.1,0))%>%
  mutate(X007b=if_else(edad>=12,P015.1,0))%>%
  mutate(X007c=0)%>%
  mutate(X008=0)%>%
  mutate(X008a=0)%>%
  mutate(X008b=0)%>%
  mutate(X008c=0)%>%
  mutate(X009=P006.1)%>%
  mutate(X010=P007.1)%>%
  mutate(X011=P008.1)%>%
  mutate(X012=P009.1)%>%
```

```

mutate(X013=P010.1+P011.1+P012.1+P013.1)%>%
mutate(X014=P006.2+P007.2+P008.2+P009.2+P010.2+P011.2+P012.2+P013.2)%>%
mutate(X015=P001.3+P002.3+P004.3+P006.3+P007.3+P008.3+P009.3+P010.3+P015.3)%>%
mutate(X016=P016.0+P016.1)%>%
mutate(X017=P017.0+P017.1)%>%
mutate(X018=P018.0+P018.1)%>%
mutate(X019=P019.0+P019.1)%>%
mutate(X020=P020.0+P020.1)%>%
mutate(X021=P021.1)%>%
mutate(X021a=0)%>%
mutate(X022=P022.1)%>%
mutate(X023=0)%>%
mutate(X024=P023.0+P023.1)%>%
mutate(X024a=0)%>%
mutate(X024b=0)%>%
mutate(X025=P024.0+P024.1)%>%
mutate(X026=P025.0+P025.1)%>%
mutate(X027=P026.0+P026.1)%>%
mutate(X028=0)%>%
mutate(X029=P027.0+P027.1)%>%
mutate(X030=P028.0+P028.1)%>%
mutate(X031=0)%>%
mutate(X032=P029.0+P029.1+P029.2)%>%
mutate(X033=0)%>%
mutate(X034=0)%>%
mutate(X035=0)%>%
mutate(X036=0)%>%
mutate(X037=P001.0+P002.0+P003.0+P004.0+P005.0+P006.0+P007.0+P008.0+P009.0+P010.0+
      P011.0+P012.0+P013.0+P014.0+P015.0+P031.0+P031.1)%>%
mutate(X038=if_else(edad<12,P001.0+P001.1+P001.2+P001.3+P002.0+P002.1+P002.2+P002.3
+
      P003.0+P003.1+P003.2+P003.3+P004.0+P004.1+P004.2+P004.3+P005.0
+
      P005.1+P005.2+P014.0+P014.1+P015.0+P015.1+P015.3,0))%>%
mutate(X039=P032.0+P032.1)%>%
mutate(X040=P038.0+P038.1)%>%
mutate(X041=P042.0+P042.1)%>%
mutate(X042=P033.0+P033.1+P034.0+P034.1)%>%
mutate(X043=P040.1)%>%
mutate(X044=P035.0+P035.1)%>%
mutate(X045=0)%>%
mutate(X046=0)%>%
mutate(X047=P039.0+P039.1)%>%
mutate(X048=P040.0+P040.1)%>%
mutate(X049=P030.0+P030.1)%>%
mutate(X050=P043.0+P043.1+P043.2)

```

Se guarda la tabla de ingreso:

```

agregado <- agregado %>%
  mutate(enc=1996)%>%
  mutate(folioviv=substr(folio,5,10))%>%
  mutate(foliohog=substr(folio,11,11))%>%
  mutate(folioviv=as.numeric(folioviv))%>%
  mutate(foliohog=as.numeric(foliohog))%>%
  mutate(foliohog=foliohog+1)%>%

```

```
mutate(numren=as.numeric(num_ren))
Ingreso1996 <- agregado %>%
  select(enc, folioviv, foliohog, numren, X001, X001a, X001b, X002, X002a, X002b, X003, X004,
         X005, X006, X007, X007a, X007b, X007c, X008, X008a, X008b, X008c, X009, X010, X011,
         X012, X013, X014, X015, X016, X017, X018, X019, X020, X021, X021a, X022, X023, X024,
         X024a, X024b, X025, X026, X027, X028, X029, X030, X031, X032, X033, X034, X035, X036,
         X037, X038, X039, X040, X041, X042, X043, X044, X045, X046, X047, X048, X049, X050)
remove(agregado)
```

F. Tabla de ingreso de 1998

```
ingresos <- read.dbf("Bases/1998/ingresos.dbf", as.is=TRUE)
colnames(ingresos) <- tolower(colnames(ingresos))
```

Cálculo del ingreso trimestral:

```
ingresos[6:12] [is.na(ingresos[6:12])] <- 0
ingresos <- ingresos %>%
  mutate (t=(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/2)%>%
  mutate (t=if_else(clave=="P009", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate (t=if_else(clave=="P029", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate (t=if_else(clave=="P030", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))
ingresos <- ingresos %>%
  mutate (empleo=as.numeric(empleo))%>%
  mutate (empleo=if_else(empleo>=3 & empleo<=7, 3, empleo))%>%
  mutate (empleo=if_else(empleo==8 | empleo==9, 0, empleo))
agregado <- ingresos %>% group_by(folio, num_ren, empleo, clave)%>%
  summarise(t=sum(t), .groups="drop")
remove(ingresos)
agregado <- agregado %>%
  mutate(clave_ocu=paste(clave, empleo, sep=".")%>%
  arrange(clave_ocu)%>%
  pivot_wider(id_cols=c(folio, num_ren), values_from=t, names_from=clave_ocu)
```

Se agrega edad:

```
personas <- read.dbf("Bases/1998/pobla.dbf", as.is=TRUE)
personas <- personas %>% select(folio, num_ren, edad)
agregado <- agregado %>% left_join(personas, by=c("folio", "num_ren"))
remove(personas)
```

Lista de las variables para considerar en la construcción:

```
ls(agregado)

[1] "edad"      "folio"     "num_ren"   "P001.0"    "P001.1"    "P001.2"    "P001.3"
[8] "P002.0"    "P002.1"    "P002.2"    "P002.3"    "P003.0"    "P003.1"    "P003.2"
[15] "P003.3"    "P004.0"    "P004.1"    "P004.2"    "P005.0"    "P005.1"    "P005.2"
[22] "P006.0"    "P006.1"    "P006.2"    "P006.3"    "P007.0"    "P007.1"    "P007.2"
[29] "P008.0"    "P008.1"    "P008.2"    "P009.0"    "P009.1"    "P009.2"    "P010.0"
[36] "P010.1"    "P010.2"    "P010.3"    "P011.0"    "P011.1"    "P011.2"    "P011.3"
[43] "P012.0"    "P012.1"    "P012.2"    "P012.3"    "P013.0"    "P013.1"    "P013.2"
[50] "P013.3"    "P014.0"    "P014.1"    "P014.2"    "P014.3"    "P015.0"    "P015.1"
[57] "P015.2"    "P015.3"    "P016.0"    "P016.1"    "P016.2"    "P016.3"    "P017.0"
[64] "P017.1"    "P017.2"    "P017.3"    "P018.1"    "P018.2"    "P018.3"    "P019.1"
[71] "P019.2"    "P019.3"    "P020.0"    "P020.1"    "P021.0"    "P021.1"    "P022.0"
[78] "P022.1"    "P023.0"    "P023.1"    "P024.0"    "P024.1"    "P025.1"    "P026.1"
```

```
[85] "P027.0" "P027.1" "P028.0" "P028.1" "P030.0" "P030.1" "P031.0"
[92] "P031.1" "P032.0" "P032.1" "P033.0" "P033.1" "P034.0" "P034.1"
[99] "P035.0" "P035.1" "P036.0" "P036.1" "P037.0" "P037.1" "P038.0"
[106] "P038.1" "P039.0" "P039.1" "P040.0" "P040.1" "P043.0" "P043.1"
[113] "P044.0" "P044.1" "P045.0" "P045.1" "P046.1" "P047.0" "P047.1"
[120] "P048.0" "P048.1" "P490.0" "P490.1" "P490.2" "P490.3"
```

Propuesta de construcción:

```
agregado[3:124] [is.na(agregado[3:124])] <- 0
agregado <- agregado %>%
  mutate(X001=if_else(edad>=12,P001.1+P004.1,0))%>%
  mutate(X001a=if_else(edad>=12,P001.1,0))%>%
  mutate(X001b=if_else(edad>=12,P004.1,0))%>%
  mutate(X002=if_else(edad>=12,P002.1+P003.1,0))%>%
  mutate(X002a=if_else(edad>=12,P003.1,0))%>%
  mutate(X002b=if_else(edad>=12,P002.1,0))%>%
  mutate(X003=if_else(edad>=12,P006.1+P007.1,0))%>%
  mutate(X004=if_else(edad>=12,P008.1,0))%>%
  mutate(X005=if_else(edad>=12,P009.1,0))%>%
  mutate(X006=if_else(edad>=12,P001.2+P002.2+P003.2+P004.2+P005.2+P006.2+P007.2+P008.
2+
    P009.2,0))%>%
  mutate(X007=if_else(edad>=12,P018.1+P019.1,0))%>%
  mutate(X007a=if_else(edad>=12,P018.1,0))%>%
  mutate(X007b=if_else(edad>=12,P019.1,0))%>%
  mutate(X007c=0)%>%
  mutate(X008=if_else(edad>=12,P018.2+P019.2,0))%>%
  mutate(X008a=if_else(edad>=12,P018.2,0))%>%
  mutate(X008b=if_else(edad>=12,P019.2,0))%>%
  mutate(X008c=0)%>%
  mutate(X009=P010.1)%>%
  mutate(X010=P011.1)%>%
  mutate(X011=P012.1)%>%
  mutate(X012=P013.1)%>%
  mutate(X013=P014.1+P015.1+P016.1+P017.1)%>%
  mutate(X014=P010.2+P011.2+P012.2+P013.2+P014.2+P015.2+P016.2)%>%
  mutate(X015=P001.3+P002.3+P003.3+P006.3+P010.3+P011.3+P012.3+P013.3+P014.3+P015.3+
    P016.3+P017.3+P018.3+P019.3)%>%
  mutate(X016=P020.0+P020.1)%>%
  mutate(X017=P021.0+P021.1)%>%
  mutate(X018=P022.0+P022.1)%>%
  mutate(X019=P023.0+P023.1)%>%
  mutate(X020=P024.0+P024.1)%>%
  mutate(X021=P025.1)%>%
  mutate(X021a=0)%>%
  mutate(X022=P026.1)%>%
  mutate(X023=P027.0+P027.1)%>%
  mutate(X024=P028.0+P028.1)%>%
  mutate(X024a=0)%>%
  mutate(X024b=0)%>%
  mutate(X025=0)%>%
  mutate(X026=P030.0+P030.1)%>%
  mutate(X027=P031.0+P031.1)%>%
  mutate(X028=0)%>%
  mutate(X029=P032.0+P032.1)%>%
```

```

mutate(X030=P033.0+P033.1)%>%
mutate(X031=0)%>%
mutate(X032=P034.0+P034.1)%>%
mutate(X033=0)%>%
mutate(X034=0)%>%
mutate(X035=0)%>%
mutate(X036=0)%>%
mutate(X037=P001.0+P002.0+P003.0+P004.0+P005.0+P006.0+P007.0+P008.0+P009.0+P010.0+
  P011.0+P012.0+P013.0+P014.0+P015.0+P016.0+P017.0+P036.0+P036.1)%>%
mutate(X038=if_else(edad<12,P001.0+P001.1+P001.2+P001.3+P002.0+P002.1+P002.2+P002.3
+
  P003.0+P003.1+P003.2+P003.3+P004.0+P004.1+P004.2+P005.0+P005.1
+
  P005.2+P006.0+P006.1+P006.2+P006.3+P007.0+P007.1+P007.2+P008.0
+
  P008.1+P008.2+P009.0+P009.1+P009.2+P018.1+P018.2+P018.3+P019.1
+
  P019.2+P019.3,0))%>%
mutate(X039=P037.0+P037.1)%>%
mutate(X040=P043.0+P043.1)%>%
mutate(X041=P047.0+P047.1)%>%
mutate(X042=P038.0+P038.1+P039.0+P039.1)%>%
mutate(X043=P046.1)%>%
mutate(X044=P040.0+P040.1)%>%
mutate(X045=0)%>%
mutate(X046=0)%>%
mutate(X047=P044.0+P044.1)%>%
mutate(X048=P045.0+P045.1)%>%
mutate(X049=P035.0+P035.1)%>%
mutate(X050=P048.0+P048.1)

```

Se guarda la tabla de ingreso:

```

agregado <- agregado %>%
  mutate(enc=1998)%>%
  mutate(folioviv=substr(folio,5,10))%>%
  mutate(foliohog=substr(folio,11,11))%>%
  mutate(folioviv=as.numeric(folioviv))%>%
  mutate(foliohog=as.numeric(foliohog))%>%
  mutate(foliohog=foliohog+1)%>%
  mutate(numren=as.numeric(num_ren))
Ingreso1998 <- agregado %>%
  select(enc, folioviv, foliohog, numren, X001, X001a, X001b, X002, X002a, X002b, X003, X004,
    X005, X006, X007, X007a, X007b, X007c, X008, X008a, X008b, X008c, X009, X010, X011,
    X012, X013, X014, X015, X016, X017, X018, X019, X020, X021, X021a, X022, X023, X024,
    X024a, X024b, X025, X026, X027, X028, X029, X030, X031, X032, X033, X034, X035, X036,
    X037, X038, X039, X040, X041, X042, X043, X044, X045, X046, X047, X048, X049, X050)
remove(agregado)

```

G. Tabla de ingreso de 2000

```

ingresos <- read.dbf("Bases/2000/ingresos.dbf", as.is=TRUE)
colnames(ingresos) <- tolower(colnames(ingresos))

```

Cálculo del ingreso trimestral:

```
ingresos[6:12] [is.na(ingresos[6:12])] <- 0
ingresos <- ingresos %>%
  mutate(t=(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/2)%>%
  mutate(t=if_else(clave=="P009", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P029", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P030", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))
ingresos <- ingresos %>%
  mutate(empleo=as.numeric(empleo))%>%
  mutate(empleo=if_else(empleo>=3 & empleo<=7, 3, empleo))%>%
  mutate(empleo=if_else(empleo==8 | empleo==9, 0, empleo))
agregado <- ingresos %>% group_by(folio, num_ren, empleo, clave)%>%
  summarise(t=sum(t), .groups="drop")
remove(ingresos)
agregado <- agregado %>%
  mutate(clave_ocu=paste(clave, empleo, sep=".")%>%
  arrange(clave_ocu)%>%
  pivot_wider(id_cols=c(folio, num_ren), values_from=t, names_from=clave_ocu)
```

Se agrega edad:

```
personas <- read.dbf("Bases/2000/pobla.dbf", as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
personas <- personas %>% select(folio, num_ren, edad)
agregado <- agregado %>% left_join(personas, by=c("folio", "num_ren"))
remove(personas)
```

Lista de las variables para considerar en la construcción:

```
ls(agregado)

[1] "edad"      "folio"     "num_ren"   "P001.0"    "P001.1"    "P001.2"    "P001.3"
[8] "P002.0"    "P002.1"    "P002.2"    "P003.0"    "P003.1"    "P003.2"    "P003.3"
[15] "P004.0"    "P004.1"    "P004.2"    "P005.0"    "P005.1"    "P006.0"    "P006.1"
[22] "P006.2"    "P007.0"    "P007.1"    "P007.2"    "P008.0"    "P008.1"    "P008.2"
[29] "P008.3"    "P009.0"    "P009.1"    "P009.2"    "P010.0"    "P010.1"    "P010.2"
[36] "P010.3"    "P011.0"    "P011.1"    "P011.2"    "P011.3"    "P012.0"    "P012.1"
[43] "P012.2"    "P012.3"    "P013.0"    "P013.1"    "P013.2"    "P013.3"    "P014.0"
[50] "P014.1"    "P014.2"    "P014.3"    "P015.0"    "P015.1"    "P016.0"    "P016.1"
[57] "P016.2"    "P016.3"    "P017.0"    "P017.1"    "P017.2"    "P017.3"    "P018.1"
[64] "P019.1"    "P020.0"    "P020.1"    "P021.0"    "P021.1"    "P022.0"    "P022.1"
[71] "P023.0"    "P023.1"    "P024.0"    "P024.1"    "P025.0"    "P025.1"    "P027.0"
[78] "P027.1"    "P028.0"    "P028.1"    "P030.0"    "P030.1"    "P031.0"    "P031.1"
[85] "P032.0"    "P032.1"    "P033.0"    "P033.1"    "P034.0"    "P034.1"    "P035.0"
[92] "P035.1"    "P036.0"    "P036.1"    "P037.0"    "P037.1"    "P038.0"    "P038.1"
[99] "P039.0"    "P039.1"    "P040.0"    "P040.1"    "P043.0"    "P043.1"    "P044.0"
[106] "P044.1"    "P045.1"    "P046.1"    "P047.0"    "P048.1"    "P490.0"    "P490.1"
[113] "P490.2"    "P490.3"    "P491.0"    "P491.2"
```

Propuesta de construcción:

```
agregado[3:115] [is.na(agregado[3:115])] <- 0
agregado <- agregado %>%
  mutate(X001=if_else(edad>=12, P001.1+P004.1, 0))%>%
  mutate(X001a=if_else(edad>=12, P001.1, 0))%>%
  mutate(X001b=if_else(edad>=12, P004.1, 0))%>%
  mutate(X002=if_else(edad>=12, P002.1+P003.1, 0))%>%
```

```

mutate(X002a=if_else(edad>=12,P003.1,0))%>%
mutate(X002b=if_else(edad>=12,P002.1,0))%>%
mutate(X003=if_else(edad>=12,P005.1+P006.1+P007.1,0))%>%
mutate(X004=if_else(edad>=12,P008.1,0))%>%
mutate(X005=if_else(edad>=12,P009.1,0))%>%
mutate(X006=if_else(edad>=12,P001.2+P002.2+P003.2+P004.2+P006.2+P007.2+P008.2+P009.
2,0))%>%
mutate(X007=if_else(edad>=12,P018.1+P019.1,0))%>%
mutate(X007a=if_else(edad>=12,P018.1,0))%>%
mutate(X007b=if_else(edad>=12,P019.1,0))%>%
mutate(X007c=0)%>%
mutate(X008=0)%>%
mutate(X008a=0)%>%
mutate(X008b=0)%>%
mutate(X008c=0)%>%
mutate(X009=P010.1)%>%
mutate(X010=P011.1)%>%
mutate(X011=P012.1)%>%
mutate(X012=P013.1)%>%
mutate(X013=P014.1+P015.1+P016.1+P017.1)%>%
mutate(X014=P010.2+P011.2+P012.2+P013.2+P014.2+P016.2)%>%
mutate(X015=P001.3+P003.3+P008.3+P010.3+P011.3+P012.3+P013.3+P014.3+P016.3+P017.3)%
>%
mutate(X016=P020.0+P020.1)%>%
mutate(X017=P021.0+P021.1)%>%
mutate(X018=P022.0+P022.1)%>%
mutate(X019=P023.0+P023.1)%>%
mutate(X020=P024.0+P024.1)%>%
mutate(X021=P025.0+P025.1)%>%
mutate(X021a=0)%>%
mutate(X022=0)%>%
mutate(X023=P027.0+P027.1)%>%
mutate(X024=P028.0+P028.1)%>%
mutate(X024a=0)%>%
mutate(X024b=0)%>%
mutate(X025=0)%>%
mutate(X026=P030.0+P030.1)%>%
mutate(X027=P031.0+P031.1)%>%
mutate(X028=0)%>%
mutate(X029=P032.0+P032.1)%>%
mutate(X030=P033.0+P033.1)%>%
mutate(X031=0)%>%
mutate(X032=P034.0+P034.1)%>%
mutate(X033=0)%>%
mutate(X034=0)%>%
mutate(X035=0)%>%
mutate(X036=0)%>%
mutate(X037=P001.0+P002.0+P003.0+P004.0+P005.0+P006.0+P007.0+P008.0+P009.0+P010.0+
P011.0+P012.0+P013.0+P014.0+P015.0+P016.0+P017.0+P036.0+P036.1)%>%
mutate(X038=if_else(edad<12,P001.0+P001.1+P001.2+P001.3+P002.0+P002.1+P002.2+P003.0
+
P003.1+P003.2+P003.3+P004.0+P004.1+P004.2+P005.0+P005.1+P006.0
+
P006.1+P006.2+P007.0+P007.1+P007.2+P008.0+P008.1+P008.2+P008.3
+

```



```

P009.0+P009.1+P009.2+P018.1+P019.1,0))%>%
mutate(X039=P037.0+P037.1)%>%
mutate(X040=P043.0+P043.1)%>%
mutate(X041=P047.0)%>%
mutate(X042=P038.0+P038.1+P039.0+P039.1)%>%
mutate(X043=P046.1)%>%
mutate(X044=P040.0+P040.1)%>%
mutate(X045=0)%>%
mutate(X046=0)%>%
mutate(X047=P044.0+P044.1)%>%
mutate(X048=P045.1)%>%
mutate(X049=P035.0+P035.1)%>%
mutate(X050=P048.1)

```

Se guarda la tabla de ingreso:

```

agregado <- agregado %>%
mutate(enc=2000)%>%
mutate(folioviv=substr(folio,5,11))%>%
mutate(foliohog=substr(folio,12,12))%>%
mutate(folioviv=as.numeric(folioviv))%>%
mutate(foliohog=as.numeric(foliohog))%>%
mutate(foliohog=foliohog+1)%>%
mutate(numren=as.numeric(num_ren))
Ingreso2000 <- agregado %>%
select(enc,folioviv,foliohog,numren,X001,X001a,X001b,X002,X002a,X002b,X003,X004,
X005,X006,X007,X007a,X007b,X007c,X008,X008a,X008b,X008c,X009,X010,X011,
X012,X013,X014,X015,X016,X017,X018,X019,X020,X021,X021a,X022,X023,X024,
X024a,X024b,X025,X026,X027,X028,X029,X030,X031,X032,X033,X034,X035,X036,
X037,X038,X039,X040,X041,X042,X043,X044,X045,X046,X047,X048,X049,X050)
remove(agregado)

```

H. Tabla de ingreso de 2002

```

ingresos <- read.dbf("Bases/2002/ingresos.dbf",as.is=TRUE)
colnames(ingresos) <- tolower(colnames(ingresos))

```

Cálculo del ingreso trimestral:

```

ingresos[8:14][is.na(ingresos[8:14])] <- 0
ingresos <- ingresos %>%
mutate(t=(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/2)%>%
mutate(t=if_else(clave=="P005",(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4,t))%>%
mutate(t=if_else(clave=="P009",(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4,t))%>%
mutate(t=if_else(clave=="P039",(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4,t))%>%
mutate(t=if_else(clave=="P040",(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4,t))%>%
mutate(t=if_else(clave=="P041",(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4,t))
ingresos <- ingresos %>%
mutate(empleo=as.numeric(empleo))%>%
mutate(empleo=if_else(empleo>=3 & empleo<=7,3,empleo))%>%
mutate(empleo=if_else(empleo==8 | empleo==9,0,empleo))
ingresos <- ingresos %>% filter(num_ren!="00")
agregado <- ingresos %>% group_by(folio,num_ren,empleo,clave)%>%
summarise(t=sum(t),.groups="drop")
remove(ingresos)
agregado <- agregado %>%

```

```
mutate(clave_ocu=paste(clave,empleo,sep="."))%>%
  arrange(clave_ocu)%>%
  pivot_wider(id_cols=c(folio,num_ren),values_from=t,names_from=clave_ocu)
```

Se agrega edad:

```
personas <- read.dbf("Bases/2002/pobla.dbf",as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
personas <- personas %>% select(folio,num_ren,edad)
agregado <- agregado %>% left_join(personas,by=c("folio","num_ren"))
remove(personas)
```

Lista de las variables para considerar en la construcción:

```
ls(agregado)

[1] "edad"      "folio"      "num_ren"    "P000.2"     "P000.3"     "P001.0"     "P001.1"
[8] "P001.2"     "P001.3"     "P002.0"     "P002.1"     "P002.2"     "P002.3"     "P003.0"
[15] "P003.1"     "P003.2"     "P003.3"     "P004.0"     "P004.1"     "P004.2"     "P005.0"
[22] "P005.1"     "P006.0"     "P006.1"     "P006.2"     "P007.0"     "P007.1"     "P007.2"
[29] "P008.0"     "P008.1"     "P008.2"     "P008.3"     "P009.0"     "P009.1"     "P009.2"
[36] "P010.0"     "P010.1"     "P010.2"     "P010.3"     "P011.0"     "P011.1"     "P011.2"
[43] "P011.3"     "P012.0"     "P012.1"     "P012.2"     "P012.3"     "P013.0"     "P013.1"
[50] "P013.2"     "P013.3"     "P014.0"     "P014.1"     "P014.2"     "P014.3"     "P015.0"
[57] "P015.1"     "P015.2"     "P016.0"     "P016.1"     "P016.2"     "P016.3"     "P017.0"
[64] "P017.1"     "P017.2"     "P017.3"     "P018.0"     "P018.1"     "P018.2"     "P019.0"
[71] "P019.1"     "P019.2"     "P020.1"     "P021.1"     "P021.2"     "P021.3"     "P022.1"
[78] "P022.2"     "P023.1"     "P023.2"     "P023.3"     "P024.0"     "P024.1"     "P027.0"
[85] "P027.1"     "P028.0"     "P028.1"     "P029.0"     "P029.1"     "P030.0"     "P030.1"
[92] "P031.0"     "P031.1"     "P032.0"     "P032.1"     "P033.1"     "P036.0"     "P036.1"
[99] "P037.0"     "P037.1"     "P038.0"     "P038.1"     "P039.0"     "P039.1"     "P040.0"
[106] "P040.1"     "P041.0"     "P041.1"     "P042.0"     "P042.1"     "P043.0"     "P043.1"
[113] "P043.2"     "P043.3"     "P044.0"     "P044.1"     "P044.2"     "P045.0"     "P045.1"
[120] "P046.0"     "P046.1"     "P046.2"     "P047.0"     "P047.1"     "P047.2"     "P047.3"
[127] "P048.0"     "P048.1"     "P049.0"     "P049.1"     "P049.2"     "P050.0"     "P050.1"
[134] "P050.2"     "P051.0"     "P051.1"     "P051.2"     "P052.0"     "P052.1"     "P053.0"
[141] "P057.0"     "P057.1"     "P058.0"     "P058.1"     "P059.0"     "P059.1"     "P061.0"
[148] "P061.1"     "P062.0"     "P062.1"     "P063.1"     "P064.0"     "P064.1"     "P065.0"
[155] "P065.1"
```

Propuesta de construcción:

```
agregado[3:154] [is.na(agregado[3:154])] <- 0
agregado <- agregado %>%
  mutate(X001=if_else(edad>=12,P001.1+P004.1,0))%>%
  mutate(X001a=if_else(edad>=12,P001.1,0))%>%
  mutate(X001b=if_else(edad>=12,P004.1,0))%>%
  mutate(X002=if_else(edad>=12,P002.1+P003.1,0))%>%
  mutate(X002a=if_else(edad>=12,P003.1,0))%>%
  mutate(X002b=if_else(edad>=12,P002.1,0))%>%
  mutate(X003=if_else(edad>=12,P005.1+P006.1+P007.1,0))%>%
  mutate(X004=if_else(edad>=12,P008.1,0))%>%
  mutate(X005=if_else(edad>=12,P009.1,0))%>%
  mutate(X006=if_else(edad>=12,P001.2+P002.2+P003.2+P004.2+P006.2+P007.2+P008.2+P009.2,0))%>%
  mutate(X007=if_else(edad>=12,P018.1+P019.1+P020.1+P021.1+P022.1+P023.1,0))%>%
  mutate(X007a=if_else(edad>=12,P018.1+P020.1+P022.1,0))%>%
  mutate(X007b=if_else(edad>=12,P019.1+P021.1+P023.1,0))%>%
```

```

mutate(X007c=0)%>%
mutate(X008=if_else(edad>=12,P018.2+P019.2+P021.2+P022.2+P023.2,0))%>%
mutate(X008a=if_else(edad>=12,P018.2+P022.2,0))%>%
mutate(X008b=if_else(edad>=12,P019.2+P021.2+P023.2,0))%>%
mutate(X008c=0)%>%
mutate(X009=P010.1)%>%
mutate(X010=P011.1)%>%
mutate(X011=P012.1)%>%
mutate(X012=P013.1)%>%
mutate(X013=P014.1+P015.1+P016.1+P017.1)%>%
mutate(X014=P010.2+P011.2+P012.2+P013.2+P014.2+P015.2+P016.2)%>%
mutate(X015=P001.3+P002.3+P003.3+P008.3+P010.3+P011.3+P012.3+P013.3+P014.3+P016.3+
      P017.3+P021.3+P023.3)%>%
mutate(X016=P024.0+P024.1)%>%
mutate(X017=P027.0+P027.1+P028.0+P028.1)%>%
mutate(X018=P029.0+P029.1)%>%
mutate(X019=P030.0+P030.1)%>%
mutate(X020=P031.0+P031.1)%>%
mutate(X021=P032.0+P032.1+P033.1)%>%
mutate(X021a=P032.0+P032.1)%>%
mutate(X022=0)%>%
mutate(X023=P036.0+P036.1)%>%
mutate(X024=P037.0+P037.1+P038.0+P038.1)%>%
mutate(X024a=P037.0+P037.1)%>%
mutate(X024b=P038.0+P038.1)%>%
mutate(X025=P039.0+P039.1)%>%
mutate(X026=P040.0+P040.1+P041.0+P041.1)%>%
mutate(X027=P042.0+P042.1)%>%
mutate(X028=P043.0+P043.1+P043.2+P043.3)%>%
mutate(X029=P044.0+P044.1+P044.2)%>%
mutate(X030=P045.0+P045.1)%>%
mutate(X031=P046.0+P046.1+P046.2)%>%
mutate(X032=P047.0+P047.1+P047.2+P047.3)%>%
mutate(X033=0)%>%
mutate(X034=0)%>%
mutate(X035=0)%>%
mutate(X036=0)%>%
mutate(X037=P001.0+P002.0+P003.0+P004.0+P005.0+P006.0+P007.0+P008.0+P009.0+P010.0+
      P011.0+P012.0+P013.0+P014.0+P015.0+P016.0+P017.0+P018.0+P019.0+P048.0+P048
      .1)%>%
      mutate(X038=if_else(edad<12,P001.0+P001.1+P001.2+P001.3+P002.0+P002.1+P002.2+
        P002.3+P003.0+P003.1+P003.2+P003.3+P004.0+P004.1+P004.2+
        P005.0+P005.1+P006.0+P006.1+P006.2+P007.0+P007.1+P007.2+
        P008.0+P008.1+P008.2+P008.3+P009.0+P009.1+P009.2+P018.0+
        P018.1+P018.2+P019.0+P019.1+P019.2+P020.1+P021.1+P021.2+
        P021.3+P022.1+P022.2+P023.1+P023.2+P023.3,0))%>%
mutate(X039=P049.0+P049.1+P049.2)%>%
mutate(X040=P057.0+P057.1+P058.0+P058.1)%>%
mutate(X041=P064.0+P064.1)%>%
mutate(X042=P050.0+P050.1+P050.2+P051.0+P051.1+P051.2)%>%
mutate(X043=P063.1)%>%
mutate(X044=P052.0+P052.1)%>%
mutate(X045=P053.0)%>%
mutate(X046=0)%>%
mutate(X047=P059.0+P059.1)%>%

```

```
mutate(X048=P061.0+P061.1)%>%
mutate(X049=P062.0+P062.1)%>%
mutate(X050=P065.0+P065.1)
```

Se guarda la tabla de ingreso:

```
agregado <- agregado %>%
  mutate(enc=2002)%>%
  mutate(folioviv=substr(folio,5,10))%>%
  mutate(foliohog=substr(folio,11,11))%>%
  mutate(folioviv=as.numeric(folioviv))%>%
  mutate(foliohog=as.numeric(foliohog))%>%
  mutate(foliohog=foliohog+1)%>%
  mutate(numren=as.numeric(num_ren))
Ingreso2002 <- agregado %>%
  select(enc, folioviv, foliohog, numren, X001, X001a, X001b, X002, X002a, X002b, X003, X004,
    X005, X006, X007, X007a, X007b, X007c, X008, X008a, X008b, X008c, X009, X010, X011,
    X012, X013, X014, X015, X016, X017, X018, X019, X020, X021, X021a, X022, X023, X024,
    X024a, X024b, X025, X026, X027, X028, X029, X030, X031, X032, X033, X034, X035, X036,
    X037, X038, X039, X040, X041, X042, X043, X044, X045, X046, X047, X048, X049, X050)
remove(agregado)
```

I. Tabla de ingreso de 2004

```
ingresos <- read.dbf("Bases/2004/ingresos.dbf", as.is=TRUE)
colnames(ingresos) <- tolower(colnames(ingresos))
```

Cálculo del ingreso trimestral:

```
ingresos[7:13][is.na(ingresos[7:13])] <- 0
ingresos <- ingresos %>%
  mutate(t=(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/2)%>%
  mutate(t=if_else(clave=="P005", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P009", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P050", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P051", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P052", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))
ingresos <- ingresos %>%
  mutate(cod_trab=as.numeric(cod_trab))%>%
  mutate(cod_trab=if_else(cod_trab>=3 & cod_trab<=7, 3, cod_trab))%>%
  mutate(cod_trab=if_else(cod_trab==8 | cod_trab==9, 0, cod_trab))
agregado <- ingresos %>% group_by(folio, num_ren, cod_trab, clave)%>%
  summarise(t=sum(t), .groups="drop")
remove(ingresos)
agregado <- agregado %>%
  mutate(clave_ocu=paste(clave, cod_trab, sep="."))%>%
  arrange(clave_ocu)%>%
  pivot_wider(id_cols=c(folio, num_ren), values_from=t, names_from=clave_ocu)
```

Se agrega edad:

```
personas <- read.dbf("Bases/2004/pobla.dbf", as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
personas <- personas %>% select(folio, num_ren, edad)
agregado <- agregado %>% left_join(personas, by=c("folio", "num_ren"))
remove(personas)
```

Lista de las variables para considerar en la construcción:

ls(agregado)

[1]	"0000.1"	"0000.2"	"edad"	"folio"	"num_ren"	"P000.0"	"P000.1"
[8]	"P000.2"	"P000.3"	"P001.0"	"P001.1"	"P001.2"	"P001.3"	"P002.0"
[15]	"P002.1"	"P002.2"	"P002.3"	"P003.0"	"P003.1"	"P003.2"	"P003.3"
[22]	"P004.0"	"P004.1"	"P004.2"	"P005.0"	"P005.1"	"P005.2"	"P006.0"
[29]	"P006.1"	"P006.2"	"P007.0"	"P007.1"	"P007.2"	"P008.0"	"P008.1"
[36]	"P008.2"	"P008.3"	"P009.0"	"P009.1"	"P009.2"	"P010.0"	"P010.1"
[43]	"P010.2"	"P010.3"	"P011.0"	"P011.1"	"P011.2"	"P011.3"	"P012.0"
[50]	"P012.1"	"P012.2"	"P012.3"	"P013.0"	"P013.1"	"P013.2"	"P013.3"
[57]	"P014.0"	"P014.1"	"P014.2"	"P014.3"	"P015.0"	"P015.1"	"P015.2"
[64]	"P015.3"	"P016.0"	"P016.1"	"P016.2"	"P016.3"	"P017.1"	"P018.1"
[71]	"P018.2"	"P018.3"	"P019.0"	"P019.1"	"P019.2"	"P021.1"	"P024.1"
[78]	"P025.1"	"P026.1"	"P027.1"	"P027.2"	"P028.0"	"P028.1"	"P028.2"
[85]	"P029.1"	"P029.2"	"P029.3"	"P030.1"	"P030.2"	"P031.1"	"P031.2"
[92]	"P035.1"	"P037.1"	"P038.0"	"P038.1"	"P038.2"	"P038.3"	"P039.0"
[99]	"P039.1"	"P039.2"	"P040.0"	"P040.1"	"P040.3"	"P041.0"	"P041.1"
[106]	"P042.0"	"P042.1"	"P043.0"	"P043.1"	"P044.0"	"P044.1"	"P045.0"
[113]	"P045.1"	"P046.0"	"P046.1"	"P047.0"	"P047.1"	"P048.0"	"P048.1"
[120]	"P048.2"	"P048.3"	"P049.0"	"P049.1"	"P050.0"	"P050.1"	"P051.0"
[127]	"P051.1"	"P052.0"	"P052.1"	"P053.0"	"P053.1"	"P054.0"	"P054.1"
[134]	"P054.2"	"P054.3"	"P055.0"	"P055.1"	"P056.0"	"P056.1"	"P056.2"
[141]	"P057.0"	"P057.1"	"P057.2"	"P057.3"	"P058.0"	"P058.1"	"P058.2"
[148]	"P059.0"	"P059.1"	"P059.2"	"P059.3"	"P060.0"	"P060.1"	"P060.2"
[155]	"P060.3"	"P061.0"	"P061.1"	"P061.2"	"P062.0"	"P062.1"	"P062.2"
[162]	"P062.3"	"P063.0"	"P063.1"	"P064.0"	"P064.1"	"P064.2"	"P065.0"
[169]	"P065.1"	"P066.0"	"P067.0"	"P067.1"	"P068.0"	"P068.1"	"P069.0"
[176]	"P069.1"	"P070.0"	"P070.1"	"P071.0"	"P071.1"	"P072.0"	"P072.1"
[183]	"P073.0"	"P073.1"	"P074.1"	"P075.0"	"P075.1"	"P076.0"	"P076.1"

Propuesta de construcción:

```

agregado[3:188] [is.na(agregado[3:188])] <- 0
agregado <- agregado %>%
  mutate(X001=if_else(edad>=12,P001.1+P004.1,0))%>%
  mutate(X001a=if_else(edad>=12,P001.1,0))%>%
  mutate(X001b=if_else(edad>=12,P004.1,0))%>%
  mutate(X002=if_else(edad>=12,P002.1+P003.1,0))%>%
  mutate(X002a=if_else(edad>=12,P003.1,0))%>%
  mutate(X002b=if_else(edad>=12,P002.1,0))%>%
  mutate(X003=if_else(edad>=12,P005.1+P006.1+P007.1,0))%>%
  mutate(X004=if_else(edad>=12,P008.1,0))%>%
  mutate(X005=if_else(edad>=12,P009.1,0))%>%
  mutate(X006=if_else(edad>=12,P001.2+P002.2+P003.2+P004.2+P005.2+P006.2+P007.2+P008.
2+
                        P009.2,0))%>%
  mutate(X007=if_else(edad>=12,P017.1+P018.1+P019.1+P021.1+P024.1+P025.1+P026.1+P027.
1+
                        P028.1+P029.1+P030.1+P031.1+P035.1+P037.1+P038.1,0))%>%
  mutate(X007a=if_else(edad>=12,P017.1+P019.1+P021.1+P024.1+P025.1+P026.1+P027.1+
                        P029.1+P030.1+P031.1+P035.1+P037.1,0))%>%
  mutate(X007b=if_else(edad>=12,P018.1+P028.1+P038.1,0))%>%
  mutate(X007c=0)%>%
  mutate(X008=if_else(edad>=12,P018.2+P019.2+P027.2+P028.2+P029.2+P030.2+P031.2+P038.
2,0))%>%
  
```

```

mutate(X008a=if_else(edad>=12,P019.2+P027.2+P029.2+P030.2+P031.2,0))%>%
mutate(X008b=if_else(edad>=12,P018.2+P028.2+P038.2,0))%>%
mutate(X008c=0)%>%
mutate(X009=P010.1)%>%
mutate(X010=P011.1)%>%
mutate(X011=P012.1)%>%
mutate(X012=P013.1)%>%
mutate(X013=P014.1+P015.1+P016.1)%>%
mutate(X014=P010.2+P011.2+P012.2+P013.2+P014.2+P015.2+P016.2)%>%
mutate(X015=P001.3+P002.3+P003.3+P008.3+P010.3+P011.3+P012.3+P013.3+P014.3+P015.3+
      P016.3+P018.3+P029.3+P038.3)%>%
mutate(X016=P039.0+P039.1)%>%
mutate(X017=P040.0+P040.1+P040.3+P041.0+P041.1)%>%
mutate(X018=P042.0+P042.1)%>%
mutate(X019=P043.0+P043.1)%>%
mutate(X020=P044.0+P044.1)%>%
mutate(X021=P045.0+P045.1)%>%
mutate(X021a=0)%>%
mutate(X022=P046.0+P046.1)%>%
mutate(X023=P046.0+P047.1)%>%
mutate(X024=P048.0+P048.1+P048.2+P048.3+P049.0+P049.1)%>%
mutate(X024a=P048.0+P048.1+P048.2+P048.3)%>%
mutate(X024b=P049.0+P049.1)%>%
mutate(X025=P050.0+P050.1)%>%
mutate(X026=P051.0+P051.1+P052.0+P052.1)%>%
mutate(X027=P053.0+P053.1)%>%
mutate(X028=P054.0+P054.1+P054.2+P054.3)%>%
mutate(X029=P055.0+P055.1+P057.0+P057.1+P057.2+P057.3)%>%
mutate(X030=P058.0+P058.1+P058.2)%>%
mutate(X031=P059.0+P059.1+P059.2+P059.3)%>%
mutate(X032=P060.0+P060.1+P060.2+P060.3)%>%
mutate(X033=0)%>%
mutate(X034=0)%>%
mutate(X035=0)%>%
mutate(X036=P056.0+P056.1+P056.2)%>%
mutate(X037=P001.0+P002.0+P003.0+P004.0+P005.0+P006.0+P007.0+P008.0+P009.0+P010.0+
      P011.0+P012.0+P013.0+P014.0+P015.0+P016.0+P019.0+P028.0+P038.0+P060.0+
      P061.1+P061.2)%>%
mutate(X038=if_else(edad<12,P001.0+P001.1+P001.2+P001.3+P002.0+P002.1+P002.2+P002.3
+
      P003.0+P003.1+P003.2+P003.3+P004.0+P004.1+P004.2+P005.0+P005.1
+
      P005.2+P006.0+P006.1+P006.2+P007.0+P007.1+P007.2+P008.0+P008.1
+
      P008.2+P008.3+P009.0+P009.1+P009.2+P017.1+P018.1+P018.2+P018.3
+
      P019.0+P019.1+P019.2+P021.1+P024.1+P025.1+P026.1+P027.1+P027.2
+
      P028.0+P028.1+P028.2+P029.1+P029.2+P029.3+P030.1+P030.2+P031.1
+
      P031.2+P035.1+P037.1+P038.0+P038.1+P038.2+P038.3,0))%>%
mutate(X039=P062.0+P062.1+P062.2+P062.3)%>%
mutate(X040=P068.0+P068.1+P069.0+P069.1)%>%
mutate(X041=P075.0+P075.1)%>%
mutate(X042=P063.0+P063.1+P064.0+P064.1+P064.2)%>%

```



```
mutate(X043=P074.1)%>%
mutate(X044=P065.0+P065.1)%>%
mutate(X045=P066.0)%>%
mutate(X046=P067.0+P067.1)%>%
mutate(X047=P070.0+P070.1+P071.0+P071.1)%>%
mutate(X048=P072.0+P072.1)%>%
mutate(X049=P073.0+P073.1)%>%
mutate(X050=P076.0+P076.1)
```

Se guarda la tabla de ingreso:

```
agregado <- agregado %>%
  mutate(enc=2004)%>%
  mutate(folioviv=substr(folio,5,10))%>%
  mutate(foliohog=substr(folio,11,11))%>%
  mutate(folioviv=as.numeric(folioviv))%>%
  mutate(foliohog=as.numeric(foliohog))%>%
  mutate(foliohog=foliohog+1)%>%
  mutate(numren=as.numeric(num_ren))
Ingreso2004 <- agregado %>%
  select(enc, folioviv, foliohog, numren, X001, X001a, X001b, X002, X002a, X002b, X003, X004,
    X005, X006, X007, X007a, X007b, X007c, X008, X008a, X008b, X008c, X009, X010, X011,
    X012, X013, X014, X015, X016, X017, X018, X019, X020, X021, X021a, X022, X023, X024,
    X024a, X024b, X025, X026, X027, X028, X029, X030, X031, X032, X033, X034, X035, X036,
    X037, X038, X039, X040, X041, X042, X043, X044, X045, X046, X047, X048, X049, X050)
remove(agregado)
```

J. Tabla de ingreso de 2005

```
ingresos <- read.dbf("Bases/2005/ingresos.dbf", as.is=TRUE)
colnames(ingresos) <- tolower(colnames(ingresos))
```

Cálculo del ingreso trimestral:

```
ingresos[7:13][is.na(ingresos[7:13])] <- 0
ingresos <- ingresos %>%
  mutate(t=(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/2)%>%
  mutate(t=if_else(clave=="P005", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P009", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P050", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P051", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P052", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))
ingresos <- ingresos %>%
  mutate(cod_trab=as.numeric(cod_trab))%>%
  mutate(cod_trab=if_else(cod_trab>=3 & cod_trab<=7, 3, cod_trab))%>%
  mutate(cod_trab=if_else(cod_trab==8 | cod_trab==9, 0, cod_trab))
agregado <- ingresos %>% group_by(folio, num_ren, cod_trab, clave)%>%
  summarise(t=sum(t), .groups="drop")
remove(ingresos)
agregado <- agregado %>%
  mutate(clave_ocu=paste(clave, cod_trab, sep="."))%>%
  arrange(clave_ocu)%>%
  pivot_wider(id_cols=c(folio, num_ren), values_from=t, names_from=clave_ocu)
```

Se agrega edad:

```
personas <- read.dbf("Bases/2005/pobla.dbf",as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
personas <- personas %>% select(folio,num_ren,edad)
agregado <- agregado %>% left_join(personas,by=c("folio","num_ren"))
remove(personas)
```

Lista de las variables para considerar en la construcción:

```
ls(agregado)
```

```
[1] "edad"      "folio"      "num_ren"    "P000.0"     "P000.1"     "P000.2"     "P000.3"
[8] "P001.0"    "P001.1"    "P001.2"    "P001.3"     "P002.0"     "P002.1"     "P002.2"
[15] "P002.3"    "P003.0"    "P003.1"    "P003.2"     "P003.3"     "P004.0"     "P004.1"
[22] "P004.2"    "P005.0"    "P005.1"    "P005.2"     "P006.0"     "P006.1"     "P006.2"
[29] "P007.0"    "P007.1"    "P007.2"    "P008.0"     "P008.1"     "P008.2"     "P009.0"
[36] "P009.1"    "P009.2"    "P010.0"    "P010.1"     "P010.2"     "P010.3"     "P011.0"
[43] "P011.1"    "P011.2"    "P011.3"    "P012.0"     "P012.1"     "P012.2"     "P012.3"
[50] "P013.0"    "P013.1"    "P013.2"    "P013.3"     "P014.0"     "P014.1"     "P014.2"
[57] "P014.3"    "P015.0"    "P015.1"    "P015.2"     "P015.3"     "P016.0"     "P016.1"
[64] "P016.2"    "P016.3"    "P017.0"    "P017.1"     "P017.2"     "P018.1"     "P018.2"
[71] "P019.1"    "P019.2"    "P020.1"    "P021.1"     "P024.1"     "P026.1"     "P027.1"
[78] "P028.0"    "P028.1"    "P028.2"    "P028.3"     "P029.0"     "P029.1"     "P029.2"
[85] "P030.0"    "P030.1"    "P031.1"    "P037.1"     "P038.0"     "P038.1"     "P038.2"
[92] "P038.3"    "P039.0"    "P039.1"    "P040.0"     "P040.1"     "P041.0"     "P041.1"
[99] "P042.0"    "P042.1"    "P043.0"    "P043.1"     "P044.0"     "P044.1"     "P045.0"
[106] "P045.1"    "P046.1"    "P047.0"    "P047.1"     "P048.0"     "P048.1"     "P049.0"
[113] "P049.1"    "P050.0"    "P050.1"    "P051.0"     "P051.1"     "P052.0"     "P052.1"
[120] "P053.0"    "P053.1"    "P054.0"    "P054.1"     "P055.0"     "P055.1"     "P056.0"
[127] "P056.1"    "P057.0"    "P057.1"    "P058.0"     "P058.1"     "P059.0"     "P059.1"
[134] "P060.0"    "P060.1"    "P061.0"    "P061.1"     "P062.0"     "P062.1"     "P063.0"
[141] "P063.1"    "P064.0"    "P064.1"    "P065.0"     "P065.1"     "P066.1"     "P067.0"
[148] "P068.0"    "P068.1"    "P069.0"    "P069.1"     "P070.0"     "P070.1"     "P071.0"
[155] "P071.1"    "P072.0"    "P072.1"    "P073.0"     "P073.1"     "P074.1"     "P075.0"
[162] "P075.1"    "P076.0"    "P076.1"
```

Propuesta de construcción:

```
agregado[3:163] [is.na(agregado[3:163])] <- 0
agregado <- agregado %>%
  mutate(X001=if_else(edad>=12,P001.1+P004.1,0))%>%
  mutate(X001a=if_else(edad>=12,P001.1,0))%>%
  mutate(X001b=if_else(edad>=12,P004.1,0))%>%
  mutate(X002=if_else(edad>=12,P002.1+P003.1,0))%>%
  mutate(X002a=if_else(edad>=12,P003.1,0))%>%
  mutate(X002b=if_else(edad>=12,P002.1,0))%>%
  mutate(X003=if_else(edad>=12,P005.1+P006.1+P007.1,0))%>%
  mutate(X004=if_else(edad>=12,P008.1,0))%>%
  mutate(X005=if_else(edad>=12,P009.1,0))%>%
  mutate(X006=if_else(edad>=12,P001.2+P002.2+P003.2+P004.2+P005.2+P006.2+P007.2+P008.
2+
    P009.2,0))%>%
  mutate(X007=if_else(edad>=12,P017.1+P018.1+P019.1+P020.1+P021.1+P024.1+P026.1+P027.
1+
    P028.1+P029.1+P030.1+P031.1+P037.1+P038.1,0))%>%
  mutate(X007a=if_else(edad>=12,P017.1+P019.1+P020.1+P021.1+P024.1+P026.1+P027.1+
```



```

                                P029.1+P030.1+P031.1+P037.1,0))%>%
mutate(X007b=if_else(edad>=12,P018.1+P028.1+P038.1,0))%>%
mutate(X007c=0)%>%
mutate(X008=if_else(edad>=12,P017.2+P018.2+P019.2+P028.2+P029.2+P038.2,0))%>%
mutate(X008a=if_else(edad>=12,P017.2+P019.2+P029.2,0))%>%
mutate(X008b=if_else(edad>=12,P018.2+P028.2+P038.2,0))%>%
mutate(X008c=0)%>%
mutate(X009=P010.1)%>%
mutate(X010=P011.1)%>%
mutate(X011=P012.1)%>%
mutate(X012=P013.1)%>%
mutate(X013=P014.1+P015.1+P016.1)%>%
mutate(X014=P010.2+P011.2+P012.2+P013.2+P014.2+P015.2+P016.2)%>%
mutate(X015=P001.3+P002.3+P003.3+P010.3+P011.3+P012.3+P013.3+P014.3+P015.3+P016.3+
                                P028.3+P038.3)%>%
mutate(X016=P039.0+P039.1)%>%
mutate(X017=P040.0+P040.1+P041.0+P041.1)%>%
mutate(X018=P042.0+P042.1)%>%
mutate(X019=P043.0+P043.1)%>%
mutate(X020=P044.0+P044.1)%>%
mutate(X021=P045.0+P045.1)%>%
mutate(X021a=0)%>%
mutate(X022=P046.1)%>%
mutate(X023=P047.0+P047.1)%>%
mutate(X024=P048.0+P048.1+P049.0+P049.1)%>%
mutate(X024a=P048.0+P048.1)%>%
mutate(X024b=P049.0+P049.1)%>%
mutate(X025=P050.0+P050.1)%>%
mutate(X026=P051.0+P051.1+P052.0+P052.1)%>%
mutate(X027=P053.0+P053.1)%>%
mutate(X028=P054.0+P054.1)%>%
mutate(X029=P055.0+P055.1+P057.0+P057.1)%>%
mutate(X030=P058.0+P058.1)%>%
mutate(X031=P059.0+P059.1)%>%
mutate(X032=P060.0+P060.1)%>%
mutate(X033=0)%>%
mutate(X034=0)%>%
mutate(X035=0)%>%
mutate(X036=P056.0+P056.1)%>%
mutate(X037=P001.0+P002.0+P003.0+P004.0+P005.0+P006.0+P007.0+P008.0+P009.0+P010.0+
                                P011.0+P012.0+P013.0+P014.0+P015.0+P016.0+P017.0+P028.0+P029.0+P030.0+
                                P038.0+P061.0+P061.1)%>%
mutate(X038=if_else(edad<12,P001.0+P001.1+P001.2+P001.3+P002.0+P002.1+P002.2+P002.3
+
                                P003.0+P003.1+P003.2+P003.3+P004.0+P004.1+P004.2+P005.0+P005.1
+
                                P005.2+P006.0+P006.1+P006.2+P007.0+P007.1+P007.2+P008.0+P008.1
+
                                P008.2+P009.0+P009.1+P009.2+P017.0+P017.1+P017.2+P018.1+P018.2
+
                                P019.1+P019.2+P020.1+P021.1+P024.1+P026.1+P027.1+P028.0+P028.1
+
                                P028.2+P028.3+P029.0+P029.1+P029.2+P030.0+P030.1+P031.1+P037.1
+
                                P038.0+P038.1+P038.2+P038.3,0))%>%

```

```
mutate(X039=P062.0+P062.1)%>%
mutate(X040=P068.0+P068.1+P069.0+P069.1)%>%
mutate(X041=P075.0+P075.1)%>%
mutate(X042=P063.0+P063.1+P064.0+P064.1)%>%
mutate(X043=P074.1)%>%
mutate(X044=P065.0+P065.1)%>%
mutate(X045=P066.1)%>%
mutate(X046=P067.0)%>%
mutate(X047=P070.0+P070.1+P071.0+P071.1)%>%
mutate(X048=P072.0+P072.1)%>%
mutate(X049=P073.0+P073.1)%>%
mutate(X050=P076.0+P076.1)
```

Se guarda la tabla de ingreso:

```
agregado <- agregado %>%
  mutate(enc=2005)%>%
  mutate(folioviv=substr(folio,5,10))%>%
  mutate(foliohog=substr(folio,11,11))%>%
  mutate(folioviv=as.numeric(folioviv))%>%
  mutate(foliohog=as.numeric(foliohog))%>%
  mutate(foliohog=foliohog+1)%>%
  mutate(numren=as.numeric(num_ren))
Ingreso2005 <- agregado %>%
  select(enc,folioviv,foliohog,numren,X001,X001a,X001b,X002,X002a,X002b,X003,X004,
    X005,X006,X007,X007a,X007b,X007c,X008,X008a,X008b,X008c,X009,X010,X011,
    X012,X013,X014,X015,X016,X017,X018,X019,X020,X021,X021a,X022,X023,X024,
    X024a,X024b,X025,X026,X027,X028,X029,X030,X031,X032,X033,X034,X035,X036,
    X037,X038,X039,X040,X041,X042,X043,X044,X045,X046,X047,X048,X049,X050)
remove(agregado)
```

K. Tabla de ingreso de 2006

```
ingresos <- read.dbf("Bases/2006/ingresos.dbf",as.is=TRUE)
colnames(ingresos) <- tolower(colnames(ingresos))
```

Cálculo del ingreso trimestral:

```
ingresos[7:13] [is.na(ingresos[7:13])] <- 0
ingresos <- ingresos %>%
  mutate (t=(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/2)%>%
  mutate (t=if_else(clave=="P005",(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4,t))%>%
  mutate (t=if_else(clave=="P009",(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4,t))%>%
  mutate (t=if_else(clave=="P050",(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4,t))%>%
  mutate (t=if_else(clave=="P051",(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4,t))%>%
  mutate (t=if_else(clave=="P052",(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4,t))
ingresos <- ingresos %>%
  mutate (cod_trab=as.numeric(cod_trab))%>%
  mutate (cod_trab=if_else(cod_trab>=3 & cod_trab<=7,3,cod_trab))%>%
  mutate (cod_trab=if_else(cod_trab==8 | cod_trab==9,0,cod_trab))
agregado <- ingresos %>% group_by(folio,num_ren,cod_trab,clave)%>%
  summarise(t=sum(t),.groups="drop")
remove(ingresos)
agregado <- agregado %>%
  mutate(clave_ocu=paste(clave,cod_trab,sep="."))%>%
```

```
arrange(clave_ocu)%>%
pivot_wider(id_cols=c(folio,num_ren),values_from=t,names_from=clave_ocu)
```

Se agrega edad:

```
personas <- read.dbf("Bases/2006/pobla.dbf",as.is=TRUE)
colnames(personas) <- tolower(colnames(personas))
personas <- personas %>% select(folio,num_ren,edad)
agregado <- agregado %>% left_join(personas,by=c("folio","num_ren"))
remove(personas)
```

Lista de las variables para considerar en la construcción:

```
ls(agregado)

[1] "edad"      "folio"      "num_ren"    "P000.0"     "P000.1"     "P000.2"     "P000.3"
[8] "P001.0"     "P001.1"     "P001.2"     "P001.3"     "P002.0"     "P002.1"     "P002.2"
[15] "P002.3"     "P003.0"     "P003.1"     "P003.2"     "P003.3"     "P004.0"     "P004.1"
[22] "P004.2"     "P005.0"     "P005.1"     "P006.0"     "P006.1"     "P006.2"     "P007.0"
[29] "P007.1"     "P007.2"     "P008.0"     "P008.1"     "P008.2"     "P008.3"     "P009.0"
[36] "P009.1"     "P009.2"     "P010.0"     "P010.1"     "P010.2"     "P010.3"     "P011.0"
[43] "P011.1"     "P011.2"     "P011.3"     "P012.0"     "P012.1"     "P012.2"     "P012.3"
[50] "P013.0"     "P013.1"     "P013.2"     "P013.3"     "P014.0"     "P014.1"     "P014.2"
[57] "P014.3"     "P015.0"     "P015.1"     "P015.2"     "P015.3"     "P016.0"     "P016.1"
[64] "P016.2"     "P016.3"     "P017.1"     "P017.2"     "P018.0"     "P018.1"     "P018.2"
[71] "P018.3"     "P019.1"     "P019.2"     "P020.1"     "P021.1"     "P022.1"     "P024.1"
[78] "P026.1"     "P027.1"     "P028.0"     "P028.1"     "P028.2"     "P028.3"     "P029.0"
[85] "P029.1"     "P029.2"     "P029.3"     "P031.1"     "P036.1"     "P037.1"     "P038.0"
[92] "P038.1"     "P038.2"     "P038.3"     "P039.0"     "P039.1"     "P040.0"     "P040.1"
[99] "P041.0"     "P041.1"     "P042.0"     "P042.1"     "P043.0"     "P043.1"     "P044.0"
[106] "P044.1"     "P045.0"     "P045.1"     "P046.1"     "P047.0"     "P047.1"     "P048.0"
[113] "P048.1"     "P049.0"     "P049.1"     "P050.1"     "P051.0"     "P051.1"     "P052.0"
[120] "P052.1"     "P053.0"     "P053.1"     "P054.0"     "P054.1"     "P055.0"     "P055.1"
[127] "P056.0"     "P056.1"     "P057.0"     "P057.1"     "P058.0"     "P058.1"     "P059.0"
[134] "P059.1"     "P060.0"     "P060.1"     "P061.0"     "P061.1"     "P062.0"     "P062.1"
[141] "P063.0"     "P063.1"     "P064.0"     "P064.1"     "P065.0"     "P065.1"     "P066.1"
[148] "P067.0"     "P068.0"     "P068.1"     "P069.0"     "P069.1"     "P070.0"     "P070.1"
[155] "P071.0"     "P071.1"     "P072.0"     "P072.1"     "P073.0"     "P073.1"     "P074.0"
[162] "P074.1"     "P075.0"     "P075.1"     "P076.0"     "P076.1"
```

Propuesta de construcción:

```
agregado[3:165] [is.na(agregado[3:165])] <- 0
agregado <- agregado %>%
  mutate(X001=if_else(edad>=12,P001.1+P004.1,0))%>%
  mutate(X001a=if_else(edad>=12,P001.1,0))%>%
  mutate(X001b=if_else(edad>=12,P004.1,0))%>%
  mutate(X002=if_else(edad>=12,P002.1+P003.1,0))%>%
  mutate(X002a=if_else(edad>=12,P003.1,0))%>%
  mutate(X002b=if_else(edad>=12,P002.1,0))%>%
  mutate(X003=if_else(edad>=12,P005.1+P006.1+P007.1,0))%>%
  mutate(X004=if_else(edad>=12,P008.1,0))%>%
  mutate(X005=if_else(edad>=12,P009.1,0))%>%
  mutate(X006=if_else(edad>=12,P001.2+P002.2+P003.2+P004.2+P006.2+P007.2+P008.2+P009.
2,0))%>%
  mutate(X007=if_else(edad>=12,P017.1+P018.1+P019.1+P020.1+P021.1+P022.1+P024.1+P026.
1+
P027.1+P028.1+P029.1+P031.1+P036.1+P037.1+P038.1,0))%>%
```

```

mutate(X007a=if_else(edad>=12,P017.1+P019.1+P020.1+P021.1+P022.1+P024.1+P026.1+
P027.1+P029.1+P031.1+P036.1+P037.1,0))%>%
mutate(X007b=if_else(edad>=12,P018.1+P028.1+P038.1,0))%>%
mutate(X007c=0)%>%
mutate(X008=if_else(edad>=12,P017.2+P018.2+P019.2+P028.2+P029.2,0))%>%
mutate(X008a=if_else(edad>=12,P017.2+P019.2+P029.2,0))%>%
mutate(X008b=if_else(edad>=12,P018.2+P028.2,0))%>%
mutate(X008c=0)%>%
mutate(X009=P010.1)%>%
mutate(X010=P011.1)%>%
mutate(X011=P012.1)%>%
mutate(X012=P013.1)%>%
mutate(X013=P014.1+P015.1+P016.1)%>%
mutate(X014=P010.2+P011.2+P012.2+P013.2+P014.2+P015.2+P016.2)%>%
mutate(X015=P001.3+P002.3+P003.3+P008.3+P010.3+P011.3+P012.3+P013.3+P014.3+P015.3
+
P016.3+P018.3+P028.3+P029.3+P038.3)%>%
mutate(X016=P039.0+P039.1)%>%
mutate(X017=P040.0+P040.1+P041.0+P041.1)%>%
mutate(X018=P042.0+P042.1)%>%
mutate(X019=P043.0+P043.1)%>%
mutate(X020=P044.0+P044.1)%>%
mutate(X021=P045.0+P045.1)%>%
mutate(X021a=0)%>%
mutate(X022=P046.1)%>%
mutate(X023=P047.0+P047.1)%>%
mutate(X024=P048.0+P048.1+P049.0+P049.1)%>%
mutate(X024a=P048.0+P048.1)%>%
mutate(X024b=P049.0+P049.1)%>%
mutate(X025=P050.1)%>%
mutate(X026=P051.0+P051.1+P052.0+P052.1)%>%
mutate(X027=P053.0+P053.1)%>%
mutate(X028=P054.0+P054.1)%>%
mutate(X029=P055.0+P055.1+P057.0+P057.1)%>%
mutate(X030=P058.0+P058.1)%>%
mutate(X031=P059.0+P059.1)%>%
mutate(X032=P060.0+P060.1)%>%
mutate(X033=0)%>%
mutate(X034=0)%>%
mutate(X035=0)%>%
mutate(X036=P056.0+P056.1)%>%
mutate(X037=P001.0+P002.0+P003.0+P004.0+P005.0+P006.0+P007.0+P008.0+P009.0+P010.0+
P011.0+P012.0+P013.0+P014.0+P015.0+P016.0+P018.0+P028.0+P029.0+P038.0+
P061.0+P061.1)%>%
mutate(X038=if_else(edad<12,P001.0+P001.1+P001.2+P001.3+P002.0+P002.1+P002.2+P002.3+
P003.0+P003.1+P003.2+P003.3+P004.0+P004.1+P004.2+P005.0+P005.1+
P006.0+P006.1+P006.2+P007.0+P007.1+P007.2+P008.0+P008.1+P008.2+
P008.3+P009.0+P009.1+P009.2+P017.1+P017.2+P018.0+P018.1+P018.2+
P018.3+P019.1+P019.2+P020.1+P021.1+P022.1+P024.1+P026.1+P027.1+
P028.0+P028.1+P028.2+P028.3+P029.0+P029.1+P029.2+P029.3+P031.1+
P036.1+P037.1+P038.0+P038.1+P038.2+P038.3,0))%>%
mutate(X039=P062.0+P062.1)%>%
mutate(X040=P068.0+P068.1+P069.0+P069.1)%>%
mutate(X041=P075.0+P075.1)%>%
mutate(X042=P063.0+P063.1+P064.0+P064.1)%>%

```

```
mutate(X043=P074.0+P074.1)%>%
mutate(X044=P065.0+P065.1)%>%
mutate(X045=P066.1)%>%
mutate(X046=P067.0)%>%
mutate(X047=P070.0+P070.1+P071.0+P071.1)%>%
mutate(X048=P072.0+P072.1)%>%
mutate(X049=P073.0+P073.1)%>%
mutate(X050=P076.0+P076.1)
```

Se guarda la tabla de ingreso:

```
agregado <- agregado %>%
  mutate(enc=2006)%>%
  mutate(folioviv=substr(folio,5,10))%>%
  mutate(foliohog=substr(folio,11,11))%>%
  mutate(folioviv=as.numeric(folioviv))%>%
  mutate(foliohog=as.numeric(foliohog))%>%
  mutate(foliohog=foliohog+1)%>%
  mutate(numren=as.numeric(num_ren))
Ingreso2006 <- agregado %>%
  select(enc,folioviv,foliohog,numren,X001,X001a,X001b,X002,X002a,X002b,X003,X004,
    X005,X006,X007,X007a,X007b,X007c,X008,X008a,X008b,X008c,X009,X010,X011,
    X012,X013,X014,X015,X016,X017,X018,X019,X020,X021,X021a,X022,X023,X024,
    X024a,X024b,X025,X026,X027,X028,X029,X030,X031,X032,X033,X034,X035,X036,
    X037,X038,X039,X040,X041,X042,X043,X044,X045,X046,X047,X048,X049,X050)
remove(agregado)
```

L. Tabla de ingreso de 2008

```
ingresos <- read.dbf ("Bases/2008/ingresos.dbf",as.is=TRUE)
colnames(ingresos) <- tolower(colnames(ingresos))
```

Cálculo del ingreso trimestral:

```
ingresos[5:17][is.na(ingresos[5:17])] <- 0
ingresos <- ingresos %>%
  mutate(t=(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/2)%>%
  mutate(t=if_else(clave=="P008",(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P009",(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P019",(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P034",(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P035",(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P036",(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P047",(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))
ingresos <- ingresos %>%
  arrange(clave)%>%
  select(folioviv,foliohog,numren,clave,t)%>%
  pivot_wider(id_cols=c(folioviv,foliohog,numren),values_from=t,names_from=clave)
```

Lista de las variables para considerar en la construcción:

```
ls(ingresos)

[1] "foliohog" "folioviv" "numren"    "P001"      "P002"      "P003"
[7] "P004"      "P005"      "P006"      "P007"      "P008"      "P009"
[13] "P011"      "P012"      "P013"      "P015"      "P016"      "P018"
[19] "P019"      "P020"      "P021"      "P022"      "P023"      "P024"
```

[25]	"P025"	"P026"	"P027"	"P028"	"P029"	"P030"
[31]	"P031"	"P032"	"P033"	"P034"	"P035"	"P036"
[37]	"P037"	"P038"	"P039"	"P040"	"P041"	"P042"
[43]	"P043"	"P044"	"P045"	"P046"	"P047"	"P048"
[49]	"P049"	"P050"	"P051"	"P052"	"P054"	"P055"
[55]	"P056"	"P057"	"P058"	"P059"	"P060"	"P061"
[61]	"P062"	"P063"	"P065"	"P066"	"P067"	"P068"
[67]	"P069"	"P070"	"P071"	"P072"	"P073"	"P074"
[73]	"P075"	"P076"	"P077"	"P078"	"P079"	"P080"

Propuesta de construcción:

```

ingresos[4:78][is.na(ingresos[4:78])] <- 0
ingresos <- ingresos %>%
  mutate(X001=P001+P004)%>%
  mutate(X001a=P001)%>%
  mutate(X001b=P004)%>%
  mutate(X002=P002+P003)%>%
  mutate(X002a=P003)%>%
  mutate(X002b=P002)%>%
  mutate(X003=P005+P006+P009)%>%
  mutate(X004=P007)%>%
  mutate(X005=P008)%>%
  mutate(X006=P018+P019)%>%
  mutate(X007=P011+P012+P013)%>%
  mutate(X007a=P011)%>%
  mutate(X007b=P012)%>%
  mutate(X007c=P013)%>%
  mutate(X008=P015+P016)%>%
  mutate(X008a=P015)%>%
  mutate(X008b=P016)%>%
  mutate(X008c=0)%>%
  mutate(X009=P067)%>%
  mutate(X010=P068)%>%
  mutate(X011=P069)%>%
  mutate(X012=P070)%>%
  mutate(X013=P071+P072+P073)%>%
  mutate(X014=P074+P075+P076+P077+P078+P079+P080)%>%
  mutate(X015=P020+P021)%>%
  mutate(X016=P023)%>%
  mutate(X017=P024+P025+P065)%>%
  mutate(X018=P026)%>%
  mutate(X019=P027)%>%
  mutate(X020=P028)%>%
  mutate(X021=P029+P047)%>%
  mutate(X021a=P047)%>%
  mutate(X022=P030)%>%
  mutate(X023=P031)%>%
  mutate(X024=P032+P033+P066)%>%
  mutate(X024a=P032+P066)%>%
  mutate(X024b=P033)%>%
  mutate(X025=P034)%>%
  mutate(X026=P035+P036)%>%
  mutate(X027=P037)%>%
  mutate(X028=P038)%>%
  mutate(X029=P039+P040)%>%

```

```
mutate(X030=P041)%>%
mutate(X031=P042)%>%
mutate(X032=P043)%>%
mutate(X033=P044)%>%
mutate(X034=0)%>%
mutate(X035=0)%>%
mutate(X036=P045)%>%
mutate(X037=P046)%>%
mutate(X038=P063)%>%
mutate(X039=P048)%>%
mutate(X040=P054+P055)%>%
mutate(X041=P061)%>%
mutate(X042=P049+P050)%>%
mutate(X043=P060)%>%
mutate(X044=P051)%>%
mutate(X045=P052)%>%
mutate(X046=0)%>%
mutate(X047=P056+P057)%>%
mutate(X048=P058)%>%
mutate(X049=P059)%>%
mutate(X050=P062)
```

Se guarda la tabla de ingreso:

```
ingresos <- ingresos %>%
  mutate(enc=2008)%>%
  mutate(folioviv=as.numeric(folioviv))%>%
  mutate(foliohog=as.numeric(foliohog))%>%
  mutate(foliohog=foliohog+1)%>%
  mutate(numren=as.numeric(numren))
Ingreso2008 <- ingresos %>%
  select(enc, folioviv, foliohog, numren, X001, X001a, X001b, X002, X002a, X002b, X003, X004,
    X005, X006, X007, X007a, X007b, X007c, X008, X008a, X008b, X008c, X009, X010, X011,
    X012, X013, X014, X015, X016, X017, X018, X019, X020, X021, X021a, X022, X023, X024,
    X024a, X024b, X025, X026, X027, X028, X029, X030, X031, X032, X033, X034, X035, X036,
    X037, X038, X039, X040, X041, X042, X043, X044, X045, X046, X047, X048, X049, X050)
remove(ingresos)
```

M. Tabla de ingreso de 2010

```
ingresos <- read.dbf ("Bases/2010/ingresos.dbf", as.is=TRUE)
colnames(ingresos) <- tolower(colnames(ingresos))
```

Cálculo del ingreso trimestral:

```
ingresos[11:17] [is.na(ingresos[11:17])] <- 0
ingresos <- ingresos %>%
  mutate(t=(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/2)%>%
  mutate(t=if_else(clave=="P008", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P009", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P015", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P016", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P034", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P035", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P036", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P050", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))
```



```

ingresos <- ingresos %>%
  arrange(clave)%>%
  select(folioviv,foliohog,numren,clave,t)%>%
  pivot_wider(id_cols=c(folioviv,foliohog,numren),values_from=t,names_from=clave)

```

Lista de las variables para considerar en la construcción:

```

ls(ingresos)

[1] "foliohog" "folioviv" "numren"    "P001"      "P002"      "P003"
[7] "P004"      "P005"      "P006"      "P007"      "P008"      "P009"
[13] "P010"      "P011"      "P012"      "P013"      "P014"      "P015"
[19] "P016"      "P017"      "P018"      "P019"      "P021"      "P022"
[25] "P023"      "P024"      "P025"      "P026"      "P027"      "P028"
[31] "P029"      "P030"      "P031"      "P032"      "P033"      "P034"
[37] "P035"      "P036"      "P037"      "P038"      "P039"      "P040"
[43] "P041"      "P042"      "P043"      "P044"      "P045"      "P046"
[49] "P047"      "P048"      "P049"      "P050"      "P051"      "P052"
[55] "P053"      "P054"      "P055"      "P056"      "P057"      "P058"
[61] "P059"      "P060"      "P061"      "P062"      "P063"      "P064"
[67] "P065"      "P066"      "P067"      "P068"      "P069"      "P070"
[73] "P071"      "P072"      "P073"      "P074"      "P075"      "P076"
[79] "P077"      "P078"      "P079"      "P080"      "P081"

```

Propuesta de construcción:

```

ingresos[4:83] [is.na(ingresos[4:83])] <- 0
ingresos <- ingresos %>%
  mutate(X001=P001+P004)%>%
  mutate(X001a=P001)%>%
  mutate(X001b=P004)%>%
  mutate(X002=P002+P003)%>%
  mutate(X002a=P003)%>%
  mutate(X002b=P002)%>%
  mutate(X003=P005+P006+P009)%>%
  mutate(X004=P007)%>%
  mutate(X005=P008)%>%
  mutate(X006=P014+P015+P016)%>%
  mutate(X007=P011+P012+P013)%>%
  mutate(X007a=P011)%>%
  mutate(X007b=P012)%>%
  mutate(X007c=P013)%>%
  mutate(X008=P018+P019)%>%
  mutate(X008a=P018)%>%
  mutate(X008b=P019)%>%
  mutate(X008c=0)%>%
  mutate(X009=P068)%>%
  mutate(X010=P069)%>%
  mutate(X011=P070)%>%
  mutate(X012=P071)%>%
  mutate(X013=P072+P073+P074)%>%
  mutate(X014=P075+P076+P077+P078+P079+P080+P081)%>%
  mutate(X015=P021+P022)%>%
  mutate(X016=P023)%>%
  mutate(X017=P024+P025)%>%
  mutate(X018=P026)%>%
  mutate(X019=P027)%>%

```



```

mutate(X020=P028)%>%
mutate(X021=P029+P050)%>%
mutate(X021a=P050)%>%
mutate(X022=P030)%>%
mutate(X023=P031)%>%
mutate(X024=P032+P033)%>%
mutate(X024a=P032)%>%
mutate(X024b=P033)%>%
mutate(X025=P034)%>%
mutate(X026=P035+P036)%>%
mutate(X027=P037)%>%
mutate(X028=P038)%>%
mutate(X029=P039+P040)%>%
mutate(X030=P041)%>%
mutate(X031=P042)%>%
mutate(X032=P043)%>%
mutate(X033=P044+P045)%>%
mutate(X034=P046)%>%
mutate(X035=P047)%>%
mutate(X036=P048)%>%
mutate(X037=P049)%>%
mutate(X038=P067)%>%
mutate(X039=P051)%>%
mutate(X040=P057+P058)%>%
mutate(X041=P065)%>%
mutate(X042=P052+P053)%>%
mutate(X043=P064)%>%
mutate(X044=P054)%>%
mutate(X045=P055)%>%
mutate(X046=P056)%>%
mutate(X047=P059+P060)%>%
mutate(X048=P061)%>%
mutate(X049=P062+P063)%>%
mutate(X050=P066)

```

Se guarda la tabla de ingreso:

```

ingresos <- ingresos %>%
  mutate(enc=2010)%>%
  mutate(folioviv=as.numeric(folioviv))%>%
  mutate(foliohog=as.numeric(foliohog))%>%
  mutate(foliohog=foliohog+1)%>%
  mutate(numren=as.numeric(numren))
Ingreso2010 <- ingresos %>%
  select(enc, folioviv, foliohog, numren, X001, X001a, X001b, X002, X002a, X002b, X003, X004,
    X005, X006, X007, X007a, X007b, X007c, X008, X008a, X008b, X008c, X009, X010, X011,
    X012, X013, X014, X015, X016, X017, X018, X019, X020, X021, X021a, X022, X023, X024,
    X024a, X024b, X025, X026, X027, X028, X029, X030, X031, X032, X033, X034, X035, X036,
    X037, X038, X039, X040, X041, X042, X043, X044, X045, X046, X047, X048, X049, X050)
remove(ingresos)

```

N. Tabla de ingreso de 2012

```
ingresos <- read.dbf ("Bases/2012/ingresos.dbf", as.is=TRUE)
colnames(ingresos) <- tolower(colnames(ingresos))
```

Cálculo del ingreso trimestral:

```
ingresos[11:17] [is.na(ingresos[11:17])] <- 0
ingresos <- ingresos %>%
  mutate(t=(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/2)%>%
  mutate(t=if_else(clave=="P008", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P009", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P015", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P016", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P034", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P035", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P036", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P050", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
ingresos <- ingresos %>%
  arrange(clave)%>%
  select(folioviv, foliohog, numren, clave, t)%>%
  pivot_wider(id_cols=c(folioviv, foliohog, numren), values_from=t, names_from=clave)
```

Lista de las variables para considerar en la construcción:

```
ls(ingresos)

[1] "foliohog" "folioviv" "numren"    "P001"      "P002"      "P003"
[7] "P004"      "P005"      "P006"      "P007"      "P008"      "P009"
[13] "P010"      "P011"      "P012"      "P013"      "P014"      "P015"
[19] "P016"      "P017"      "P018"      "P019"      "P021"      "P022"
[25] "P023"      "P024"      "P025"      "P026"      "P027"      "P028"
[31] "P029"      "P030"      "P031"      "P032"      "P033"      "P034"
[37] "P035"      "P036"      "P037"      "P038"      "P039"      "P040"
[43] "P041"      "P042"      "P043"      "P044"      "P045"      "P046"
[49] "P047"      "P048"      "P049"      "P050"      "P051"      "P052"
[55] "P053"      "P054"      "P056"      "P057"      "P058"      "P059"
[61] "P060"      "P061"      "P062"      "P063"      "P064"      "P065"
[67] "P066"      "P067"      "P068"      "P069"      "P070"      "P071"
[73] "P072"      "P073"      "P074"      "P075"      "P076"      "P077"
[79] "P078"      "P079"      "P080"      "P081"
```

Propuesta de construcción:

```
ingresos[4:82] [is.na(ingresos[4:82])] <- 0
ingresos <- ingresos %>%
  mutate(X001=P001+P004)%>%
  mutate(X001a=P001)%>%
  mutate(X001b=P004)%>%
  mutate(X002=P002+P003)%>%
  mutate(X002a=P003)%>%
  mutate(X002b=P002)%>%
  mutate(X003=P005+P006+P009)%>%
  mutate(X004=P007)%>%
  mutate(X005=P008)%>%
  mutate(X006=P014+P015+P016)%>%
  mutate(X007=P011+P012+P013)%>%
```

```

mutate(X007a=P011)%>%
mutate(X007b=P012)%>%
mutate(X007c=P013)%>%
mutate(X008=P018+P019)%>%
mutate(X008a=P018)%>%
mutate(X008b=P019)%>%
mutate(X008c=0)%>%
mutate(X009=P068)%>%
mutate(X010=P069)%>%
mutate(X011=P070)%>%
mutate(X012=P071)%>%
mutate(X013=P072+P073+P074)%>%
mutate(X014=P075+P076+P077+P078+P079+P080+P081)%>%
mutate(X015=P021+P022)%>%
mutate(X016=P023)%>%
mutate(X017=P024+P025)%>%
mutate(X018=P026)%>%
mutate(X019=P027)%>%
mutate(X020=P028)%>%
mutate(X021=P029+P050)%>%
mutate(X021a=P050)%>%
mutate(X022=P030)%>%
mutate(X023=P031)%>%
mutate(X024=P032+P033)%>%
mutate(X024a=P032)%>%
mutate(X024b=P033)%>%
mutate(X025=P034)%>%
mutate(X026=P035+P036)%>%
mutate(X027=P037)%>%
mutate(X028=P038)%>%
mutate(X029=P039+P040)%>%
mutate(X030=P041)%>%
mutate(X031=P042)%>%
mutate(X032=P043)%>%
mutate(X033=P044+P045)%>%
mutate(X034=P046)%>%
mutate(X035=P047)%>%
mutate(X036=P048)%>%
mutate(X037=P049)%>%
mutate(X038=P067)%>%
mutate(X039=P051)%>%
mutate(X040=P057+P058)%>%
mutate(X041=P065)%>%
mutate(X042=P052+P053)%>%
mutate(X043=P064)%>%
mutate(X044=P054)%>%
mutate(X045=0)%>%
mutate(X046=P056)%>%
mutate(X047=P059+P060)%>%
mutate(X048=P061)%>%
mutate(X049=P062+P063)%>%
mutate(X050=P066)

```

Se guarda la tabla de ingreso:

```

ingresos <- ingresos %>%
  mutate(enc=2012)%>%
  mutate(folioviv=as.numeric(folioviv))%>%
  mutate(foliohog=as.numeric(foliohog))%>%
  mutate(foliohog=foliohog+1)%>%
  mutate(numren=as.numeric(numren))
Ingreso2012 <- ingresos %>%
  select(enc, folioviv, foliohog, numren, X001, X001a, X001b, X002, X002a, X002b, X003, X004,
    X005, X006, X007, X007a, X007b, X007c, X008, X008a, X008b, X008c, X009, X010, X011,
    X012, X013, X014, X015, X016, X017, X018, X019, X020, X021, X021a, X022, X023, X024,
    X024a, X024b, X025, X026, X027, X028, X029, X030, X031, X032, X033, X034, X035, X036,
    X037, X038, X039, X040, X041, X042, X043, X044, X045, X046, X047, X048, X049, X050)
remove(ingresos)

```

O. Tabla de ingreso de 2014

```

ingresos <- read.dbf ("Bases/2014/ingresos.dbf", as.is=TRUE)
colnames(ingresos) <- tolower(colnames(ingresos))

```

Cálculo del ingreso trimestral:

```

ingresos[11:17] [is.na(ingresos[11:17])] <- 0
ingresos <- ingresos %>%
  mutate(t=(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/2)%>%
  mutate(t=if_else(clave=="P008", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P009", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P015", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P016", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P034", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P035", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P036", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P050", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))
ingresos <- ingresos %>%
  arrange(clave)%>%
  select(folioviv, foliohog, numren, clave, t)%>%
  pivot_wider(id_cols=c(folioviv, foliohog, numren), values_from=t, names_from=clave)

```

Lista de las variables para considerar en la construcción:

```

ls(ingresos)

```

[1]	"foliohog"	"folioviv"	"numren"	"P001"	"P002"	"P003"
[7]	"P004"	"P005"	"P006"	"P007"	"P008"	"P009"
[13]	"P011"	"P012"	"P013"	"P014"	"P015"	"P016"
[19]	"P018"	"P019"	"P021"	"P022"	"P023"	"P024"
[25]	"P025"	"P026"	"P027"	"P028"	"P030"	"P031"
[31]	"P032"	"P033"	"P034"	"P035"	"P036"	"P037"
[37]	"P038"	"P039"	"P040"	"P041"	"P042"	"P043"
[43]	"P044"	"P045"	"P046"	"P047"	"P048"	"P049"
[49]	"P050"	"P051"	"P052"	"P053"	"P054"	"P055"
[55]	"P057"	"P058"	"P059"	"P060"	"P061"	"P062"
[61]	"P063"	"P064"	"P065"	"P066"	"P067"	"P068"
[67]	"P069"	"P070"	"P071"	"P072"	"P073"	"P074"
[73]	"P075"	"P076"	"P077"	"P078"	"P079"	"P080"
[79]	"P081"					

Propuesta de construcción:

```

ingresos[4:79][is.na(ingresos[4:79])] <- 0
ingresos <- ingresos %>%
  mutate(X001=P001+P004)%>%
  mutate(X001a=P001)%>%
  mutate(X001b=P004)%>%
  mutate(X002=P002+P003)%>%
  mutate(X002a=P003)%>%
  mutate(X002b=P002)%>%
  mutate(X003=P005+P006+P009)%>%
  mutate(X004=P007)%>%
  mutate(X005=P008)%>%
  mutate(X006=P014+P015+P016)%>%
  mutate(X007=P011+P012+P013)%>%
  mutate(X007a=P011)%>%
  mutate(X007b=P012)%>%
  mutate(X007c=P013)%>%
  mutate(X008=P018+P019)%>%
  mutate(X008a=P018)%>%
  mutate(X008b=P019)%>%
  mutate(X008c=0)%>%
  mutate(X009=P068)%>%
  mutate(X010=P069)%>%
  mutate(X011=P070)%>%
  mutate(X012=P071)%>%
  mutate(X013=P072+P073+P074)%>%
  mutate(X014=P075+P076+P077+P078+P079+P080+P081)%>%
  mutate(X015=P021+P022)%>%
  mutate(X016=P023)%>%
  mutate(X017=P024+P025)%>%
  mutate(X018=P026)%>%
  mutate(X019=P027)%>%
  mutate(X020=P028)%>%
  mutate(X021=P050)%>%
  mutate(X021a=P050)%>%
  mutate(X022=P030)%>%
  mutate(X023=P031)%>%
  mutate(X024=P032+P033)%>%
  mutate(X024a=P032)%>%
  mutate(X024b=P033)%>%
  mutate(X025=P034)%>%
  mutate(X026=P035+P036)%>%
  mutate(X027=P037)%>%
  mutate(X028=P038)%>%
  mutate(X029=P039+P040)%>%
  mutate(X030=P041)%>%
  mutate(X031=P042)%>%
  mutate(X032=P043)%>%
  mutate(X033=P044+P045)%>%
  mutate(X034=P046)%>%
  mutate(X035=P047)%>%
  mutate(X036=P048)%>%
  mutate(X037=P049)%>%
  mutate(X038=P067)%>%

```

```
mutate(X039=P051)%>%
mutate(X040=P057+P058)%>%
mutate(X041=P065)%>%
mutate(X042=P052+P053)%>%
mutate(X043=P064)%>%
mutate(X044=P054)%>%
mutate(X045=P055)%>%
mutate(X046=0)%>%
mutate(X047=P059+P060)%>%
mutate(X048=P061)%>%
mutate(X049=P062+P063)%>%
mutate(X050=P066)
```

Se guarda la tabla de ingreso:

```
ingresos <- ingresos %>%
  mutate(enc=2014)%>%
  mutate(folioviv=as.numeric(folioviv))%>%
  mutate(foliohog=as.numeric(foliohog))%>%
  mutate(numren=as.numeric(numren))
Ingreso2014 <- ingresos %>%
  select(enc, folioviv, foliohog, numren, X001, X001a, X001b, X002, X002a, X002b, X003, X004,
    X005, X006, X007, X007a, X007b, X007c, X008, X008a, X008b, X008c, X009, X010, X011,
    X012, X013, X014, X015, X016, X017, X018, X019, X020, X021, X021a, X022, X023, X024,
    X024a, X024b, X025, X026, X027, X028, X029, X030, X031, X032, X033, X034, X035, X036,
    X037, X038, X039, X040, X041, X042, X043, X044, X045, X046, X047, X048, X049, X050)
remove(ingresos)
```

P. Tabla de ingreso de 2016

```
ingresos <- read.dbf ("Bases/2016/ingresos.dbf", as.is=TRUE)
colnames(ingresos) <- tolower(colnames(ingresos))
```

Cálculo del ingreso trimestral:

```
ingresos[11:17] [is.na(ingresos[11:17])] <- 0
ingresos <- ingresos %>%
  mutate(t=(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/2)%>%
  mutate(t=if_else(clave=="P008", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P009", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P015", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P016", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P034", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P035", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P036", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P050", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))
ingresos <- ingresos %>%
  arrange(clave)%>%
  select(folioviv, foliohog, numren, clave, t)%>%
  pivot_wider(id_cols=c(folioviv, foliohog, numren), values_from=t, names_from=clave)
```

Se estima el ingreso de negocios sin autoconsumo

Negocios agropecuarios:

```
agro <- read.dbf("Bases/2016/agro.dbf", as.is=TRUE)
agro$ventas [is.na(agro$ventas)] <- 0
```

```

agro$otrosnom [is.na(agro$otrosnom)] <- 0
agro$gasneg [is.na(agro$gasneg)] <- 0
agro <- agro %>%
  mutate(ing=(ventas+otrosnom-gasneg)/4)%>%
  mutate(ing=if_else(ing<0,0,ing))%>%
  mutate(id_trabajo=as.integer(id_trabajo))%>%
  mutate(tipoact=as.integer(tipoact))%>%
  mutate(agro,clave=paste(tipoact,id_trabajo,sep=""))%>%
  arrange(clave)%>%
  select(folioviv,foliohog,numren,clave,ing)%>%
  mutate(clave=paste("ing.",clave,sep=""))%>%
  pivot_wider(id_cols=c("folioviv","foliohog","numren"),values_from=ing,names_from=clave)
agro [is.na(agro)] <- 0
agro <- agro %>%
  mutate(P071T=(ing.41))%>%
  mutate(P072T=(ing.51))%>%
  mutate(P073T=(ing.61+ing.71))%>%
  mutate(P074T=(ing.81+ing.91))%>%
  mutate(P078T=(ing.42))%>%
  mutate(P079T=(ing.52))%>%
  mutate(P080T=(ing.62+ing.72))%>%
  mutate(P081T=(ing.82+ing.92))%>%
  select(folioviv,foliohog,numren,P071T,P072T,P073T,P074T,P078T,P079T,P080T,P081T)
ingresos <- ingresos %>% left_join(agro,by=c("folioviv","foliohog","numren"))
remove(agro)

```

Negocios no agropecuarios:

```

noagro <- read.dbf("Bases/2016/noagro.dbf",as.is=TRUE)
noagro <- noagro %>%
  mutate(across(c("ventas1":"ventas6"), ~replace_na(.x, 0)))%>%
  mutate(across(c("otrosnom1":"otrosnom6"), ~replace_na(.x, 0)))%>%
  mutate(across(c("gasneg1":"gasneg6"), ~replace_na(.x, 0)))
noagro <- noagro %>%
  mutate(ventas=(ventas1+ventas2+ventas3+ventas4+ventas5+ventas6)/2)%>%
  mutate(otrosnom=(otrosnom1+otrosnom2+otrosnom3+otrosnom4+otrosnom5+otrosnom6)/2)%>%
  mutate(gasneg=(gasneg1+gasneg2+gasneg3+gasneg4+gasneg5+gasneg6)/2)%>%
  mutate(ing=ventas+otrosnom-gasneg)%>%
  mutate(ing=if_else(ing<0,0,ing))%>%
  mutate(id_trabajo=as.numeric(id_trabajo))%>%
  mutate(tipoact=as.numeric(tipoact))%>%
  mutate(noagro,clave=paste(tipoact,id_trabajo,sep=""))%>%
  arrange(clave)%>%
  select(folioviv,foliohog,numren,clave,ing)%>%
  mutate(clave=paste("ing.",clave,sep=""))%>%
  pivot_wider(id_cols=c("folioviv","foliohog","numren"),values_from=ing,names_from=clave)
noagro [is.na(noagro)] <- 0
noagro <- noagro %>%
  mutate(P068T=(ing.11))%>%
  mutate(P069T=(ing.21))%>%
  mutate(P070T=(ing.31))%>%
  mutate(P075T=(ing.12))%>%
  mutate(P076T=(ing.22))%>%
  mutate(P077T=(ing.32))%>%

```



```
select(folioviv,foliohog,numren,P068T,P069T,P070T,P075T,P076T,P077T)
ingresos <- ingresos %>% left_join(noagro,by=c("folioviv","foliohog","numren"))
remove(noagro)
```

Lista de las variables para considerar en la construcción:

```
ls(ingresos)
```

[1]	"foliohog"	"folioviv"	"numren"	"P001"	"P002"	"P003"
[7]	"P004"	"P005"	"P006"	"P007"	"P008"	"P009"
[13]	"P011"	"P012"	"P013"	"P014"	"P015"	"P016"
[19]	"P018"	"P019"	"P021"	"P022"	"P023"	"P024"
[25]	"P025"	"P026"	"P027"	"P028"	"P029"	"P030"
[31]	"P031"	"P032"	"P033"	"P034"	"P035"	"P036"
[37]	"P037"	"P038"	"P039"	"P040"	"P041"	"P042"
[43]	"P043"	"P044"	"P045"	"P046"	"P047"	"P048"
[49]	"P049"	"P050"	"P051"	"P052"	"P053"	"P054"
[55]	"P055"	"P056"	"P057"	"P058"	"P059"	"P060"
[61]	"P061"	"P062"	"P063"	"P064"	"P065"	"P066"
[67]	"P067"	"P068"	"P068T"	"P069"	"P069T"	"P070"
[73]	"P070T"	"P071"	"P071T"	"P072"	"P072T"	"P073"
[79]	"P073T"	"P074"	"P074T"	"P075"	"P075T"	"P076"
[85]	"P076T"	"P077"	"P077T"	"P078"	"P078T"	"P079"
[91]	"P079T"	"P080"	"P080T"	"P081"	"P081T"	

Propuesta de construcción:

```
ingresos[4:95][is.na(ingresos[4:95])] <- 0
ingresos <- ingresos %>%
  mutate(X001=P001+P004)%>%
  mutate(X001a=P001)%>%
  mutate(X001b=P004)%>%
  mutate(X002=P002+P003)%>%
  mutate(X002a=P003)%>%
  mutate(X002b=P002)%>%
  mutate(X003=P005+P006+P009)%>%
  mutate(X004=P007)%>%
  mutate(X005=P008)%>%
  mutate(X006=P014+P015+P016)%>%
  mutate(X007=P011+P012+P013)%>%
  mutate(X007a=P011)%>%
  mutate(X007b=P012)%>%
  mutate(X007c=P013)%>%
  mutate(X008=P018+P019)%>%
  mutate(X008a=P018)%>%
  mutate(X008b=P019)%>%
  mutate(X008c=0)%>%
  mutate(X009=P068T)%>%
  mutate(X010=P069T)%>%
  mutate(X011=P070T)%>%
  mutate(X012=P071T)%>%
  mutate(X013=P072T+P073T+P074T)%>%
  mutate(X014=P075T+P076T+P077T+P078T+P079T+P080T+P081T)%>%
  mutate(X015=P021+P022)%>%
  mutate(X016=P023)%>%
  mutate(X017=P024+P025)%>%
  mutate(X018=P026)%>%
```



```

mutate(X019=P027)%>%
mutate(X020=P028)%>%
mutate(X021=P029+P050)%>%
mutate(X021a=P050)%>%
mutate(X022=P030)%>%
mutate(X023=P031)%>%
mutate(X024=P032+P033)%>%
mutate(X024a=P032)%>%
mutate(X024b=P033)%>%
mutate(X025=P034)%>%
mutate(X026=P035+P036)%>%
mutate(X027=P037)%>%
mutate(X028=P038)%>%
mutate(X029=P039+P040)%>%
mutate(X030=P041)%>%
mutate(X031=P042)%>%
mutate(X032=P043)%>%
mutate(X033=P044+P045)%>%
mutate(X034=P046)%>%
mutate(X035=P047)%>%
mutate(X036=P048)%>%
mutate(X037=P049)%>%
mutate(X038=P067)%>%
mutate(X039=P051)%>%
mutate(X040=P057+P058)%>%
mutate(X041=P065)%>%
mutate(X042=P052+P053)%>%
mutate(X043=P064)%>%
mutate(X044=P054)%>%
mutate(X045=P055)%>%
mutate(X046=P056)%>%
mutate(X047=P059+P060)%>%
mutate(X048=P061)%>%
mutate(X049=P062+P063)%>%
mutate(X050=P066)

```

Se guarda la tabla de ingreso:

```

ingresos <- ingresos %>%
  mutate(enc=2016)%>%
  mutate(folioviv=as.numeric(folioviv))%>%
  mutate(foliohog=as.numeric(foliohog))%>%
  mutate(numren=as.numeric(numren))
Ingreso2016 <- ingresos %>%
  select(enc, folioviv, foliohog, numren, X001, X001a, X001b, X002, X002a, X002b, X003, X004,
    X005, X006, X007, X007a, X007b, X007c, X008, X008a, X008b, X008c, X009, X010, X011,
    X012, X013, X014, X015, X016, X017, X018, X019, X020, X021, X021a, X022, X023, X024,
    X024a, X024b, X025, X026, X027, X028, X029, X030, X031, X032, X033, X034, X035, X036,
    X037, X038, X039, X040, X041, X042, X043, X044, X045, X046, X047, X048, X049, X050)
remove(ingresos)

```

Q. Tabla de ingreso de 2018

```

ingresos <- read.dbf ("Bases/2018/ingresos.dbf", as.is=TRUE)
colnames(ingresos) <- tolower(colnames(ingresos))

```

Cálculo del ingreso trimestral:

```
ingresos[11:17] [is.na(ingresos[11:17])] <- 0
ingresos <- ingresos %>%
  mutate(t=(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/2)%>%
  mutate(t=if_else(clave=="P008", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P009", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P015", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P016", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P034", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P035", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P036", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P050", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))
ingresos <- ingresos %>%
  arrange(clave)%>%
  select(folioviv, foliohog, numren, clave, t)%>%
  pivot_wider(id_cols=c(folioviv, foliohog, numren), values_from=t, names_from=clave)
```

Se estima el ingreso de negocios sin autoconsumo

Negocios agropecuarios:

```
agro <- read.dbf("Bases/2018/agro.dbf", as.is=TRUE)
agro$ventas [is.na(agro$ventas)] <- 0
agro$otrosnom [is.na(agro$otrosnom)] <- 0
agro$gasneg [is.na(agro$gasneg)] <- 0
agro <- agro %>%
  mutate(ing=(ventas+otrosnom-gasneg)/4)%>%
  mutate(ing=if_else(ing<0, 0, ing))%>%
  mutate(id_trabajo=as.integer(id_trabajo))%>%
  mutate(tipoact=as.integer(tipoact))%>%
  mutate(agro, clave=paste(tipoact, id_trabajo, sep=""))%>%
  arrange(clave)%>%
  select(folioviv, foliohog, numren, clave, ing)%>%
  mutate(clave=paste("ing.", clave, sep=""))%>%
  pivot_wider(id_cols=c("folioviv", "foliohog", "numren"), values_from=ing, names_from=clave)
agro [is.na(agro)] <- 0
agro <- agro %>%
  mutate(P071T=(ing.41))%>%
  mutate(P072T=(ing.51))%>%
  mutate(P073T=(ing.61+ing.71))%>%
  mutate(P074T=(ing.81+ing.91))%>%
  mutate(P078T=(ing.42))%>%
  mutate(P079T=(ing.52))%>%
  mutate(P080T=(ing.62+ing.72))%>%
  mutate(P081T=(ing.82+ing.92))%>%
  select(folioviv, foliohog, numren, P071T, P072T, P073T, P074T, P078T, P079T, P080T, P081T)
ingresos <- ingresos %>% left_join(agro, by=c("folioviv", "foliohog", "numren"))
remove(agro)
```

Negocios no agropecuarios:

```
noagro <- read.dbf("Bases/2018/noagro.dbf", as.is=TRUE)
noagro <- noagro %>%
  mutate(across(c("ventas1":"ventas6"), ~replace_na(.x, 0)))%>%
  mutate(across(c("otrosnom1":"otrosnom6"), ~replace_na(.x, 0)))%>%
```

```

  mutate(across(c("gasneg1":"gasneg6"), ~replace_na(.x, 0)))
noagro <- noagro %>%
  mutate(ventas=(ventas1+ventas2+ventas3+ventas4+ventas5+ventas6)/2)%>%
  mutate(otrosnom=(otrosnom1+otrosnom2+otrosnom3+otrosnom4+otrosnom5+otrosnom6)/2)%>%
  mutate(gasneg=(gasneg1+gasneg2+gasneg3+gasneg4+gasneg5+gasneg6)/2)%>%
  mutate(ing=ventas+otrosnom-gasneg)%>%
  mutate(ing=if_else(ing<0,0,ing))%>%
  mutate(id_trabajo=as.numeric(id_trabajo))%>%
  mutate(tipoact=as.numeric_version(tipoact))%>%
  mutate(noagro,clave=paste(tipoact,id_trabajo,sep=""))%>%
  arrange(clave)%>%
  select(folioviv,foliohog,numren,clave,ing)%>%
  mutate(clave=paste("ing.",clave,sep=""))%>%
  pivot_wider(id_cols=c("folioviv","foliohog","numren"),values_from=ing,names_from=clave)
noagro [is.na(noagro)] <- 0
noagro <- noagro %>%
  mutate(P068T=(ing.11))%>%
  mutate(P069T=(ing.21))%>%
  mutate(P070T=(ing.31))%>%
  mutate(P075T=(ing.12))%>%
  mutate(P076T=(ing.22))%>%
  mutate(P077T=(ing.32))%>%
  select(folioviv,foliohog,numren,P068T,P069T,P070T,P075T,P076T,P077T)
ingresos <- ingresos %>% left_join(noagro,by=c("folioviv","foliohog","numren"))
remove(noagro)

```

Lista de las variables para considerar en la construcción:

```
ls(ingresos)
```

[1]	"foliohog"	"folioviv"	"numren"	"P001"	"P002"	"P003"
[7]	"P004"	"P005"	"P006"	"P007"	"P008"	"P009"
[13]	"P011"	"P012"	"P013"	"P014"	"P015"	"P016"
[19]	"P018"	"P019"	"P021"	"P022"	"P023"	"P024"
[25]	"P025"	"P026"	"P027"	"P028"	"P029"	"P030"
[31]	"P031"	"P032"	"P033"	"P034"	"P035"	"P036"
[37]	"P037"	"P038"	"P039"	"P040"	"P041"	"P042"
[43]	"P043"	"P044"	"P045"	"P046"	"P047"	"P048"
[49]	"P049"	"P050"	"P051"	"P052"	"P053"	"P054"
[55]	"P055"	"P056"	"P057"	"P058"	"P059"	"P060"
[61]	"P061"	"P062"	"P063"	"P064"	"P065"	"P066"
[67]	"P067"	"P068"	"P068T"	"P069"	"P069T"	"P070"
[73]	"P070T"	"P071"	"P071T"	"P072"	"P072T"	"P073"
[79]	"P073T"	"P074"	"P074T"	"P075"	"P075T"	"P076"
[85]	"P076T"	"P077"	"P077T"	"P078"	"P078T"	"P079"
[91]	"P079T"	"P080"	"P080T"	"P081"	"P081T"	

Propuesta de construcción:

```

ingresos[4:95] [is.na(ingresos[4:95])] <- 0
ingresos <- ingresos %>%
  mutate(X001=P001+P004)%>%
  mutate(X001a=P001)%>%
  mutate(X001b=P004)%>%
  mutate(X002=P002+P003)%>%
  mutate(X002a=P003)%>%

```

```

mutate(X002b=P002)%>%
mutate(X003=P005+P006+P009)%>%
mutate(X004=P007)%>%
mutate(X005=P008)%>%
mutate(X006=P014+P015+P016)%>%
mutate(X007=P011+P012+P013)%>%
mutate(X007a=P011)%>%
mutate(X007b=P012)%>%
mutate(X007c=P013)%>%
mutate(X008=P018+P019)%>%
mutate(X008a=P018)%>%
mutate(X008b=P019)%>%
mutate(X008c=0)%>%
mutate(X009=P068T)%>%
mutate(X010=P069T)%>%
mutate(X011=P070T)%>%
mutate(X012=P071T)%>%
mutate(X013=P072T+P073T+P074T)%>%
mutate(X014=P075T+P076T+P077T+P078T+P079T+P080T+P081T)%>%
mutate(X015=P021+P022)%>%
mutate(X016=P023)%>%
mutate(X017=P024+P025)%>%
mutate(X018=P026)%>%
mutate(X019=P027)%>%
mutate(X020=P028)%>%
mutate(X021=P029+P050)%>%
mutate(X021a=P050)%>%
mutate(X022=P030)%>%
mutate(X023=P031)%>%
mutate(X024=P032+P033)%>%
mutate(X024a=P032)%>%
mutate(X024b=P033)%>%
mutate(X025=P034)%>%
mutate(X026=P035+P036)%>%
mutate(X027=P037)%>%
mutate(X028=P038)%>%
mutate(X029=P039+P040)%>%
mutate(X030=P041)%>%
mutate(X031=P042)%>%
mutate(X032=P043)%>%
mutate(X033=P044+P045)%>%
mutate(X034=P046)%>%
mutate(X035=P047)%>%
mutate(X036=P048)%>%
mutate(X037=P049)%>%
mutate(X038=P067)%>%
mutate(X039=P051)%>%
mutate(X040=P057+P058)%>%
mutate(X041=P065)%>%
mutate(X042=P052+P053)%>%
mutate(X043=P064)%>%
mutate(X044=P054)%>%
mutate(X045=P055)%>%
mutate(X046=P056)%>%
mutate(X047=P059+P060)%>%

```

```
mutate(X048=P061)%>%
mutate(X049=P062+P063)%>%
mutate(X050=P066)
```

Se guarda la tabla de ingreso:

```
ingresos <- ingresos %>%
  mutate(enc=2018)%>%
  mutate(folioviv=as.numeric(folioviv))%>%
  mutate(foliohog=as.numeric(foliohog))%>%
  mutate(numren=as.numeric(numren))
Ingreso2018 <- ingresos %>%
  select(enc, folioviv, foliohog, numren, X001, X001a, X001b, X002, X002a, X002b, X003, X004,
    X005, X006, X007, X007a, X007b, X007c, X008, X008a, X008b, X008c, X009, X010, X011,
    X012, X013, X014, X015, X016, X017, X018, X019, X020, X021, X021a, X022, X023, X024,
    X024a, X024b, X025, X026, X027, X028, X029, X030, X031, X032, X033, X034, X035, X036,
    X037, X038, X039, X040, X041, X042, X043, X044, X045, X046, X047, X048, X049, X050)
remove(ingresos)
```

R. Tabla de ingreso de 2020

```
ingresos <- read.dbf("Bases/2020/ingresos.dbf", as.is=TRUE)
colnames(ingresos) <- tolower(colnames(ingresos))
```

Cálculo del ingreso trimestral:

```
ingresos[11:17] [is.na(ingresos[11:17])] <- 0
ingresos <- ingresos %>%
  mutate(t=(ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/2)%>%
  mutate(t=if_else(clave=="P008", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P009", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P015", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P016", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P034", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P035", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P036", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))%>%
  mutate(t=if_else(clave=="P050", (ing_1+ing_2+ing_3+ing_4+ing_5+ing_6)/4, t))
ingresos <- ingresos %>%
  arrange(clave)%>%
  select(folioviv, foliohog, numren, clave, t)%>%
  pivot_wider(id_cols=c(folioviv, foliohog, numren), values_from=t, names_from=clave)
```

Se estima el ingreso de negocios sin autoconsumo

Negocios agropecuarios:

```
agro <- read.dbf("Bases/2020/agro.dbf", as.is=TRUE)
agro$ventas [is.na(agro$ventas)] <- 0
agro$otrosnom [is.na(agro$otrosnom)] <- 0
agro$gasneg [is.na(agro$gasneg)] <- 0
agro <- agro %>%
  mutate(ing=(ventas+otrosnom-gasneg)/4)%>%
  mutate(ing=if_else(ing<0, 0, ing))%>%
  mutate(id_trabajo=as.integer(id_trabajo))%>%
  mutate(tipoact=as.integer(tipoact))%>%
  mutate(agro, clave=paste(tipoact, id_trabajo, sep=""))%>%
  arrange(clave)%>%
```

```

select(folioviv,foliohog,numren,clave,ing)%>%
mutate(clave=paste("ing.",clave,sep=""))%>%
pivot_wider(id_cols=c("folioviv","foliohog","numren"),values_from=ing,names_from=clave)
agro [is.na(agro)] <- 0
agro <- agro %>%
  mutate(P071T=(ing.41))%>%
  mutate(P072T=(ing.51))%>%
  mutate(P073T=(ing.61+ing.71))%>%
  mutate(P074T=(ing.81+ing.91))%>%
  mutate(P078T=(ing.42))%>%
  mutate(P079T=(ing.52))%>%
  mutate(P080T=(ing.62+ing.72))%>%
  mutate(P081T=(ing.82+ing.92))%>%
  select(folioviv,foliohog,numren,P071T,P072T,P073T,P074T,P078T,P079T,P080T,P081T)
ingresos <- ingresos %>% left_join(agro,by=c("folioviv","foliohog","numren"))
remove(agro)

```

Negocios no agropecuarios:

```

noagro <- read.dbf("Bases/2020/noagro.dbf",as.is=TRUE)
noagro <- noagro %>%
  mutate(across(c("ventas1":"ventas6"), ~replace_na(.x, 0)))%>%
  mutate(across(c("otrosnom1":"otrosnom6"), ~replace_na(.x, 0)))%>%
  mutate(across(c("gasneg1":"gasneg6"), ~replace_na(.x, 0)))
noagro <- noagro %>%
  mutate(ventas=(ventas1+ventas2+ventas3+ventas4+ventas5+ventas6)/2)%>%
  mutate(otrosnom=(otrosnom1+otrosnom2+otrosnom3+otrosnom4+otrosnom5+otrosnom6)/2)%>%
  mutate(gasneg=(gasneg1+gasneg2+gasneg3+gasneg4+gasneg5+gasneg6)/2)%>%
  mutate(ing=ventas+otrosnom-gasneg)%>%
  mutate(ing=if_else(ing<0,0,ing))%>%
  mutate(id_trabajo=as.numeric(id_trabajo))%>%
  mutate(tipoact=as.numeric(tipoact))%>%
  mutate(noagro,clave=paste(tipoact,id_trabajo,sep=""))%>%
  arrange(clave)%>%
  select(folioviv,foliohog,numren,clave,ing)%>%
  mutate(clave=paste("ing.",clave,sep=""))%>%
  pivot_wider(id_cols=c("folioviv","foliohog","numren"),values_from=ing,names_from=clave)
noagro [is.na(noagro)] <- 0
noagro <- noagro %>%
  mutate(P068T=(ing.11))%>%
  mutate(P069T=(ing.21))%>%
  mutate(P070T=(ing.31))%>%
  mutate(P075T=(ing.12))%>%
  mutate(P076T=(ing.22))%>%
  mutate(P077T=(ing.32))%>%
  select(folioviv,foliohog,numren,P068T,P069T,P070T,P075T,P076T,P077T)
ingresos <- ingresos %>% left_join(noagro,by=c("folioviv","foliohog","numren"))
remove(noagro)

```

Lista de las variables para considerar en la construcción:

```
ls(ingresos)
```

[1]	"foliohog"	"folioviv"	"numren"	"P001"	"P002"	"P003"
[7]	"P004"	"P005"	"P006"	"P007"	"P008"	"P009"

[13]	"P011"	"P012"	"P013"	"P014"	"P015"	"P016"
[19]	"P018"	"P019"	"P021"	"P022"	"P023"	"P024"
[25]	"P025"	"P026"	"P027"	"P028"	"P029"	"P030"
[31]	"P031"	"P032"	"P033"	"P034"	"P035"	"P036"
[37]	"P037"	"P038"	"P039"	"P040"	"P041"	"P043"
[43]	"P045"	"P048"	"P049"	"P050"	"P051"	"P052"
[49]	"P053"	"P054"	"P055"	"P056"	"P057"	"P058"
[55]	"P059"	"P060"	"P061"	"P062"	"P063"	"P064"
[61]	"P065"	"P066"	"P067"	"P068"	"P068T"	"P069"
[67]	"P069T"	"P070"	"P070T"	"P071"	"P071T"	"P072"
[73]	"P072T"	"P073"	"P073T"	"P074"	"P074T"	"P075"
[79]	"P075T"	"P076"	"P076T"	"P077"	"P077T"	"P078"
[85]	"P078T"	"P079"	"P079T"	"P080"	"P080T"	"P081"
[91]	"P081T"	"P101"	"P102"	"P103"	"P104"	"P105"
[97]	"P106"	"P107"	"P108"			

Propuesta de construcción:

```

ingresos[4:99][is.na(ingresos[4:99])] <- 0
ingresos <- ingresos %>%
  mutate(X001=P001+P004)%>%
  mutate(X001a=P001)%>%
  mutate(X001b=P004)%>%
  mutate(X002=P002+P003)%>%
  mutate(X002a=P003)%>%
  mutate(X002b=P002)%>%
  mutate(X003=P005+P006+P009)%>%
  mutate(X004=P007)%>%
  mutate(X005=P008)%>%
  mutate(X006=P014+P015+P016)%>%
  mutate(X007=P011+P012+P013)%>%
  mutate(X007a=P011)%>%
  mutate(X007b=P012)%>%
  mutate(X007c=P013)%>%
  mutate(X008=P018+P019)%>%
  mutate(X008a=P018)%>%
  mutate(X008b=P019)%>%
  mutate(X008c=0)%>%
  mutate(X009=P068T)%>%
  mutate(X010=P069T)%>%
  mutate(X011=P070T)%>%
  mutate(X012=P071T)%>%
  mutate(X013=P072T+P073T+P074T)%>%
  mutate(X014=P075T+P076T+P077T+P078T+P079T+P080T+P081T)%>%
  mutate(X015=P021+P022)%>%
  mutate(X016=P023)%>%
  mutate(X017=P024+P025)%>%
  mutate(X018=P026)%>%
  mutate(X019=P027)%>%
  mutate(X020=P028)%>%
  mutate(X021=P029+P050)%>%
  mutate(X021a=P050)%>%
  mutate(X022=P030)%>%
  mutate(X023=P031)%>%
  mutate(X024=P032+P033)%>%
  mutate(X024a=P032)%>%

```



```

mutate(X024b=P033)%>%
mutate(X025=P034)%>%
mutate(X026=P035+P036)%>%
mutate(X027=P037)%>%
mutate(X028=P038+P102+P103)%>%
mutate(X029=P039+P040)%>%
mutate(X030=P041)%>%
mutate(X031=P101)%>%
mutate(X032=P043)%>%
mutate(X033=P045+P104)%>%
mutate(X034=0)%>%
mutate(X035=0)%>%
mutate(X036=P048+P105+P106+P107+P108)%>%
mutate(X037=P049)%>%
mutate(X038=P067)%>%
mutate(X039=P051)%>%
mutate(X040=P057+P058)%>%
mutate(X041=P065)%>%
mutate(X042=P052+P053)%>%
mutate(X043=P064)%>%
mutate(X044=P054)%>%
mutate(X045=P055)%>%
mutate(X046=P056)%>%
mutate(X047=P059+P060)%>%
mutate(X048=P061)%>%
mutate(X049=P062+P063)%>%
mutate(X050=P066)

```

Se guarda la tabla de ingreso:

```

ingresos <- ingresos %>%
  mutate(enc=2020)%>%
  mutate(folioviv=as.numeric(folioviv))%>%
  mutate(foliohog=as.numeric(foliohog))%>%
  mutate(numren=as.numeric(numren))
Ingreso2020 <- ingresos %>%
  select(enc, folioviv, foliohog, numren, X001, X001a, X001b, X002, X002a, X002b, X003, X004,
    X005, X006, X007, X007a, X007b, X007c, X008, X008a, X008b, X008c, X009, X010, X011,
    X012, X013, X014, X015, X016, X017, X018, X019, X020, X021, X021a, X022, X023, X024,
    X024a, X024b, X025, X026, X027, X028, X029, X030, X031, X032, X033, X034, X035, X036,
    X037, X038, X039, X040, X041, X042, X043, X044, X045, X046, X047, X048, X049, X050)
remove(ingresos)

```


Se generan los cuadros de control

Cuadro 17
Ingresos: cuadro control
(En miles de pesos)

enc	Perceptores	Ingreso monetario	Percepciones capital
1984	23 503 893	2 010 997	225 042
1989	26 612 117	42 180 632	2 400 814
1992	31 353 686	93 574 351	11 089 230
1994	33 874 282	122 177 237	7 984 953
1996	36 371 715	168 425 068	15 469 132
1998	39 816 734	273 920 828	17 786 378
2000	44 966 387	429 171 629	36 092 146
2002	49 260 185	489 858 589	29 699 542
2004	51 717 675	580 491 289	31 642 314
2005	53 831 761	630 185 112	38 288 577
2006	58 688 663	716 774 006	46 285 088
2008	64 901 886	827 337 340	39 601 558
2010	67 379 358	832 778 197	40 091 667
2012	74 852 260	990 209 535	54 832 227
2014	75 332 883	1 048 769 647	43 590 556
2016	81 617 091	1 306 450 080	51 008 053
2018	82 252 502	1 446 193 241	66 913 551
2020	79 561 256	1 481 794 029	71 953 760

Fuente: Elaboración propia.

V. Base de remuneraciones en especie homologada de la ENIGH

Para conformar las bases de Remuneraciones en especie, Autoconsumo y Gasto total del hogar se tuvieron que homologar las claves de los cuestionarios de gastos personales y gastos del hogar, las cuales también han cambiado a lo largo de los levantamientos (véase cuadros AM.19 y AM.20 del anexo metodológico). Al igual que en la tabla de ingreso, se incluyeron, además de los gastos corrientes, las adquisiciones de capital (compras de activos fijos y financieros, así como pasivos de corto y largo plazo), con el propósito de tener elementos para el análisis de las cuentas de acumulación del Sistema de Cuentas Nacionales. Finalmente, las tres tablas quedaron conformadas por 46 variables, con el prefijo "YE" para Remuneraciones en especie, "YA" para Autoconsumo, y "GT" para el Gasto. Por último, se conformó una base con el alquiler imputado (véase cuadro AM.22 del anexo metodológico).

A. Tabla especie de 1984

```
gasto <- read.dbf("Bases/1984/nomon.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona pago en especie y se cambia a nuevos pesos:

```
gasto <- gasto %>% filter(tipo_gas=="2")
gasto <- gasto %>% mutate(gasto_tri=gasto_tri/1000)
agregado <- gasto %>% group_by(folio,num_ren,clave) %>%
  summarise(gasto=sum(gasto_tri),.groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=c(folio,num_ren),values_from=gasto,names_from=clave)
```

Lista de variables de ingreso para considerar en la construcción:

ls(agregado)

[1]	"A001"	"A002"	"A004"	"A007"	"A012"	"A013"	"A017"
[8]	"A020"	"A021"	"A022"	"A027"	"A030"	"A059"	"A060"
[15]	"A061"	"A065"	"A066"	"A075"	"A077"	"A079"	"A080"
[22]	"A081"	"A087"	"A099"	"A102"	"A114"	"A124"	"A144"
[29]	"A145"	"A158"	"A172"	"A185"	"A199"	"A200"	"A201"
[36]	"A202"	"A203"	"B002"	"B006"	"B007"	"C001"	"C002"
[43]	"C003"	"C005"	"C006"	"C011"	"C012"	"C015"	"C019"
[50]	"D001"	"D003"	"D004"	"D007"	"D010"	"D012"	"D013"
[57]	"D018"	"D019"	"E001"	"E003"	"E011"	"E023"	"F001"
[64]	"F006"	"F007"	"folio"	"G005"	"G006"	"G008"	"G009"
[71]	"G011"	"G012"	"G019"	"G020"	"G023"	"H001"	"H002"
[78]	"H003"	"H004"	"H009"	"H010"	"H020"	"H027"	"H034"
[85]	"H039"	"H044"	"I016"	"I021"	"J001"	"J002"	"J003"
[92]	"J004"	"J005"	"J008"	"J009"	"J010"	"J011"	"J012"
[99]	"J013"	"J015"	"J017"	"J018"	"J020"	"J021"	"J023"
[106]	"J024"	"J025"	"J029"	"J030"	"J031"	"J032"	"K001"
[113]	"K018"	"K030"	"M001"	"M002"	"M014"	"M015"	"N005"
[120]	"N009"	"N020"	"num_ren"				

Construcción propuesta:

```

agregado[3:122] [is.na(agregado[3:122])] <- 0
agregado <- agregado %>%
  mutate(YE001=A001+A002+A004+A007+A012+A013+A017+A020+A021+A022+A027+A030+A059+
    A060+A061+A065+A066+A075+A077+A079+A080+A081+A087+A099+A102+A114+A124+
    A144+A145+A158+A172)%>%
  mutate(YE002=0)%>%
  mutate(YE003=A185)%>%
  mutate(YE004=0)%>%
  mutate(YE005=0)%>%
  mutate(YE006=A199+A200+A201+A202)%>%
  mutate(YE007=A203)%>%
  mutate(YE008=0)%>%
  mutate(YE009=B002+B006+B007)%>%
  mutate(YE010=C001+C002+C003+C005+C006+C011+C012+C015+C019)%>%
  mutate(YE011=0)%>%
  mutate(YE012=D001+D003+D004+D007+D010+D012+D013)%>%
  mutate(YE013=D018+D019)%>%
  mutate(YE014=E001+E003)%>%
  mutate(YE015=E011)%>%
  mutate(YE016=0)%>%
  mutate(YE017=E023)%>%
  mutate(YE018=F001)%>%
  mutate(YE019=F006+F007)%>%
  mutate(YE020=G005+G009)%>%
  mutate(YE021=G006+G008+G011+G012+G019+G020+G023)%>%
  mutate(YE022=H001+H002+H003+H004+H009+H010+H020+H027+H034+H039+H044)%>%
  mutate(YE023=I016+I021)%>%
  mutate(YE024=J001+J002+J003+J004+J005+J008)%>%
  mutate(YE025=J009+J010+J011+J012+J013)%>%
  mutate(YE026=J015+J017+J018+J020+J021+J023+J024+J025)%>%
  mutate(YE027=J029+J030+J031)%>%
  mutate(YE028=J032)%>%

```

```
mutate(YE029=0)%>%
mutate(YE030=0)%>%
mutate(YE031=0)%>%
mutate(YE032=K001+K018)%>%
mutate(YE033=0)%>%
mutate(YE034=K030)%>%
mutate(YE035=0)%>%
mutate(YE036=M001+M002)%>%
mutate(YE037=0)%>%
mutate(YE038=M014+M015)%>%
mutate(YE039=N005+N009)%>%
mutate(YE040=N020)%>%
mutate(YE041=0)%>%
mutate(YE042=0)%>%
mutate(YE043=0)%>%
mutate(YE044=0)%>%
mutate(YE045=0)
```

Se guarda la tabla de ingreso en especie:

```
agregado <- agregado %>%
  mutate(enc=1984) %>%
  mutate(folioviv=substr(folio,5,11)) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=1) %>%
  mutate(numren=as.numeric(num_ren))
Especie1984 <- agregado %>%
  select(enc,folioviv,foliohog,numren,YE001,YE002,YE003,YE004,YE005,YE006,YE007,
        YE008,YE009,YE010,YE011,YE012,YE013,YE014,YE015,YE016,YE017,YE018,YE019,
        YE020,YE021,YE022,YE023,YE024,YE025,YE026,YE027,YE028,YE029,YE030,YE031,
        YE032,YE033,YE034,YE035,YE036,YE037,YE038,YE039,YE040,YE041,YE042,YE043,
        YE044,YE045)
remove(agregado)
```

B. Tabla especie de 1989

```
gasto <- read.dbf("Bases/1989/nomon.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona pago en especie y se cambia a nuevos pesos:

```
gasto <- gasto %>% filter(tipo_gas=="2")
gasto <- gasto %>% mutate(gasto_tri=gasto_tri/1000)
agregado <- gasto %>% group_by(folio,num_ren,clave) %>%
  summarise(gasto=sum(gasto_tri),.groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=c(folio,num_ren),values_from=gasto,names_from=clave)
```

Lista de variables de ingreso para considerar en la construcción:

```
ls(agregado)
[1] "A001" "A002" "A003" "A004" "A006" "A008" "A010"
[8] "A011" "A012" "A014" "A015" "A017" "A020" "A021"
[15] "A022" "A023" "A026" "A027" "A028" "A029" "A030"
```

[22]	"A031"	"A032"	"A042"	"A043"	"A047"	"A052"	"A053"
[29]	"A056"	"A059"	"A060"	"A061"	"A063"	"A064"	"A066"
[36]	"A069"	"A074"	"A075"	"A077"	"A079"	"A081"	"A084"
[43]	"A087"	"A088"	"A089"	"A090"	"A091"	"A092"	"A093"
[50]	"A094"	"A095"	"A096"	"A097"	"A098"	"A100"	"A101"
[57]	"A102"	"A103"	"A109"	"A110"	"A114"	"A119"	"A121"
[64]	"A124"	"A125"	"A126"	"A138"	"A140"	"A144"	"A149"
[71]	"A152"	"A154"	"A163"	"A165"	"A166"	"A167"	"A170"
[78]	"A171"	"A172"	"A173"	"A176"	"A183"	"A184"	"A185"
[85]	"A186"	"A199"	"A200"	"A201"	"A202"	"B002"	"B003"
[92]	"B004"	"B005"	"B007"	"C001"	"C002"	"C003"	"C004"
[99]	"C005"	"C006"	"C007"	"C008"	"C009"	"C010"	"C011"
[106]	"C012"	"C013"	"C014"	"C015"	"C016"	"C017"	"C018"
[113]	"C019"	"D001"	"D002"	"D003"	"D004"	"D005"	"D006"
[120]	"D007"	"D008"	"D009"	"D010"	"D012"	"D013"	"D014"
[127]	"D015"	"D017"	"D018"	"D020"	"E001"	"E004"	"E005"
[134]	"E006"	"E007"	"E009"	"E011"	"E015"	"E016"	"E019"
[141]	"E020"	"E023"	"E025"	"F001"	"F002"	"F006"	"F007"
[148]	"F008"	"F009"	"F010"	"folio"	"G002"	"G003"	"G008"
[155]	"G011"	"G022"	"G023"	"G026"	"G028"	"H001"	"H002"
[162]	"H003"	"H004"	"H005"	"H006"	"H007"	"H008"	"H016"
[169]	"H018"	"H019"	"H020"	"H021"	"H022"	"H024"	"H025"
[176]	"H028"	"H030"	"H033"	"H034"	"H036"	"H040"	"H041"
[183]	"H042"	"H044"	"I001"	"I002"	"I003"	"I004"	"I010"
[190]	"I013"	"I016"	"I017"	"I018"	"I020"	"J001"	"J002"
[197]	"J003"	"J004"	"J005"	"J008"	"J009"	"J010"	"J011"
[204]	"J012"	"J013"	"J014"	"J015"	"J016"	"J017"	"J018"
[211]	"J020"	"J021"	"J022"	"J023"	"J024"	"J025"	"J028"
[218]	"J029"	"J030"	"J031"	"J032"	"J033"	"J035"	"J037"
[225]	"K001"	"K003"	"K008"	"K010"	"K016"	"K020"	"K024"
[232]	"K025"	"K030"	"K031"	"L009"	"L016"	"M001"	"M002"
[239]	"M003"	"M004"	"M005"	"M006"	"M011"	"M012"	"M013"
[246]	"M014"	"M015"	"N004"	"N005"	"N006"	"N009"	"N013"
[253]	"N014"	"num_ren"					

Construcción propuesta:

```

agregado[3:254] [is.na(agregado[3:254])] <- 0
agregado <- agregado %>%
  mutate(YE001=A001+A002+A003+A010+A011+A012+A022+A023+A026+A032+A042+A043+A060+
    A061+A063+A077+A079+A081+A091+A092+A093+A100+A101+A102+A121+A124+A125+
    A152+A154+A163+A172+A173+A176)%>%
  mutate(YE002=A183+A184)%>%
  mutate(YE003=A185+A186)%>%
  mutate(YE004=0)%>%
  mutate(YE005=0)%>%
  mutate(YE006=A199+A200+A201+A202)%>%
  mutate(YE007=0)%>%
  mutate(YE008=0)%>%
  mutate(YE009=B002+B003+B004+B005+B007)%>%
  mutate(YE010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
    C014+C015+C016+C017+C018+C019)%>%
  mutate(YE011=0)%>%
  mutate(YE012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D012+D013+D014+
    D015+D017)%>%
  mutate(YE013=D018+D020)%>%

```

```

mutate(YE014=E001+E004+E005+E006+E007+E009)%>%
mutate(YE015=E011)%>%
mutate(YE016=E015+E016)%>%
mutate(YE017=E019+E020+E023+E025)%>%
mutate(YE018=F001+F002)%>%
mutate(YE019=F006+F007+F008+F009+F010)%>%
mutate(YE020=G002)%>%
mutate(YE021=G003+G008+G011+G022+G023+G026+G028)%>%
mutate(YE022=H001+H002+H003+H004+H005+H006+H007+H008+H016+H018+H019+H020+H021+
      H022+H024+H025+H028+H030+H033+H034+H036+H040+H041+H042+H044)%>%
mutate(YE023=I001+I002+I003+I004+I010+I013+I016+I017+I018+I020)%>%
mutate(YE024=J001+J002+J003+J004+J005+J008)%>%
mutate(YE025=J009+J010+J011+J012+J013+J014)%>%
mutate(YE026=J015+J016+J017+J018+J020+J021+J022+J023+J024+J025)%>%
mutate(YE027=J028+J029+J030+J031)%>%
mutate(YE028=J032+J033+J035)%>%
mutate(YE029=0)%>%
mutate(YE030=J037)%>%
mutate(YE031=0)%>%
mutate(YE032=K001+K003+K008+K010+K016)%>%
mutate(YE033=K020+K024+K025)%>%
mutate(YE034=K030+K031)%>%
mutate(YE035=L009+L016)%>%
mutate(YE036=M001+M002+M003+M004+M005)%>%
mutate(YE037=M006)%>%
mutate(YE038=M011+M012+M013+M014+M015)%>%
mutate(YE039=N004+N005)%>%
mutate(YE040=N006+N009)%>%
mutate(YE041=N013+N014)%>%
mutate(YE042=0)%>%
mutate(YE043=0)%>%
mutate(YE044=0)%>%
mutate(YE045=0)

```

Se guarda la tabla de ingreso en especie:

```

agregado <- agregado %>%
  mutate(enc=1989) %>%
  mutate(folioviv=substr(folio,5,11)) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=1) %>%
  mutate(numren=as.numeric(num_ren))
Especie1989 <- agregado %>%
  select(enc, folioviv, foliohog, numren, YE001, YE002, YE003, YE004, YE005, YE006, YE007,
        YE008, YE009, YE010, YE011, YE012, YE013, YE014, YE015, YE016, YE017, YE018, YE019,
        YE020, YE021, YE022, YE023, YE024, YE025, YE026, YE027, YE028, YE029, YE030, YE031,
        YE032, YE033, YE034, YE035, YE036, YE037, YE038, YE039, YE040, YE041, YE042, YE043,
        YE044, YE045)
remove(agregado)

```

C. Tabla especie de 1992

```

gasto <- read.dbf("Bases/1992/nomon.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))

```

Se selecciona pago en especie y se cambia a nuevos pesos:

```
gasto <- gasto %>% filter(tipo_gas=="2")
gasto <- gasto %>% mutate(gasto_tri=gasto_tri/1000)
agregado <- gasto %>% group_by(folio,numren,clave) %>%
  summarise(gasto=sum(gasto_tri),.groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=c(folio,numren),values_from=gasto,names_from=clave)
```

Lista de variables de ingreso para considerar en la construcción:

```
ls(agregado)

[1] "A001" "A002" "A003" "A004" "A006" "A007" "A010" "A011"
[9] "A012" "A015" "A017" "A021" "A022" "A023" "A025" "A026"
[17] "A027" "A028" "A029" "A031" "A032" "A033" "A037" "A043"
[25] "A049" "A052" "A053" "A054" "A055" "A056" "A057" "A060"
[33] "A062" "A063" "A064" "A065" "A066" "A067" "A074" "A077"
[41] "A079" "A080" "A081" "A082" "A084" "A087" "A088" "A089"
[49] "A090" "A092" "A093" "A094" "A096" "A101" "A102" "A103"
[57] "A104" "A106" "A109" "A114" "A117" "A121" "A122" "A124"
[65] "A125" "A126" "A127" "A128" "A131" "A134" "A136" "A140"
[73] "A144" "A145" "A147" "A149" "A152" "A154" "A158" "A161"
[81] "A163" "A168" "A169" "A172" "A174" "A175" "A178" "A182"
[89] "A185" "A187" "A199" "A200" "A201" "A202" "A203" "B001"
[97] "B002" "B003" "B004" "B005" "B006" "B007" "C001" "C002"
[105] "C003" "C004" "C005" "C006" "C007" "C008" "C009" "C010"
[113] "C011" "C012" "C013" "C014" "C015" "C016" "C017" "C019"
[121] "C021" "C024" "D001" "D002" "D003" "D004" "D005" "D006"
[129] "D007" "D008" "D009" "D010" "D011" "D012" "D013" "D014"
[137] "D017" "D018" "E001" "E002" "E003" "E004" "E005" "E006"
[145] "E007" "E008" "E009" "E010" "E011" "E012" "E014" "E015"
[153] "E017" "E018" "E019" "E023" "E024" "F001" "F006" "F007"
[161] "F009" "F010" "folio" "G003" "G006" "G008" "G011" "G022"
[169] "G023" "G024" "G026" "H001" "H002" "H003" "H007" "H008"
[177] "H009" "H012" "H013" "H014" "H015" "H016" "H017" "H020"
[185] "H021" "H024" "H028" "H029" "H030" "H031" "H032" "H042"
[193] "H044" "H045" "H046" "H047" "H052" "H053" "H056" "H060"
[201] "H061" "I001" "I002" "I003" "I005" "I007" "I008" "I009"
[209] "I010" "I013" "I018" "I020" "J001" "J002" "J003" "J004"
[217] "J005" "J006" "J009" "J010" "J011" "J012" "J013" "J014"
[225] "J015" "J016" "J018" "J019" "J020" "J022" "J023" "J024"
[233] "J025" "J026" "J028" "J029" "J030" "J031" "J033" "J034"
[241] "J035" "J036" "J037" "J038" "J040" "J043" "K001" "K008"
[249] "K010" "K011" "K018" "K019" "K020" "K021" "K030" "L002"
[257] "L004" "L006" "L007" "L009" "M001" "M002" "M003" "M005"
[265] "M007" "M012" "M015" "M016" "N005" "N010" "N015" "numren"
[273] "Q005" "Q006"
```

Construcción propuesta:

```
agregado[3:274] [is.na(agregado[3:274])] <- 0
agregado <- agregado %>%
  mutate(YE001=A001+A002+A003+A004+A006+A007+A010+A011+A012+A015+A017+A021+A022+
    A023+A025+A026+A027+A028+A029+A031+A032+A033+A037+A043+A049+A052+A053+
```

```

A054+A055+A056+A057+A060+A062+A063+A064+A065+A066+A067+A074+A077+A079+
A080+A081+A082+A084+A087+A088+A089+A090+A092+A093+A094+A096+A101+A102+
A103+A104+A106+A109+A114+A117+A121+A122+A124+A125+A126+A127+A128+A131+
A134+A136+A140+A144+A145+A147+A149+A152+A154+A158+A161+A163+A168+A169+
A172+A174+A175+A178+A182)%>%
mutate(YE002=0)%>%
mutate(YE003=A185+A187)%>%
mutate(YE004=0)%>%
mutate(YE005=0)%>%
mutate(YE006=A199+A200+A201+A202)%>%
mutate(YE007=A203)%>%
mutate(YE008=0)%>%
mutate(YE009=B001+B002+B003+B004+B005+B006+B007)%>%
mutate(YE010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
C014+C015+C016+C017+C019)%>%
mutate(YE011=C021+C024)%>%
mutate(YE012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
D014+D017)%>%
mutate(YE013=D018)%>%
mutate(YE014=E001+E002+E003+E004+E005+E006+E007+E008+E009)%>%
mutate(YE015=E010+E011+E012)%>%
mutate(YE016=E014+E015+E017)%>%
mutate(YE017=E018+E019+E023+E024)%>%
mutate(YE018=F001)%>%
mutate(YE019=F006+F007+F009+F010)%>%
mutate(YE020=0)%>%
mutate(YE021=G003+G006+G008+G011+G022+G023+G024+G026)%>%
mutate(YE022=H001+H002+H003+H007+H008+H009+H012+H013+H014+H015+H016+H017+H020+
H021+H024+H028+H029+H030+H031+H032+H042+H044+H045+H046+H047+H052+H053+
H056+H060+H061)%>%
mutate(YE023=I001+I002+I003+I005+I007+I008+I009+I010+I013+I018+I020)%>%
mutate(YE024=J001+J002+J003+J004+J005+J006+J009)%>%
mutate(YE025=J010+J011+J012+J013+J014+J015)%>%
mutate(YE026=J016+J018+J019+J020+J022+J023+J024+J025+J026+J028)%>%
mutate(YE027=J029+J030+J031+J033+J034+J035+J036)%>%
mutate(YE028=J037+J038+J040)%>%
mutate(YE029=0)%>%
mutate(YE030=J043)%>%
mutate(YE031=0)%>%
mutate(YE032=K001+K008+K010+K011+K018+K019)%>%
mutate(YE033=K020+K021)%>%
mutate(YE034=K030)%>%
mutate(YE035=L002+L004+L006+L007+L009)%>%
mutate(YE036=M001+M002+M003+M005)%>%
mutate(YE037=M007)%>%
mutate(YE038=M012+M015+M016)%>%
mutate(YE039=N005+N010)%>%
mutate(YE040=N015+Q006)%>%
mutate(YE041=0)%>%
mutate(YE042=Q005)%>%
mutate(YE043=0)%>%
mutate(YE044=0)%>%
mutate(YE045=0)

```


Se guarda la tabla de ingreso en especie:

```
agregado <- agregado %>%
  mutate(enc=1992) %>%
  mutate(folioviv=substr(folio,5,10)) %>%
  mutate(foliohog=substr(folio,11,11)) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog)) %>%
  mutate(foliohog=foliohog+1) %>%
  mutate(numren=as.numeric(numren))
Especie1992 <- agregado %>%
  select(enc, folioviv, foliohog, numren, YE001, YE002, YE003, YE004, YE005, YE006, YE007,
    YE008, YE009, YE010, YE011, YE012, YE013, YE014, YE015, YE016, YE017, YE018, YE019,
    YE020, YE021, YE022, YE023, YE024, YE025, YE026, YE027, YE028, YE029, YE030, YE031,
    YE032, YE033, YE034, YE035, YE036, YE037, YE038, YE039, YE040, YE041, YE042, YE043,
    YE044, YE045)
remove(agregado)
```

D. Tabla especie de 1994

```
gasto <- read.dbf("Bases/1994/nomon.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona pago en especie:

```
gasto <- gasto %>% filter(tipo_gas=="2")
agregado <- gasto %>% group_by(folio,num_ren,clave) %>%
  summarise(gasto=sum(gas_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=c(folio,num_ren), values_from=gasto, names_from=clave)
```

Lista de variables de ingreso para considerar en la construcción:

```
ls(agregado)

[1] "A001" "A002" "A004" "A005" "A006" "A007" "A008"
[8] "A010" "A011" "A012" "A013" "A014" "A015" "A017"
[15] "A019" "A021" "A022" "A023" "A024" "A028" "A029"
[22] "A030" "A033" "A038" "A041" "A042" "A043" "A044"
[29] "A048" "A050" "A052" "A054" "A055" "A056" "A057"
[36] "A058" "A060" "A061" "A062" "A064" "A065" "A067"
[43] "A068" "A071" "A074" "A075" "A076" "A077" "A078"
[50] "A080" "A081" "A082" "A083" "A085" "A087" "A088"
[57] "A089" "A090" "A091" "A092" "A093" "A094" "A095"
[64] "A096" "A097" "A098" "A099" "A103" "A104" "A108"
[71] "A111" "A112" "A113" "A114" "A116" "A117" "A118"
[78] "A123" "A124" "A125" "A126" "A127" "A128" "A129"
[85] "A130" "A131" "A133" "A140" "A141" "A143" "A146"
[92] "A149" "A151" "A154" "A156" "A159" "A161" "A164"
[99] "A171" "A175" "A177" "A184" "A188" "A190" "A194"
[106] "A196" "A204" "A205" "A206" "A207" "A208" "B001"
[113] "B002" "B003" "B004" "B005" "B006" "B007" "C001"
[120] "C002" "C003" "C004" "C005" "C006" "C007" "C008"
[127] "C009" "C010" "C011" "C012" "C013" "C014" "C015"
[134] "C016" "C018" "C019" "C020" "C024" "D001" "D002"
```

[141]	"D003"	"D004"	"D005"	"D006"	"D007"	"D008"	"D009"
[148]	"D010"	"D011"	"D012"	"D013"	"D014"	"D017"	"D018"
[155]	"D019"	"E001"	"E003"	"E005"	"E006"	"E008"	"E011"
[162]	"E013"	"E014"	"E015"	"E019"	"E022"	"E024"	"F001"
[169]	"F002"	"F006"	"F007"	"F009"	"folio"	"G002"	"G003"
[176]	"G005"	"G008"	"G009"	"G011"	"G020"	"G022"	"G026"
[183]	"G027"	"G028"	"G029"	"G033"	"H001"	"H002"	"H003"
[190]	"H007"	"H008"	"H009"	"H010"	"H012"	"H013"	"H014"
[197]	"H015"	"H017"	"H018"	"H019"	"H020"	"H021"	"H022"
[204]	"H023"	"H024"	"H028"	"H029"	"H032"	"H045"	"H046"
[211]	"H047"	"H049"	"H052"	"H053"	"H055"	"H056"	"H062"
[218]	"I001"	"I002"	"I005"	"I008"	"I011"	"I012"	"I016"
[225]	"I017"	"I018"	"J001"	"J002"	"J003"	"J004"	"J005"
[232]	"J006"	"J009"	"J010"	"J011"	"J012"	"J013"	"J014"
[239]	"J015"	"J016"	"J018"	"J019"	"J022"	"J023"	"J024"
[246]	"J025"	"J026"	"J028"	"J029"	"J030"	"J031"	"J032"
[253]	"J033"	"J034"	"J035"	"J036"	"J037"	"J040"	"J042"
[260]	"K001"	"K007"	"K008"	"K010"	"K015"	"K016"	"K018"
[267]	"K021"	"K025"	"K028"	"K030"	"L002"	"L005"	"L015"
[274]	"L017"	"M001"	"M003"	"M005"	"M006"	"M007"	"M008"
[281]	"M010"	"M012"	"M017"	"M018"	"N004"	"N005"	"N016"
[288]	"num_ren"	"Q012"					

Construcción propuesta:

```

agregado[3:289] [is.na(agregado[3:289])] <- 0
agregado <- agregado %>%
  mutate(YE001=A001+A002+A004+A005+A006+A007+A008+A010+A011+A012+A013+A014+A015+
    A017+A019+A021+A022+A023+A024+A028+A029+A030+A033+A038+A041+A042+A043+
    A044+A048+A050+A052+A054+A055+A056+A057+A058+A060+A061+A062+A064+A065+
    A067+A068+A071+A074+A075+A076+A077+A078+A080+A081+A082+A083+A085+A087+
    A088+A089+A090+A091+A092+A093+A094+A095+A096+A097+A098+A099+A103+A104+
    A108+A111+A112+A113+A114+A116+A117+A118+A123+A124+A125+A126+A127+A128+
    A129+A130+A131+A133+A140+A141+A143+A146+A149+A151+A154+A156+A159+A161+
    A164+A171+A175+A177+A184)%>%
  mutate(YE002=0)%>%
  mutate(YE003=A188+A190)%>%
  mutate(YE004=A194+A196)%>%
  mutate(YE005=0)%>%
  mutate(YE006=A204+A205+A206+A207)%>%
  mutate(YE007=A208)%>%
  mutate(YE008=0)%>%
  mutate(YE009=B001+B002+B003+B004+B005+B006+B007)%>%
  mutate(YE010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
    C014+C015+C016+C018+C019)%>%
  mutate(YE011=C020+C024)%>%
  mutate(YE012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
    D014+D017)%>%
  mutate(YE013=D018+D019)%>%
  mutate(YE014=E001+E003+E005+E006+E008+E011)%>%
  mutate(YE015=E013+E014+E015)%>%
  mutate(YE016=E019+E022)%>%
  mutate(YE017=E024)%>%
  mutate(YE018=F001+F002)%>%
  mutate(YE019=F006+F007+F009)%>%
  mutate(YE020=G002+G005+G009)%>%

```

```

mutate(YE021=G003+G008+G011+G020+G022+G026+G027+G028+G029+G033)%>%
mutate(YE022=H001+H002+H003+H007+H008+H009+H010+H012+H013+H014+H015+H017+H018+
      H019+H020+H021+H022+H023+H024+H028+H029+H032+H045+H046+H047+H049+H052+
      H053+H055+H056+H062)%>%
mutate(YE023=I001+I002+I005+I008+I011+I012+I016+I017+I018)%>%
mutate(YE024=J001+J002+J003+J004+J005+J006+J009)%>%
mutate(YE025=J010+J011+J012+J013+J014+J015)%>%
mutate(YE026=J016+J018+J019+J022+J023+J024+J025+J026+J028)%>%
mutate(YE027=J029+J030+J031+J032+J033+J034+J035+J036)%>%
mutate(YE028=J037+J040)%>%
mutate(YE029=0)%>%
mutate(YE030=J042)%>%
mutate(YE031=0)%>%
mutate(YE032=K001+K007+K008+K010+K015+K016+K018)%>%
mutate(YE033=K021+K025+K028)%>%
mutate(YE034=K030)%>%
mutate(YE035=L002+L005+L015+L017)%>%
mutate(YE036=M001+M003+M005+M006)%>%
mutate(YE037=M007+M008+M010)%>%
mutate(YE038=M012+M017+M018)%>%
mutate(YE039=N004+N005)%>%
mutate(YE040=N016)%>%
mutate(YE041=Q012)%>%
mutate(YE042=0)%>%
mutate(YE043=0)%>%
mutate(YE044=0)%>%
mutate(YE045=0)

```

Se guarda la tabla de ingreso en especie:

```

agregado <- agregado %>%
  mutate(enc=1994) %>%
  mutate(folioviv=substr(folio,5,10)) %>%
  mutate(foliohog=substr(folio,11,11)) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog)) %>%
  mutate(foliohog=foliohog+1) %>%
  mutate(numren=as.numeric(num_ren))
Especie1994 <- agregado %>%
  select(enc,folioviv,foliohog,numren,YE001,YE002,YE003,YE004,YE005,YE006,YE007,
        YE008,YE009,YE010,YE011,YE012,YE013,YE014,YE015,YE016,YE017,YE018,YE019,
        YE020,YE021,YE022,YE023,YE024,YE025,YE026,YE027,YE028,YE029,YE030,YE031,
        YE032,YE033,YE034,YE035,YE036,YE037,YE038,YE039,YE040,YE041,YE042,YE043,
        YE044,YE045)
remove(agregado)

```

E. Tabla especie de 1996

```

gasto <- read.dbf("Bases/1996/nomon.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))

```

Se selecciona pago en especie:

```

gasto <- gasto %>% filter(tipo_gas=="2")
agregado <- gasto %>% group_by(folio,num_ren,clave) %>%
  summarise(gasto=sum(gas_tri),.groups="drop")

```

```
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=c(folio,num_ren),values_from=gasto,names_from=clave)
```

Lista de variables de ingreso para considerar en la construcción:

```
ls(agregado)

[1] "A001" "A002" "A003" "A004" "A005" "A006" "A007"
[8] "A008" "A010" "A011" "A012" "A013" "A015" "A016"
[15] "A017" "A022" "A023" "A024" "A025" "A026" "A027"
[22] "A028" "A030" "A033" "A034" "A036" "A041" "A043"
[29] "A044" "A050" "A053" "A055" "A057" "A060" "A061"
[36] "A063" "A064" "A067" "A069" "A072" "A074" "A075"
[43] "A076" "A077" "A078" "A080" "A081" "A085" "A089"
[50] "A090" "A091" "A092" "A093" "A094" "A095" "A096"
[57] "A097" "A098" "A099" "A100" "A103" "A104" "A105"
[64] "A107" "A109" "A111" "A113" "A114" "A115" "A117"
[71] "A119" "A120" "A122" "A124" "A125" "A127" "A128"
[78] "A129" "A130" "A132" "A133" "A134" "A137" "A138"
[85] "A139" "A140" "A142" "A143" "A147" "A151" "A152"
[92] "A155" "A156" "A157" "A160" "A161" "A163" "A164"
[99] "A165" "A176" "A178" "A180" "A181" "A182" "A185"
[106] "A189" "A191" "A192" "A193" "A194" "A195" "A202"
[113] "A203" "A205" "A206" "A207" "A208" "A209" "B001"
[120] "B002" "B004" "B005" "B006" "B007" "C001" "C002"
[127] "C003" "C004" "C005" "C006" "C007" "C008" "C009"
[134] "C010" "C011" "C012" "C013" "C014" "C015" "C016"
[141] "C017" "C018" "C019" "C021" "C022" "D001" "D002"
[148] "D003" "D004" "D005" "D006" "D007" "D008" "D009"
[155] "D010" "D011" "D012" "D013" "D014" "D017" "D018"
[162] "D020" "D021" "D022" "E001" "E002" "E003" "E004"
[169] "E005" "E006" "E007" "E008" "E009" "E013" "E014"
[176] "E015" "E021" "E026" "E031" "E032" "F001" "F006"
[183] "F007" "F009" "F010" "folio" "G003" "G008" "G011"
[190] "G022" "G026" "G027" "G032" "G033" "H001" "H002"
[197] "H003" "H004" "H005" "H007" "H009" "H010" "H011"
[204] "H013" "H018" "H019" "H020" "H021" "H024" "H026"
[211] "H028" "H029" "H031" "H032" "H036" "H037" "H040"
[218] "H041" "H044" "H046" "H047" "H049" "H052" "H053"
[225] "H054" "H055" "H056" "H061" "H062" "H064" "I001"
[232] "I002" "I003" "I004" "I006" "I007" "I014" "I021"
[239] "J001" "J002" "J003" "J004" "J005" "J006" "J007"
[246] "J009" "J010" "J011" "J012" "J013" "J014" "J015"
[253] "J016" "J018" "J019" "J020" "J023" "J024" "J025"
[260] "J027" "J028" "J029" "J030" "J032" "J033" "J034"
[267] "J035" "J036" "J037" "J038" "J039" "J040" "J042"
[274] "K002" "K013" "K019" "K024" "K031" "L003" "L004"
[281] "L014" "L027" "M001" "M002" "M003" "M004" "M005"
[288] "M017" "M018" "N002" "N004" "N010" "N016" "num_ren"
[295] "Q012"
```

Construcción propuesta:

```

agregado[3:295] [is.na(agregado[3:295])] <- 0
agregado <- agregado %>%
  mutate(YE001=A001+A002+A003+A004+A005+A006+A007+A008+A010+A011+A012+A013+A015+
    A016+A017+A022+A023+A024+A025+A026+A027+A028+A030+A033+A034+A036+A041+
    A043+A044+A050+A053+A055+A057+A060+A061+A063+A064+A067+A069+A072+A074+
    A075+A076+A077+A078+A080+A081+A085+A089+A090+A091+A092+A093+A094+A095+
    A096+A097+A098+A099+A100+A103+A104+A105+A107+A109+A111+A113+A114+A115+
    A117+A119+A120+A122+A124+A125+A127+A128+A129+A130+A132+A133+A134+A137+
    A138+A139+A140+A142+A143+A147+A151+A152+A155+A156+A157+A160+A161+A163+
    A164+A165+A176+A178+A180+A181+A182+A185)%>%
  mutate(YE002=0)%>%
  mutate(YE003=A189+A191+A192+A193+A194)%>%
  mutate(YE004=A195+A202+A203)%>%
  mutate(YE005=0)%>%
  mutate(YE006=A205+A206+A207+A208)%>%
  mutate(YE007=A209)%>%
  mutate(YE008=0)%>%
  mutate(YE009=B001+B002+B004+B005+B006+B007)%>%
  mutate(YE010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
    C014+C015+C016+C017+C018+C019)%>%
  mutate(YE011=C021+C022)%>%
  mutate(YE012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
    D014+D017)%>%
  mutate(YE013=D018+D020+D021+D022)%>%
  mutate(YE014=E001+E002+E003+E004+E005+E006+E007+E008+E009+E013)%>%
  mutate(YE015=E014+E015)%>%
  mutate(YE016=E021)%>%
  mutate(YE017=E026+E031+E032)%>%
  mutate(YE018=F001)%>%
  mutate(YE019=F006+F007+F009+F010)%>%
  mutate(YE020=0)%>%
  mutate(YE021=G003+G008+G011+G022+G026+G027+G032+G033)%>%
  mutate(YE022=H001+H002+H003+H004+H005+H007+H009+H010+H011+H013+H018+H019+H020+
    H021+H024+H026+H028+H029+H031+H032+H036+H037+H040+H041+H044+H046+H047+
    H049+H052+H053+H054+H055+H056+H061+H062+H064)%>%
  mutate(YE023=I001+I002+I003+I004+I006+I007+I014+I021)%>%
  mutate(YE024=J001+J002+J003+J004+J005+J006+J007+J009)%>%
  mutate(YE025=J010+J011+J012+J013+J014+J015)%>%
  mutate(YE026=J016+J018+J019+J020+J023+J024+J025+J027+J028+J029+J030+J032)%>%
  mutate(YE027=J033+J034+J035+J036+J037+J038)%>%
  mutate(YE028=J039+J040+J042)%>%
  mutate(YE029=0)%>%
  mutate(YE030=0)%>%
  mutate(YE031=0)%>%
  mutate(YE032=K002+K013+K019)%>%
  mutate(YE033=K024)%>%
  mutate(YE034=K031)%>%
  mutate(YE035=L003+L004+L014+L027)%>%
  mutate(YE036=M001+M002+M003+M004+M005)%>%
  mutate(YE037=0)%>%
  mutate(YE038=M017+M018)%>%
  mutate(YE039=N002+N004+N010)%>%
  mutate(YE040=N016)%>%

```

```
mutate(YE041=Q012)%>%
mutate(YE042=0)%>%
mutate(YE043=0)%>%
mutate(YE044=0)%>%
mutate(YE045=0)
```

Se guarda la tabla de ingreso en especie:

```
agregado <- agregado %>%
  mutate(enc=1996) %>%
  mutate(folioviv=substr(folio,5,10)) %>%
  mutate(foliohog=substr(folio,11,11)) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog)) %>%
  mutate(foliohog=foliohog+1) %>%
  mutate(numren=as.numeric(num_ren))
Especie1996 <- agregado %>%
  select(enc, folioviv, foliohog, numren, YE001, YE002, YE003, YE004, YE005, YE006, YE007,
    YE008, YE009, YE010, YE011, YE012, YE013, YE014, YE015, YE016, YE017, YE018, YE019,
    YE020, YE021, YE022, YE023, YE024, YE025, YE026, YE027, YE028, YE029, YE030, YE031,
    YE032, YE033, YE034, YE035, YE036, YE037, YE038, YE039, YE040, YE041, YE042, YE043,
    YE044, YE045)
remove(agregado)
```

F. Tabla especie de 1998

```
gasto <- read.dbf("Bases/1998/nomon.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona pago en especie:

```
gasto <- gasto %>% filter(tipo_gas=="2")
agregado <- gasto %>% group_by(folio,num_ren,clave) %>%
  summarise(gasto=sum(gas_tri),.groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=c(folio,num_ren),values_from=gasto,names_from=clave)
```

Lista de variables de ingreso para considerar en la construcción:

```
ls(agregado)
```

[1]	"A001"	"A002"	"A003"	"A004"	"A006"	"A007"	"A009"
[8]	"A010"	"A011"	"A012"	"A013"	"A015"	"A017"	"A021"
[15]	"A022"	"A023"	"A024"	"A026"	"A029"	"A030"	"A031"
[22]	"A032"	"A033"	"A034"	"A041"	"A043"	"A044"	"A048"
[29]	"A054"	"A055"	"A057"	"A060"	"A061"	"A062"	"A064"
[36]	"A065"	"A067"	"A068"	"A075"	"A077"	"A078"	"A080"
[43]	"A081"	"A082"	"A085"	"A088"	"A089"	"A091"	"A092"
[50]	"A093"	"A094"	"A096"	"A098"	"A099"	"A100"	"A102"
[57]	"A104"	"A105"	"A112"	"A113"	"A114"	"A115"	"A117"
[64]	"A119"	"A120"	"A124"	"A125"	"A127"	"A129"	"A130"
[71]	"A132"	"A146"	"A147"	"A149"	"A150"	"A152"	"A155"
[78]	"A157"	"A160"	"A162"	"A163"	"A165"	"A167"	"A171"
[85]	"A176"	"A178"	"A182"	"A184"	"A189"	"A191"	"A200"
[92]	"A205"	"A206"	"A207"	"A208"	"B002"	"B003"	"B004"

[99]	"B005"	"B006"	"B007"	"C001"	"C002"	"C003"	"C004"
[106]	"C005"	"C006"	"C007"	"C008"	"C009"	"C010"	"C011"
[113]	"C012"	"C013"	"C014"	"C015"	"C016"	"C018"	"C019"
[120]	"C020"	"C024"	"D001"	"D002"	"D003"	"D004"	"D005"
[127]	"D006"	"D007"	"D008"	"D009"	"D010"	"D011"	"D012"
[134]	"D013"	"D014"	"D015"	"E001"	"E002"	"E003"	"E004"
[141]	"E005"	"E007"	"E008"	"E009"	"E015"	"E023"	"E024"
[148]	"E026"	"E032"	"F001"	"F002"	"F005"	"F007"	"F008"
[155]	"F009"	"folio"	"G003"	"G006"	"G008"	"G011"	"G020"
[162]	"G022"	"G026"	"G027"	"G030"	"G032"	"H001"	"H002"
[169]	"H003"	"H005"	"H006"	"H007"	"H008"	"H009"	"H010"
[176]	"H012"	"H013"	"H017"	"H018"	"H019"	"H020"	"H021"
[183]	"H022"	"H023"	"H024"	"H029"	"H031"	"H032"	"H037"
[190]	"H046"	"H047"	"H049"	"H052"	"H053"	"H055"	"H057"
[197]	"H058"	"I001"	"I004"	"I015"	"I017"	"I021"	"I022"
[204]	"J001"	"J002"	"J003"	"J004"	"J005"	"J006"	"J007"
[211]	"J008"	"J009"	"J010"	"J011"	"J012"	"J013"	"J014"
[218]	"J015"	"J016"	"J017"	"J018"	"J019"	"J020"	"J023"
[225]	"J024"	"J025"	"J027"	"J028"	"J029"	"J030"	"J032"
[232]	"J033"	"J034"	"J035"	"J036"	"J037"	"J038"	"J039"
[239]	"J045"	"K003"	"K008"	"K009"	"K010"	"K032"	"K033"
[246]	"K034"	"L025"	"M001"	"M002"	"M003"	"M006"	"M007"
[253]	"M012"	"M013"	"M014"	"M015"	"M017"	"N004"	"num_ren"
[260]	"Q005"	"Q009"	"Q011"				

Construcción propuesta:

```

agregado[3:262] [is.na(agregado[3:262])] <- 0
agregado <- agregado %>%
  mutate(YE001=A001+A002+A003+A004+A006+A007+A009+A010+A011+A012+A013+A015+A017+
    A021+A022+A023+A024+A026+A029+A030+A031+A032+A033+A034+A041+A043+A044+
    A048+A054+A055+A057+A060+A061+A062+A064+A065+A067+A068+A075+A077+A078+
    A080+A081+A082+A085+A088+A089+A091+A092+A093+A094+A096+A098+A099+A100+
    A102+A104+A105+A112+A113+A114+A115+A117+A119+A120+A124+A125+A127+A129+
    A130+A132+A146+A147+A149+A150+A152+A155+A157+A160+A162+A163+A165+A167+
    A171+A176+A178+A182+A184)%>%
  mutate(YE002=0)%>%
  mutate(YE003=A189+A191)%>%
  mutate(YE004=A200)%>%
  mutate(YE005=0)%>%
  mutate(YE006=A205+A206+A207+A208)%>%
  mutate(YE007=0)%>%
  mutate(YE008=0)%>%
  mutate(YE009=B002+B003+B004+B005+B006+B007)%>%
  mutate(YE010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
    C014+C015+C016+C018+C019)%>%
  mutate(YE011=C020+C024)%>%
  mutate(YE012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
    D014+D015)%>%
  mutate(YE013=0)%>%
  mutate(YE014=E001+E002+E003+E004+E005+E007+E008+E009)%>%
  mutate(YE015=E015)%>%
  mutate(YE016=E023+E024)%>%
  mutate(YE017=E026+E032)%>%
  mutate(YE018=F001+F002+F005)%>%
  mutate(YE019=F007+F008+F009)%>%

```



```

mutate(YE020=0)%>%
mutate(YE021=G003+G006+G008+G011+G020+G022+G026+G027+G030+G032)%>%
mutate(YE022=H001+H002+H003+H005+H006+H007+H008+H009+H010+H012+H013+H017+H018+
      H019+H020+H021+H022+H023+H024+H029+H031+H032+H037+H046+H047+H049+H052+
      H053+H055+H057+H058)%>%
mutate(YE023=I001+I004+I015+I017+I021+I022)%>%
mutate(YE024=J001+J002+J003+J004+J005+J006+J007+J008+J009)%>%
mutate(YE025=J010+J011+J012+J013+J014+J015)%>%
mutate(YE026=J016+J017+J018+J019+J020+J023+J024+J025+J027+J028+J029+J030+J032)%>%
mutate(YE027=J033+J034+J035+J036+J037+J038)%>%
mutate(YE028=J039)%>%
mutate(YE029=0)%>%
mutate(YE030=J045)%>%
mutate(YE031=0)%>%
mutate(YE032=K003+K008+K009+K010)%>%
mutate(YE033=K032+K033)%>%
mutate(YE034=K034)%>%
mutate(YE035=L025)%>%
mutate(YE036=M001+M002+M003+M006)%>%
mutate(YE037=M007)%>%
mutate(YE038=M012+M013+M014+M015+M017)%>%
mutate(YE039=N004+Q011)%>%
mutate(YE040=0)%>%
mutate(YE041=Q009)%>%
mutate(YE042=Q005)%>%
mutate(YE043=0)%>%
mutate(YE044=0)%>%
mutate(YE045=0)

```

Se guarda la tabla de ingreso en especie:

```

agregado <- agregado %>%
  mutate(enc=1998) %>%
  mutate(folioviv=substr(folio,5,10)) %>%
  mutate(foliohog=substr(folio,11,11)) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog)) %>%
  mutate(foliohog=foliohog+1) %>%
  mutate(numren=as.numeric(num_ren))
Especie1998 <- agregado %>%
  select(enc,folioviv,foliohog,numren,YE001,YE002,YE003,YE004,YE005,YE006,YE007,
        YE008,YE009,YE010,YE011,YE012,YE013,YE014,YE015,YE016,YE017,YE018,YE019,
        YE020,YE021,YE022,YE023,YE024,YE025,YE026,YE027,YE028,YE029,YE030,YE031,
        YE032,YE033,YE034,YE035,YE036,YE037,YE038,YE039,YE040,YE041,YE042,YE043,
        YE044,YE045)
remove(agregado)

```

G. Tabla especie de 2000

```

gasto <- read.dbf("Bases/2000/nomon.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))

```

Se selecciona pago en especie:

```

gasto <- gasto %>% filter(tipo_gas=="2")
agregado <- gasto %>% group_by(folio,num_ren,clave) %>%

```



```

summarise(gasto=sum(gas_tri),.groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=c(folio,num_ren),values_from=gasto,names_from=clave)

```

Lista de variables de ingreso para considerar en la construcción:

```

ls(agregado)

```

[1]	"A001"	"A002"	"A003"	"A004"	"A006"	"A007"	"A008"
[8]	"A010"	"A011"	"A012"	"A013"	"A014"	"A015"	"A016"
[15]	"A017"	"A018"	"A020"	"A021"	"A022"	"A023"	"A024"
[22]	"A030"	"A033"	"A034"	"A035"	"A041"	"A043"	"A044"
[29]	"A057"	"A060"	"A061"	"A062"	"A063"	"A064"	"A065"
[36]	"A066"	"A068"	"A069"	"A070"	"A075"	"A076"	"A077"
[43]	"A078"	"A080"	"A081"	"A083"	"A085"	"A088"	"A089"
[50]	"A090"	"A091"	"A094"	"A096"	"A098"	"A099"	"A100"
[57]	"A101"	"A105"	"A113"	"A115"	"A117"	"A119"	"A120"
[64]	"A123"	"A124"	"A125"	"A126"	"A127"	"A128"	"A129"
[71]	"A134"	"A135"	"A137"	"A138"	"A139"	"A140"	"A141"
[78]	"A142"	"A144"	"A147"	"A148"	"A150"	"A152"	"A155"
[85]	"A157"	"A160"	"A162"	"A163"	"A165"	"A166"	"A167"
[92]	"A170"	"A176"	"A178"	"A180"	"A182"	"A189"	"A191"
[99]	"A192"	"A193"	"A200"	"A202"	"A206"	"A207"	"A208"
[106]	"A209"	"A211"	"B001"	"B002"	"B003"	"B004"	"B005"
[113]	"B006"	"B007"	"C001"	"C002"	"C003"	"C004"	"C005"
[120]	"C006"	"C007"	"C008"	"C009"	"C010"	"C011"	"C012"
[127]	"C013"	"C014"	"C015"	"C016"	"C018"	"C019"	"C020"
[134]	"C021"	"C022"	"C024"	"D001"	"D002"	"D003"	"D004"
[141]	"D005"	"D006"	"D007"	"D008"	"D009"	"D010"	"D011"
[148]	"D012"	"D013"	"D014"	"D017"	"D018"	"E003"	"E004"
[155]	"E005"	"E007"	"E008"	"E009"	"E010"	"E015"	"E022"
[162]	"E023"	"E026"	"E027"	"E031"	"F001"	"F007"	"F008"
[169]	"folio"	"G003"	"G008"	"G011"	"G022"	"G023"	"G026"
[176]	"G027"	"H001"	"H002"	"H003"	"H004"	"H005"	"H007"
[183]	"H008"	"H009"	"H010"	"H014"	"H015"	"H024"	"H026"
[190]	"H028"	"H031"	"H032"	"H033"	"H036"	"H037"	"H039"
[197]	"H040"	"H042"	"H046"	"H049"	"H057"	"H061"	"H063"
[204]	"I001"	"I002"	"I003"	"I004"	"I005"	"I006"	"I014"
[211]	"J001"	"J002"	"J003"	"J004"	"J005"	"J006"	"J007"
[218]	"J009"	"J010"	"J011"	"J012"	"J013"	"J014"	"J015"
[225]	"J016"	"J018"	"J019"	"J020"	"J023"	"J024"	"J025"
[232]	"J027"	"J028"	"J029"	"J030"	"J033"	"J034"	"J035"
[239]	"J036"	"J037"	"J038"	"J039"	"J040"	"J042"	"K001"
[246]	"K009"	"K011"	"K013"	"K021"	"K035"	"L002"	"L003"
[253]	"L006"	"M001"	"M003"	"M004"	"M005"	"M006"	"M007"
[260]	"N005"	"N010"	"N015"	"N016"	"num_ren"		

Construcción propuesta:

```

agregado[3:264] [is.na(agregado[3:264])] <- 0
agregado <- agregado %>%
  mutate(YE001=A001+A002+A003+A004+A006+A007+A008+A010+A011+A012+A013+A014+A015+
    A016+A017+A018+A020+A021+A022+A023+A024+A030+A033+A034+A035+A041+A043+
    A044+A057+A060+A061+A062+A063+A064+A065+A066+A068+A069+A070+A075+A076+
    A077+A078+A080+A081+A083+A085+A088+A089+A090+A091+A094+A096+A098+A099+

```

```

A100+A101+A105+A113+A115+A117+A119+A120+A123+A124+A125+A126+A127+A128+
A129+A134+A135+A137+A138+A139+A140+A141+A142+A144+A147+A148+A150+A152+
A155+A157+A160+A162+A163+A165+A166+A167+A170+A176+A178+A180+A182)%>%
mutate(YE002=0)%>%
mutate(YE003=A189+A191+A192+A193)%>%
mutate(YE004=A200+A202)%>%
mutate(YE005=0)%>%
mutate(YE006=A206+A207+A208+A209)%>%
mutate(YE007=A211)%>%
mutate(YE008=0)%>%
mutate(YE009=B001+B002+B003+B004+B005+B006+B007)%>%
mutate(YE010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
C014+C015+C016+C018+C019)%>%
mutate(YE011=C020+C021+C022+C024)%>%
mutate(YE012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
D014+D017)%>%
mutate(YE013=D018)%>%
mutate(YE014=E003+E004+E005+E007+E008+E009+E010)%>%
mutate(YE015=E015)%>%
mutate(YE016=E022+E023)%>%
mutate(YE017=E026+E027+E031)%>%
mutate(YE018=F001)%>%
mutate(YE019=F007+F008)%>%
mutate(YE020=0)%>%
mutate(YE021=G003+G008+G011+G022+G023+G026+G027)%>%
mutate(YE022=H001+H002+H003+H004+H005+H007+H008+H009+H010+H014+H015+H024+H026+
H028+H031+H032+H033+H036+H037+H039+H040+H042+H046+H049+H057+H061+H063)%>%
mutate(YE023=I001+I002+I003+I004+I005+I006+I014)%>%
mutate(YE024=J001+J002+J003+J004+J005+J006+J007+J009)%>%
mutate(YE025=J010+J011+J012+J013+J014+J015)%>%
mutate(YE026=J016+J018+J019+J020+J023+J024+J025+J027+J028+J029+J030)%>%
mutate(YE027=J033+J034+J035+J036+J037+J038)%>%
mutate(YE028=J039+J040+J042)%>%
mutate(YE029=0)%>%
mutate(YE030=0)%>%
mutate(YE031=0)%>%
mutate(YE032=K001+K009+K011+K013+K021)%>%
mutate(YE033=0)%>%
mutate(YE034=K035)%>%
mutate(YE035=L002+L003+L006)%>%
mutate(YE036=M001+M003+M004+M005+M006)%>%
mutate(YE037=M007)%>%
mutate(YE038=0)%>%
mutate(YE039=N005+N010)%>%
mutate(YE040=N015+N016)%>%
mutate(YE041=0)%>%
mutate(YE042=0)%>%
mutate(YE043=0)%>%
mutate(YE044=0)%>%
mutate(YE045=0)

```

Se guarda la tabla de ingreso en especie:

```

agregado <- agregado %>%
  mutate(enc=2000) %>%
  mutate(folioviv=substr(folio,5,11)) %>%

```

```
mutate(foliohog=substr(folio,12,12)) %>%
mutate(folioviv=as.numeric(folioviv)) %>%
mutate(foliohog=as.numeric(foliohog)) %>%
mutate(foliohog=foliohog+1) %>%
mutate(numren=as.numeric(num_ren))
Especie2000 <- agregado %>%
  select(enc,folioviv,foliohog,numren,YE001,YE002,YE003,YE004,YE005,YE006,YE007,
        YE008,YE009,YE010,YE011,YE012,YE013,YE014,YE015,YE016,YE017,YE018,YE019,
        YE020,YE021,YE022,YE023,YE024,YE025,YE026,YE027,YE028,YE029,YE030,YE031,
        YE032,YE033,YE034,YE035,YE036,YE037,YE038,YE039,YE040,YE041,YE042,YE043,
        YE044,YE045)
remove(agregado)
```

H. Tabla especie de 2002

```
gasto <- read.dbf("Bases/2002/nomon.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona pago en especie:

```
gasto <- gasto %>% filter(tipo_gas=="2")
agregado <- gasto %>% group_by(folio,num_ren,clave) %>%
  summarise(gasto=sum(gas_tri),.groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=c(folio,num_ren),values_from=gasto,names_from=clave)
```

Lista de variables de ingreso para considerar en la construcción:

```
ls(agregado)
[1] "A001"      "A002"      "A004"      "A005"      "A006"      "A007"      "A008"
[8] "A009"      "A010"      "A011"      "A012"      "A013"      "A014"      "A017"
[15] "A018"      "A020"      "A021"      "A022"      "A024"      "A027"      "A031"
[22] "A032"      "A034"      "A036"      "A038"      "A041"      "A042"      "A044"
[29] "A045"      "A046"      "A048"      "A049"      "A050"      "A052"      "A053"
[36] "A054"      "A055"      "A056"      "A057"      "A059"      "A065"      "A066"
[43] "A067"      "A068"      "A069"      "A070"      "A071"      "A072"      "A073"
[50] "A074"      "A076"      "A078"      "A080"      "A081"      "A082"      "A083"
[57] "A084"      "A085"      "A086"      "A087"      "A089"      "A091"      "A093"
[64] "A095"      "A097"      "A098"      "A099"      "A102"      "A104"      "A107"
[71] "A108"      "A109"      "A110"      "A111"      "A112"      "A113"      "A114"
[78] "A115"      "A116"      "A117"      "A120"      "A121"      "A122"      "A123"
[85] "A124"      "A125"      "A126"      "A128"      "A129"      "A131"      "A133"
[92] "A135"      "A136"      "A139"      "A145"      "A147"      "A148"      "A150"
[99] "A152"      "A154"      "A155"      "A156"      "A157"      "A158"      "A160"
[106] "A162"      "A163"      "A165"      "A166"      "A167"      "A168"      "A169"
[113] "A170"      "A173"      "A176"      "A177"      "A182"      "A183"      "A185"
[120] "A187"      "A188"      "A190"      "A194"      "A195"      "A197"      "A198"
[127] "A199"      "A201"      "A202"      "A203"      "A206"      "A210"      "A211"
[134] "A212"      "A214"      "A215"      "A216"      "A218"      "A234"      "A235"
[141] "A236"      "A237"      "A238"      "A243"      "B001"      "B002"      "B003"
[148] "B004"      "B005"      "B006"      "B007"      "C001"      "C002"      "C003"
[155] "C004"      "C005"      "C006"      "C007"      "C008"      "C009"      "C010"
[162] "C011"      "C012"      "C013"      "C014"      "C015"      "C016"      "C017"
[169] "C018"      "C019"      "C021"      "C022"      "D001"      "D002"      "D003"
```

[176]	"D004"	"D005"	"D006"	"D007"	"D008"	"D009"	"D010"
[183]	"D011"	"D012"	"D013"	"D014"	"D015"	"D016"	"D017"
[190]	"D019"	"D020"	"D022"	"E002"	"E004"	"E005"	"E006"
[197]	"E008"	"E009"	"E014"	"E015"	"E021"	"E022"	"E023"
[204]	"E026"	"E027"	"E032"	"E033"	"E034"	"E035"	"F002"
[211]	"F003"	"F004"	"F005"	"F006"	"F008"	"F010"	"F011"
[218]	"F014"	"folio"	"G002"	"G003"	"G004"	"G009"	"G010"
[225]	"G012"	"G013"	"G014"	"G015"	"G018"	"G019"	"G020"
[232]	"G037"	"G043"	"G044"	"G046"	"H001"	"H002"	"H004"
[239]	"H013"	"H014"	"H020"	"H045"	"H059"	"H060"	"H061"
[246]	"H062"	"H063"	"H065"	"H066"	"H067"	"H068"	"H069"
[253]	"H071"	"H072"	"H073"	"H074"	"H075"	"H076"	"H078"
[260]	"H079"	"H082"	"H083"	"H084"	"H086"	"H087"	"H088"
[267]	"H089"	"H090"	"H091"	"H093"	"H100"	"H106"	"H108"
[274]	"H112"	"H115"	"H116"	"H117"	"H118"	"H119"	"H120"
[281]	"H123"	"H124"	"H126"	"H127"	"H129"	"H131"	"H133"
[288]	"H134"	"H136"	"H137"	"I001"	"I002"	"I003"	"I004"
[295]	"I005"	"I006"	"I008"	"I009"	"I011"	"I014"	"I017"
[302]	"I018"	"I019"	"I020"	"I021"	"I026"	"J001"	"J002"
[309]	"J003"	"J004"	"J005"	"J006"	"J007"	"J008"	"J009"
[316]	"J010"	"J011"	"J012"	"J013"	"J014"	"J015"	"J016"
[323]	"J017"	"J018"	"J019"	"J020"	"J021"	"J022"	"J023"
[330]	"J024"	"J025"	"J026"	"J027"	"J028"	"J029"	"J030"
[337]	"J031"	"J032"	"J033"	"J034"	"J035"	"J036"	"J038"
[344]	"J040"	"J041"	"J042"	"J043"	"J044"	"J047"	"J048"
[351]	"J049"	"J050"	"J052"	"J053"	"J054"	"J055"	"J056"
[358]	"J057"	"J058"	"J059"	"J062"	"J063"	"J064"	"J065"
[365]	"J066"	"J067"	"J068"	"J070"	"J072"	"J075"	"K001"
[372]	"K002"	"K010"	"K012"	"K014"	"K019"	"K023"	"K026"
[379]	"K031"	"K032"	"K034"	"K037"	"L001"	"L003"	"L005"
[386]	"L012"	"L013"	"L018"	"L019"	"L020"	"L023"	"M001"
[393]	"M003"	"M004"	"M005"	"M006"	"M010"	"M012"	"M013"
[400]	"M014"	"M017"	"M018"	"N001"	"N004"	"N005"	"N008"
[407]	"N016"	"num_ren"	"Q012"				

Construcción propuesta:

```

agregado[3:409] [is.na(agregado[3:409])] <- 0
agregado <- agregado %>%
  mutate(YE001=A001+A002+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+A014+
    A017+A018+A020+A021+A022+A024+A027+A031+A032+A034+A036+A038+A041+A042+
    A044+A045+A046+A048+A049+A050+A052+A053+A054+A055+A056+A057+A059+A065+
    A066+A067+A068+A069+A070+A071+A072+A073+A074+A076+A078+A080+A081+A082+
    A083+A084+A085+A086+A087+A089+A091+A093+A095+A097+A098+A099+A102+A104+
    A107+A108+A109+A110+A111+A112+A113+A114+A115+A116+A117+A120+A121+A122+
    A123+A124+A125+A126+A128+A129+A131+A133+A135+A136+A139+A145+A147+A148+
    A150+A152+A154+A155+A156+A157+A158+A160+A162+A163+A165+A166+A167+A168+
    A169+A170+A173+A176+A177+A182+A183+A185+A187+A188+A190+A194+A195+A197+
    A198+A199+A201+A202+A203+A206)%>%
  mutate(YE002=A210+A211)%>%
  mutate(YE003=A212+A214+A215+A216+A218)%>%
  mutate(YE004=A234)%>%
  mutate(YE005=0)%>%
  mutate(YE006=A235+A236+A237+A238)%>%
  mutate(YE007=0)%>%
  mutate(YE008=A243)%>%

```

```

mutate(YE009=B001+B002+B003+B004+B005+B006+B007)%>%
mutate(YE010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
      C014+C015+C016+C017+C018+C019)%>%
mutate(YE011=C021+C022)%>%
mutate(YE012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
      D014+D015+D016+D017+D019)%>%
mutate(YE013=D020+D022)%>%
mutate(YE014=E002+E004+E005+E006+E008+E009)%>%
mutate(YE015=E014+E015)%>%
mutate(YE016=E021+E022+E023)%>%
mutate(YE017=E026+E027+E032+E033+E034+E035)%>%
mutate(YE018=F002+F003+F004+F005+F006+F008)%>%
mutate(YE019=F010+F011+F014)%>%
mutate(YE020=G012)%>%
mutate(YE021=G002+G003+G004+G009+G010+G013+G014+G015+G018+G019+G020+G037+G043+
      G044+G046)%>%
mutate(YE022=H001+H002+H004+H013+H014+H020+H045+H059+H060+H061+H062+H063+H065+
      H066+H067+H068+H069+H071+H072+H073+H074+H075+H076+H078+H079+H082+H083+
      H084+H086+H087+H088+H089+H090+H091+H093+H100+H106+H108+H112+H115+H116+
      H117+H118+H119+H120+H123+H124+H126+H127+H129+H131+H133+H134+H136+H137)%>%
mutate(YE023=I001+I002+I003+I004+I005+I006+I008+I009+I011+I014+I017+I018+I019+
      I020+I021+I026)%>%
mutate(YE024=J001+J002+J003+J004+J005+J006+J007+J008+J009+J010+J011+J012+J013+
      J014+J015+J016+J017+J018+J019+J020+J021+J022+J023+J024+J025+J026+J027+
      J028+J029)%>%
mutate(YE025=J030+J031+J032+J033+J034+J035+J036+J038)%>%
mutate(YE026=J040+J041+J042+J043+J044+J047)%>%
mutate(YE027=J048+J049+J050+J052+J053+J054+J055+J056+J057+J058+J059+J062+J063+
      J064+J065+J066+J067+J068)%>%
mutate(YE028=J070+J072)%>%
mutate(YE029=J075)%>%
mutate(YE030=0)%>%
mutate(YE031=0)%>%
mutate(YE032=K001+K002+K010+K012+K014+K019+K023)%>%
mutate(YE033=K026+K031+K032+K034)%>%
mutate(YE034=K037)%>%
mutate(YE035=L001+L003+L005+L012+L013+L018+L019+L020+L023)%>%
mutate(YE036=M001+M003+M004+M005+M006)%>%
mutate(YE037=M010)%>%
mutate(YE038=M012+M013+M014+M017+M018)%>%
mutate(YE039=N001+N004+N005)%>%
mutate(YE040=N008+N016)%>%
mutate(YE041=Q012)%>%
mutate(YE042=0)%>%
mutate(YE043=0)%>%
mutate(YE044=0)%>%
mutate(YE045=0)

```

Se guarda la tabla de ingreso en especie:

```

agregado <- agregado %>%
  mutate(enc=2002) %>%
  mutate(folioviv=substr(folio,5,10)) %>%
  mutate(foliohog=substr(folio,11,11)) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog)) %>%

```

```
mutate(foliohog=foliohog+1) %>%
mutate(numren=as.numeric(num_ren))
Especie2002 <- agregado %>%
  select(enc,folioviv,foliohog,numren,YE001,YE002,YE003,YE004,YE005,YE006,YE007,
        YE008,YE009,YE010,YE011,YE012,YE013,YE014,YE015,YE016,YE017,YE018,YE019,
        YE020,YE021,YE022,YE023,YE024,YE025,YE026,YE027,YE028,YE029,YE030,YE031,
        YE032,YE033,YE034,YE035,YE036,YE037,YE038,YE039,YE040,YE041,YE042,YE043,
        YE044,YE045)
remove(agregado)
```

I. Tabla especie de 2004

```
gasto <- read.dbf("Bases/2004/nomon.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona pago en especie:

```
gasto <- gasto %>% filter(tipo_gas=="2")
agregado <- gasto %>% group_by(folio,num_ren,clave) %>%
  summarise(gasto=sum(gas_tri),.groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=c(folio,num_ren),values_from=gasto,names_from=clave)
```

Lista de variables de ingreso para considerar en la construcción:

```
ls(agregado)
```

[1]	"A001"	"A002"	"A004"	"A005"	"A007"	"A009"	"A010"
[8]	"A012"	"A013"	"A014"	"A016"	"A017"	"A019"	"A021"
[15]	"A022"	"A023"	"A025"	"A027"	"A029"	"A030"	"A032"
[22]	"A033"	"A034"	"A035"	"A036"	"A037"	"A038"	"A039"
[29]	"A040"	"A042"	"A047"	"A049"	"A050"	"A053"	"A054"
[36]	"A055"	"A056"	"A057"	"A058"	"A060"	"A064"	"A065"
[43]	"A066"	"A068"	"A070"	"A072"	"A073"	"A074"	"A075"
[50]	"A076"	"A077"	"A079"	"A080"	"A082"	"A084"	"A085"
[57]	"A086"	"A087"	"A088"	"A089"	"A090"	"A092"	"A099"
[64]	"A103"	"A105"	"A106"	"A108"	"A109"	"A112"	"A113"
[71]	"A114"	"A116"	"A119"	"A121"	"A122"	"A123"	"A124"
[78]	"A126"	"A127"	"A128"	"A130"	"A132"	"A133"	"A134"
[85]	"A136"	"A137"	"A140"	"A141"	"A146"	"A149"	"A151"
[92]	"A155"	"A156"	"A157"	"A158"	"A159"	"A161"	"A162"
[99]	"A163"	"A165"	"A170"	"A172"	"A173"	"A174"	"A178"
[106]	"A184"	"A188"	"A189"	"A193"	"A196"	"A197"	"A199"
[113]	"A202"	"A203"	"A204"	"A205"	"A209"	"A210"	"A212"
[120]	"A213"	"A214"	"A215"	"A216"	"A217"	"A230"	"A232"
[127]	"A233"	"A235"	"A236"	"A237"	"A238"	"A239"	"A240"
[134]	"A243"	"B001"	"B002"	"B003"	"B004"	"B005"	"B006"
[141]	"B007"	"C001"	"C002"	"C003"	"C004"	"C005"	"C006"
[148]	"C007"	"C008"	"C009"	"C010"	"C011"	"C012"	"C013"
[155]	"C014"	"C015"	"C016"	"C018"	"C019"	"C020"	"C021"
[162]	"C024"	"D001"	"D002"	"D003"	"D004"	"D005"	"D006"
[169]	"D007"	"D008"	"D009"	"D010"	"D011"	"D012"	"D013"
[176]	"D014"	"D015"	"D016"	"D019"	"D020"	"E001"	"E002"
[183]	"E003"	"E004"	"E005"	"E006"	"E007"	"E008"	"E009"
[190]	"E012"	"E014"	"E015"	"E016"	"E021"	"E024"	"E025"

[197]	"E026"	"E027"	"E028"	"E031"	"E033"	"F002"	"F003"
[204]	"F004"	"F005"	"F006"	"F007"	"F008"	"F010"	"F011"
[211]	"F013"	"folio"	"G002"	"G003"	"G004"	"G007"	"G008"
[218]	"G009"	"G010"	"G019"	"G021"	"G023"	"G025"	"G028"
[225]	"H001"	"H006"	"H010"	"H018"	"H040"	"H041"	"H045"
[232]	"H046"	"H047"	"H050"	"H051"	"H052"	"H053"	"H056"
[239]	"H057"	"H058"	"H059"	"H060"	"H062"	"H071"	"H072"
[246]	"H073"	"H076"	"H079"	"H082"	"H088"	"H089"	"H090"
[253]	"H091"	"H094"	"H095"	"H097"	"H098"	"H100"	"H101"
[260]	"H107"	"H109"	"I001"	"I002"	"I004"	"I005"	"I006"
[267]	"I012"	"J001"	"J002"	"J003"	"J004"	"J005"	"J007"
[274]	"J008"	"J009"	"J010"	"J011"	"J012"	"J015"	"J016"
[281]	"J017"	"J018"	"J019"	"J020"	"J021"	"J022"	"J023"
[288]	"J024"	"J025"	"J026"	"J027"	"J028"	"J029"	"J030"
[295]	"J031"	"J032"	"J033"	"J034"	"J035"	"J036"	"J037"
[302]	"J038"	"J039"	"J040"	"J041"	"J042"	"J043"	"J044"
[309]	"J045"	"J046"	"J047"	"J048"	"J049"	"J050"	"J051"
[316]	"J052"	"J053"	"J054"	"J055"	"J056"	"J057"	"J058"
[323]	"J059"	"J060"	"J061"	"J064"	"J065"	"J067"	"J069"
[330]	"J071"	"K001"	"K007"	"K010"	"K023"	"K025"	"K035"
[337]	"K037"	"K038"	"K039"	"L002"	"L008"	"L018"	"L023"
[344]	"L027"	"M001"	"M003"	"M004"	"M005"	"M006"	"M007"
[351]	"M008"	"M017"	"N004"	"N005"	"N008"	"N009"	"N011"
[358]	"N015"	"N016"	"num_ren"	"Q013"			

Construcción propuesta:

```

agregado[3:361] [is.na(agregado[3:361])] <- 0
agregado <- agregado %>%
  mutate(YE001=A001+A002+A004+A005+A007+A009+A010+A012+A013+A014+A016+A017+A019+
    A021+A022+A023+A025+A027+A029+A030+A032+A033+A034+A035+A036+A037+A038+
    A039+A040+A042+A047+A049+A050+A053+A054+A055+A056+A057+A058+A060+A064+
    A065+A066+A068+A070+A072+A073+A074+A075+A076+A077+A079+A080+A082+A084+
    A085+A086+A087+A088+A089+A090+A092+A099+A103+A105+A106+A108+A109+A112+
    A113+A114+A116+A119+A121+A122+A123+A124+A126+A127+A128+A130+A132+A133+
    A134+A136+A137+A140+A141+A146+A149+A151+A155+A156+A157+A158+A159+A161+
    A162+A163+A165+A170+A172+A173+A174+A178+A184+A188+A189+A193+A196+A197+
    A199+A202+A203+A204+A205)%>%
  mutate(YE002=A210)%>%
  mutate(YE003=A212+A213+A214+A215+A216+A217)%>%
  mutate(YE004=A230+A232+A233)%>%
  mutate(YE005=A209)%>%
  mutate(YE006=A235+A236+A237+A238+A239)%>%
  mutate(YE007=A240)%>%
  mutate(YE008=A243)%>%
  mutate(YE009=B001+B002+B003+B004+B005+B006+B007)%>%
  mutate(YE010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
    C014+C015+C016+C018+C019)%>%
  mutate(YE011=C020+C021+C024)%>%
  mutate(YE012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
    D014+D015+D016+D019)%>%
  mutate(YE013=D020)%>%
  mutate(YE014=E001+E002+E003+E004+E005+E006+E007+E008+E009+E012)%>%
  mutate(YE015=E014+E015+E016)%>%
  mutate(YE016=E021+E024)%>%
  mutate(YE017=E025+E026+E027+E028+E031+E033)%>%

```



```

mutate(YE018=F002+F003+F004+F005+F006+F007+F008)%>%
mutate(YE019=F010+F011+F013)%>%
mutate(YE020=G002+G003+G004)%>%
mutate(YE021=G007+G008+G009+G010+G019+G021+G023+G025+G028)%>%
mutate(YE022=H001+H006+H010+H018+H040+H041+H045+H046+H047+H050+H051+H052+H053+
      H056+H057+H058+H059+H060+H062+H071+H072+H073+H076+H079+H082+H088+H089+
      H090+H091+H094+H095+H097+H098+H100+H101+H107+H109)%>%
mutate(YE023=I001+I002+I004+I005+I006+I012)%>%
mutate(YE024=J016+J017+J018+J019+J020+J021+J022+J023+J024+J025+J026+J027+J028+
      J029+J030+J031+J032+J033+J034+J035+J036+J037+J038+J064)%>%
mutate(YE025=J039+J040+J041+J042+J043)%>%
mutate(YE026=J001+J002+J003+J004+J005+J007+J008+J009+J010+J011+J012+J015)%>%
mutate(YE027=J044+J045+J046+J047+J048+J049+J050+J051+J052+J053+J054+J055+J056+
      J057+J058+J059+J060+J061)%>%
mutate(YE028=J065+J067)%>%
mutate(YE029=J069)%>%
mutate(YE030=J071)%>%
mutate(YE031=0)%>%
mutate(YE032=K001+K007+K010+K023)%>%
mutate(YE033=K025+K035)%>%
mutate(YE034=K037+K038+K039)%>%
mutate(YE035=L002+L008+L018+L023+L027)%>%
mutate(YE036=M001+M003+M004+M005+M006)%>%
mutate(YE037=M007+M008)%>%
mutate(YE038=M017)%>%
mutate(YE039=N004+N005)%>%
mutate(YE040=N008+N009+N011+N015+N016)%>%
mutate(YE041=Q013)%>%
mutate(YE042=0)%>%
mutate(YE043=0)%>%
mutate(YE044=0)%>%
mutate(YE045=0)

```

Se guarda la tabla de ingreso en especie:

```

agregado <- agregado %>%
  mutate(enc=2004) %>%
  mutate(folioviv=substr(folio,5,10)) %>%
  mutate(foliohog=substr(folio,11,11)) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog)) %>%
  mutate(foliohog=foliohog+1) %>%
  mutate(numren=as.numeric(num_ren))
Especie2004 <- agregado %>%
  select(enc,folioviv,foliohog,numren,YE001,YE002,YE003,YE004,YE005,YE006,YE007,
        YE008,YE009,YE010,YE011,YE012,YE013,YE014,YE015,YE016,YE017,YE018,YE019,
        YE020,YE021,YE022,YE023,YE024,YE025,YE026,YE027,YE028,YE029,YE030,YE031,
        YE032,YE033,YE034,YE035,YE036,YE037,YE038,YE039,YE040,YE041,YE042,YE043,
        YE044,YE045)
remove(agregado)

```

J. Tabla especie de 2005

```

gasto <- read.dbf("Bases/2005/nomon.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))

```


Se selecciona pago en especie:

```
gasto <- gasto %>% filter(tipo_gas=="2")
agregado <- gasto %>% group_by(folio,num_ren,clave) %>%
  summarise(gasto=sum(gas_tri),.groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=c(folio,num_ren),values_from=gasto,names_from=clave)
```

Lista de variables de ingreso para considerar en la construcción:

```
ls(agregado)
```

[1]	"A001"	"A004"	"A005"	"A006"	"A007"	"A008"	"A009"
[8]	"A010"	"A011"	"A012"	"A013"	"A014"	"A016"	"A017"
[15]	"A019"	"A020"	"A021"	"A023"	"A029"	"A032"	"A033"
[22]	"A036"	"A040"	"A046"	"A047"	"A049"	"A050"	"A051"
[29]	"A052"	"A053"	"A055"	"A056"	"A057"	"A058"	"A060"
[36]	"A064"	"A065"	"A066"	"A068"	"A070"	"A072"	"A073"
[43]	"A077"	"A079"	"A081"	"A082"	"A084"	"A086"	"A087"
[50]	"A088"	"A090"	"A092"	"A093"	"A094"	"A096"	"A099"
[57]	"A101"	"A105"	"A106"	"A108"	"A109"	"A110"	"A112"
[64]	"A113"	"A114"	"A115"	"A116"	"A118"	"A119"	"A121"
[71]	"A122"	"A123"	"A124"	"A127"	"A130"	"A132"	"A134"
[78]	"A139"	"A146"	"A149"	"A151"	"A152"	"A154"	"A155"
[85]	"A156"	"A157"	"A158"	"A159"	"A163"	"A164"	"A166"
[92]	"A167"	"A168"	"A170"	"A172"	"A174"	"A176"	"A177"
[99]	"A178"	"A183"	"A184"	"A185"	"A186"	"A187"	"A188"
[106]	"A189"	"A192"	"A193"	"A195"	"A197"	"A198"	"A199"
[113]	"A202"	"A203"	"A204"	"A205"	"A207"	"A209"	"A210"
[120]	"A211"	"A212"	"A213"	"A214"	"A215"	"A216"	"A217"
[127]	"A235"	"A236"	"A237"	"A238"	"A240"	"A243"	"B001"
[134]	"B002"	"B003"	"B004"	"B005"	"B006"	"B007"	"C001"
[141]	"C002"	"C003"	"C004"	"C005"	"C006"	"C007"	"C008"
[148]	"C009"	"C010"	"C011"	"C012"	"C013"	"C014"	"C015"
[155]	"C016"	"C018"	"C020"	"C021"	"C023"	"C024"	"D001"
[162]	"D002"	"D003"	"D004"	"D005"	"D006"	"D007"	"D008"
[169]	"D009"	"D010"	"D012"	"D013"	"D014"	"D015"	"D016"
[176]	"D019"	"D020"	"D021"	"E001"	"E002"	"E003"	"E004"
[183]	"E005"	"E006"	"E008"	"E009"	"E012"	"E013"	"E014"
[190]	"E015"	"E020"	"E021"	"E022"	"E023"	"E025"	"E026"
[197]	"E028"	"E030"	"E031"	"E032"	"E033"	"F002"	"F003"
[204]	"F004"	"F005"	"F008"	"F009"	"F010"	"F011"	"F013"
[211]	"F014"	"F015"	"folio"	"G002"	"G003"	"G004"	"G005"
[218]	"G007"	"G008"	"G009"	"G020"	"G021"	"G026"	"G027"
[225]	"G028"	"H001"	"H002"	"H005"	"H007"	"H010"	"H012"
[232]	"H023"	"H025"	"H029"	"H030"	"H045"	"H046"	"H047"
[239]	"H048"	"H050"	"H052"	"H056"	"H057"	"H058"	"H059"
[246]	"H060"	"H062"	"H066"	"H067"	"H071"	"H073"	"H076"
[253]	"H079"	"H082"	"H084"	"H088"	"H094"	"H095"	"H096"
[260]	"H100"	"H107"	"H110"	"H112"	"H113"	"H115"	"H116"
[267]	"H117"	"I002"	"I005"	"I011"	"I016"	"I017"	"I019"
[274]	"I021"	"J001"	"J002"	"J003"	"J004"	"J007"	"J008"
[281]	"J009"	"J010"	"J011"	"J012"	"J014"	"J015"	"J016"
[288]	"J017"	"J018"	"J019"	"J020"	"J021"	"J022"	"J023"
[295]	"J024"	"J025"	"J026"	"J027"	"J028"	"J029"	"J030"

[302]	"J031"	"J032"	"J033"	"J034"	"J035"	"J036"	"J037"
[309]	"J038"	"J039"	"J040"	"J041"	"J042"	"J043"	"J044"
[316]	"J045"	"J046"	"J047"	"J048"	"J049"	"J050"	"J051"
[323]	"J052"	"J053"	"J054"	"J055"	"J056"	"J057"	"J058"
[330]	"J059"	"J060"	"J062"	"J065"	"J067"	"J069"	"K001"
[337]	"K004"	"K009"	"K010"	"K011"	"K012"	"K015"	"K021"
[344]	"K022"	"K032"	"K037"	"K038"	"K039"	"L002"	"L005"
[351]	"L006"	"L007"	"L011"	"L016"	"L023"	"M001"	"M002"
[358]	"M003"	"M005"	"M007"	"M008"	"M009"	"M011"	"M013"
[365]	"M017"	"M018"	"N004"	"N005"	"N006"	"N008"	"N009"
[372]	"N016"	"num_ren"					

Construcción propuesta:

```

agregado[3:373] [is.na(agregado[3:373])] <- 0
agregado <- agregado %>%
  mutate(YE001=A001+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+A014+A016+
    A017+A019+A020+A021+A023+A029+A032+A033+A036+A040+A046+A047+A049+A050+
    A051+A052+A053+A055+A056+A057+A058+A060+A064+A065+A066+A068+A070+A072+
    A073+A077+A079+A081+A082+A084+A086+A087+A088+A090+A092+A093+A094+A096+
    A099+A101+A105+A106+A108+A109+A110+A112+A113+A114+A115+A116+A118+A119+
    A121+A122+A123+A124+A127+A130+A132+A134+A139+A146+A149+A151+A152+A154+
    A155+A156+A157+A158+A159+A163+A164+A166+A167+A168+A170+A172+A174+A176+
    A177+A178+A183+A184+A185+A186+A187+A188+A189+A192+A193+A195+A197+A198+
    A199+A202+A203+A204+A205+A207)%>%
  mutate(YE002=A210+A211)%>%
  mutate(YE003=A212+A213+A214+A215+A216+A217)%>%
  mutate(YE004=0)%>%
  mutate(YE005=A209)%>%
  mutate(YE006=A235+A236+A237+A238)%>%
  mutate(YE007=A240)%>%
  mutate(YE008=A243)%>%
  mutate(YE009=B001+B002+B003+B004+B005+B006+B007)%>%
  mutate(YE010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
    C014+C015+C016+C018)%>%
  mutate(YE011=C020+C021+C023+C024)%>%
  mutate(YE012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D012+D013+D014+
    D015+D016+D019)%>%
  mutate(YE013=D020+D021)%>%
  mutate(YE014=E001+E002+E003+E004+E005+E006+E008+E009+E012+E013)%>%
  mutate(YE015=E014+E015)%>%
  mutate(YE016=E020+E021+E022+E023)%>%
  mutate(YE017=E025+E026+E028+E030+E031+E032+E033)%>%
  mutate(YE018=F002+F003+F004+F005+F008+F009)%>%
  mutate(YE019=F010+F011+F013+F014+F015)%>%
  mutate(YE020=G002+G003+G004+G005)%>%
  mutate(YE021=G007+G008+G009+G020+G021+G026+G027+G028)%>%
  mutate(YE022=H001+H002+H005+H007+H010+H012+H023+H025+H029+H030+H045+H046+H047+
    H048+H050+H052+H056+H057+H058+H059+H060+H062+H066+H067+H071+H073+H076+
    H079+H082+H084+H088+H094+H095+H096+H100+H107+H110+H112+H113+H115+H116+
    H117)%>%
  mutate(YE023=I002+I005+I011+I016+I017+I019+I021)%>%
  mutate(YE024=J016+J017+J018+J019+J020+J021+J022+J023+J024+J025+J026+J027+J028+
    J029+J030+J031+J032+J033+J034+J035+J036+J037+J038+J062)%>%
  mutate(YE025=J039+J040+J041+J042+J043)%>%
  mutate(YE026=J001+J002+J003+J004+J007+J008+J009+J010+J011+J012+J014+J015)%>%

```

```
mutate(YE027=J044+J045+J046+J047+J048+J049+J050+J051+J052+J053+J054+J055+J056+
      J057+J058+J059+J060)%>%
mutate(YE028=J065+J067)%>%
mutate(YE029=J069)%>%
mutate(YE030=0)%>%
mutate(YE031=0)%>%
mutate(YE032=K001+K004+K009+K010+K011+K012+K015+K021+K022)%>%
mutate(YE033=K032)%>%
mutate(YE034=K037+K038+K039)%>%
mutate(YE035=L002+L005+L006+L007+L011+L016+L023)%>%
mutate(YE036=M001+M002+M003+M005)%>%
mutate(YE037=M007+M008+M009+M011)%>%
mutate(YE038=M013+M017+M018)%>%
mutate(YE039=N004+N005+N006)%>%
mutate(YE040=N008+N009+N016)%>%
mutate(YE041=0)%>%
mutate(YE042=0)%>%
mutate(YE043=0)%>%
mutate(YE044=0)%>%
mutate(YE045=0)
```

Se guarda la tabla de ingreso en especie:

```
agregado <- agregado %>%
  mutate(enc=2005) %>%
  mutate(folioviv=substr(folio,5,10)) %>%
  mutate(foliohog=substr(folio,11,11)) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog)) %>%
  mutate(foliohog=foliohog+1) %>%
  mutate(numren=as.numeric(num_ren))
Especie2005 <- agregado %>%
  select(enc, folioviv, foliohog, numren, YE001, YE002, YE003, YE004, YE005, YE006, YE007,
        YE008, YE009, YE010, YE011, YE012, YE013, YE014, YE015, YE016, YE017, YE018, YE019,
        YE020, YE021, YE022, YE023, YE024, YE025, YE026, YE027, YE028, YE029, YE030, YE031,
        YE032, YE033, YE034, YE035, YE036, YE037, YE038, YE039, YE040, YE041, YE042, YE043,
        YE044, YE045)
remove(agregado)
```

K. Tabla especie de 2006

```
gasto <- read.dbf("Bases/2006/nomon.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona pago en especie:

```
gasto <- gasto %>% filter(tipo_gas=="2")
agregado <- gasto %>% group_by(folio, num_ren, clave) %>%
  summarise(gasto=sum(gas_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=c(folio, num_ren), values_from=gasto, names_from=clave)
```

Lista de variables de ingreso para considerar en la construcción:

ls(agregado)

[1]	"A001"	"A002"	"A003"	"A004"	"A005"	"A007"	"A008"
[8]	"A009"	"A010"	"A011"	"A012"	"A013"	"A014"	"A015"
[15]	"A016"	"A019"	"A021"	"A022"	"A025"	"A031"	"A034"
[22]	"A038"	"A039"	"A042"	"A049"	"A052"	"A055"	"A056"
[29]	"A057"	"A058"	"A059"	"A061"	"A062"	"A066"	"A067"
[36]	"A068"	"A072"	"A073"	"A075"	"A077"	"A078"	"A079"
[43]	"A080"	"A082"	"A085"	"A086"	"A087"	"A088"	"A089"
[50]	"A091"	"A092"	"A093"	"A095"	"A097"	"A102"	"A103"
[57]	"A106"	"A108"	"A109"	"A110"	"A111"	"A112"	"A113"
[64]	"A115"	"A116"	"A117"	"A119"	"A120"	"A124"	"A125"
[71]	"A127"	"A129"	"A130"	"A131"	"A133"	"A134"	"A135"
[78]	"A137"	"A142"	"A144"	"A149"	"A151"	"A154"	"A156"
[85]	"A158"	"A160"	"A161"	"A162"	"A166"	"A167"	"A168"
[92]	"A173"	"A177"	"A178"	"A181"	"A186"	"A187"	"A191"
[99]	"A192"	"A193"	"A198"	"A199"	"A200"	"A201"	"A202"
[106]	"A205"	"A207"	"A208"	"A209"	"A213"	"A214"	"A215"
[113]	"A217"	"A218"	"A219"	"A220"	"A221"	"A224"	"A236"
[120]	"A239"	"A242"	"A243"	"A244"	"A245"	"A246"	"B001"
[127]	"B002"	"B004"	"B005"	"B006"	"B007"	"C001"	"C002"
[134]	"C003"	"C004"	"C005"	"C006"	"C007"	"C008"	"C009"
[141]	"C010"	"C011"	"C012"	"C013"	"C014"	"C015"	"C016"
[148]	"C018"	"C019"	"C020"	"C021"	"C022"	"D001"	"D002"
[155]	"D003"	"D004"	"D005"	"D006"	"D007"	"D008"	"D009"
[162]	"D010"	"D011"	"D012"	"D013"	"D014"	"D015"	"D016"
[169]	"D017"	"D019"	"D021"	"D022"	"D024"	"D025"	"E001"
[176]	"E002"	"E003"	"E004"	"E005"	"E006"	"E007"	"E008"
[183]	"E009"	"E013"	"E016"	"E021"	"E022"	"E023"	"E025"
[190]	"E026"	"E027"	"E031"	"E032"	"E033"	"F002"	"F003"
[197]	"F004"	"F005"	"F006"	"F008"	"F009"	"F010"	"F011"
[204]	"F012"	"F013"	"F014"	"F015"	"folio"	"G001"	"G002"
[211]	"G003"	"G004"	"G007"	"G008"	"G009"	"G020"	"G024"
[218]	"G025"	"G027"	"G029"	"H001"	"H007"	"H015"	"H016"
[225]	"H017"	"H019"	"H023"	"H025"	"H029"	"H031"	"H036"
[232]	"H037"	"H045"	"H046"	"H047"	"H048"	"H051"	"H052"
[239]	"H053"	"H055"	"H056"	"H057"	"H058"	"H059"	"H060"
[246]	"H062"	"H063"	"H066"	"H067"	"H070"	"H072"	"H073"
[253]	"H082"	"H084"	"H088"	"H090"	"H094"	"H095"	"H098"
[260]	"H100"	"H106"	"H107"	"H109"	"H110"	"H114"	"H115"
[267]	"H116"	"H117"	"H118"	"I001"	"I004"	"I009"	"I011"
[274]	"I015"	"I021"	"J001"	"J002"	"J003"	"J004"	"J006"
[281]	"J007"	"J008"	"J009"	"J010"	"J011"	"J012"	"J014"
[288]	"J015"	"J016"	"J017"	"J018"	"J019"	"J020"	"J021"
[295]	"J022"	"J023"	"J024"	"J025"	"J026"	"J027"	"J028"
[302]	"J029"	"J030"	"J031"	"J032"	"J033"	"J034"	"J035"
[309]	"J036"	"J037"	"J038"	"J039"	"J040"	"J041"	"J042"
[316]	"J043"	"J044"	"J045"	"J046"	"J047"	"J048"	"J049"
[323]	"J050"	"J051"	"J052"	"J053"	"J054"	"J055"	"J056"
[330]	"J057"	"J058"	"J059"	"J060"	"J061"	"J062"	"J065"
[337]	"J067"	"J069"	"J071"	"K007"	"K009"	"K010"	"K012"
[344]	"K014"	"K020"	"K023"	"K026"	"K029"	"K037"	"K038"
[351]	"K040"	"L005"	"M001"	"M003"	"M004"	"M005"	"M006"
[358]	"M009"	"M012"	"M013"	"M014"	"M016"	"M017"	"M018"

[365]	"N001"	"N004"	"N005"	"N008"	"N009"	"N010"	"N015"
[372]	"N016"	"num_ren"	"Q009"				

Construcción propuesta:

```

agregado[3:374] [is.na(agregado[3:374])] <- 0
agregado <- agregado %>%
  mutate(YE001=A001+A002+A003+A004+A005+A007+A008+A009+A010+A011+A012+A013+A014+
    A015+A016+A019+A021+A022+A025+A031+A034+A038+A039+A042+A049+A052+A055+
    A056+A057+A058+A059+A061+A062+A066+A067+A068+A072+A073+A075+A077+A078+
    A079+A080+A082+A085+A086+A087+A088+A089+A091+A092+A093+A095+A097+A102+
    A103+A106+A108+A109+A110+A111+A112+A113+A115+A116+A117+A119+A120+A124+
    A125+A127+A129+A130+A131+A133+A134+A135+A137+A142+A144+A149+A151+A154+
    A156+A158+A160+A161+A162+A166+A167+A168+A173+A177+A178+A181+A186+A187+
    A191+A192+A193+A198+A199+A200+A201+A202+A205+A207+A208+A209)%>%
  mutate(YE002=A213+A214)%>%
  mutate(YE003=A215+A217+A218+A219+A220+A221)%>%
  mutate(YE004=A224+A236)%>%
  mutate(YE005=0)%>%
  mutate(YE006=A243+A244+A245+A246)%>%
  mutate(YE007=A239)%>%
  mutate(YE008=A242)%>%
  mutate(YE009=B001+B002+B004+B005+B006+B007)%>%
  mutate(YE010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
    C014+C015+C016+C018+C019)%>%
  mutate(YE011=C020+C021+C022)%>%
  mutate(YE012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
    D014+D015+D016+D017+D019+D021)%>%
  mutate(YE013=D022+D024+D025)%>%
  mutate(YE014=E001+E002+E003+E004+E005+E006+E007+E008+E009+E013)%>%
  mutate(YE015=E016)%>%
  mutate(YE016=E021+E022+E023)%>%
  mutate(YE017=E025+E026+E027+E031+E032+E033)%>%
  mutate(YE018=F002+F003+F004+F005+F006+F008+F009)%>%
  mutate(YE019=F010+F011+F012+F013+F014+F015)%>%
  mutate(YE020=G001+G002+G003+G004)%>%
  mutate(YE021=G007+G008+G009+G020+G024+G025+G027+G029)%>%
  mutate(YE022=H001+H007+H015+H016+H017+H019+H023+H025+H029+H031+H036+H037+H045+
    H046+H047+H048+H051+H052+H053+H055+H056+H057+H058+H059+H060+H062+H063+
    H066+H067+H070+H072+H073+H082+H084+H088+H090+H094+H095+H098+H100+H106+
    H107+H109+H110+H114+H115+H116+H117+H118)%>%
  mutate(YE023=I001+I004+I009+I011+I015+I021)%>%
  mutate(YE024=J016+J017+J018+J019+J020+J021+J022+J023+J024+J025+J026+J027+J028+
    J029+J030+J031+J032+J033+J034+J035+J036+J037+J038+J062)%>%
  mutate(YE025=J039+J040+J041+J042+J043)%>%
  mutate(YE026=J001+J002+J003+J004+J006+J007+J008+J009+J010+J011+J012+J014+J015)%>%
  mutate(YE027=J044+J045+J046+J047+J048+J049+J050+J051+J052+J053+J054+J055+J056+
    J057+J058+J059+J060+J061)%>%
  mutate(YE028=J065+J067)%>%
  mutate(YE029=J069)%>%
  mutate(YE030=J071)%>%
  mutate(YE031=0)%>%
  mutate(YE032=K007+K009+K010+K012+K014+K020+K023)%>%
  mutate(YE033=K026+K029)%>%
  mutate(YE034=K037+K038+K040)%>%
  mutate(YE035=L005)%>%
  
```

```
mutate(YE036=M001+M003+M004+M005+M006)%>%
mutate(YE037=M009)%>%
mutate(YE038=M012+M013+M014+M016+M017+M018)%>%
mutate(YE039=N001+N004+N005+N010)%>%
mutate(YE040=N008+N009+N015+N016)%>%
mutate(YE041=Q009)%>%
mutate(YE042=0)%>%
mutate(YE043=0)%>%
mutate(YE044=0)%>%
mutate(YE045=0)
```

Se guarda la tabla de ingreso en especie:

```
agregado <- agregado %>%
  mutate(enc=2006) %>%
  mutate(folioviv=substr(folio,5,10)) %>%
  mutate(foliohog=substr(folio,11,11)) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog)) %>%
  mutate(foliohog=foliohog+1) %>%
  mutate(numren=as.numeric(num_ren))
Especie2006 <- agregado %>%
  select(enc,folioviv,foliohog,numren,YE001,YE002,YE003,YE004,YE005,YE006,YE007,
        YE008,YE009,YE010,YE011,YE012,YE013,YE014,YE015,YE016,YE017,YE018,YE019,
        YE020,YE021,YE022,YE023,YE024,YE025,YE026,YE027,YE028,YE029,YE030,YE031,
        YE032,YE033,YE034,YE035,YE036,YE037,YE038,YE039,YE040,YE041,YE042,YE043,
        YE044,YE045)
remove(agregado)
```

L. Tabla especie de 2008

```
gasto <- read.dbf("Bases/2008/nomon.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona pago en especie:

```
gasto <- gasto %>% filter(tipogasto=="2")
agregado <- gasto %>% group_by(folioviv,foliohog,numren,clave) %>%
  summarise(gasto=sum(apo_tri),.groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=c(folioviv,foliohog,numren),values_from=gasto,names_from=clave)
```

Lista de variables de ingreso para considerar en la construcción:

```
ls(agregado)
```

[1]	"A001"	"A002"	"A003"	"A004"	"A005"	"A007"
[7]	"A008"	"A009"	"A010"	"A011"	"A012"	"A013"
[13]	"A014"	"A015"	"A017"	"A019"	"A021"	"A022"
[19]	"A024"	"A025"	"A026"	"A030"	"A033"	"A034"
[25]	"A035"	"A036"	"A037"	"A040"	"A042"	"A045"
[31]	"A046"	"A048"	"A049"	"A052"	"A054"	"A055"
[37]	"A056"	"A057"	"A058"	"A059"	"A062"	"A065"
[43]	"A066"	"A067"	"A068"	"A070"	"A072"	"A073"
[49]	"A075"	"A078"	"A080"	"A083"	"A085"	"A087"

[55]	"A088"	"A089"	"A090"	"A091"	"A092"	"A093"
[61]	"A095"	"A099"	"A102"	"A106"	"A108"	"A111"
[67]	"A112"	"A113"	"A115"	"A117"	"A119"	"A122"
[73]	"A124"	"A125"	"A126"	"A127"	"A129"	"A130"
[79]	"A131"	"A133"	"A134"	"A135"	"A137"	"A139"
[85]	"A140"	"A142"	"A148"	"A149"	"A152"	"A154"
[91]	"A155"	"A158"	"A159"	"A160"	"A161"	"A162"
[97]	"A164"	"A166"	"A167"	"A173"	"A176"	"A177"
[103]	"A187"	"A191"	"A192"	"A198"	"A199"	"A200"
[109]	"A201"	"A202"	"A205"	"A207"	"A208"	"A209"
[115]	"A212"	"A215"	"A216"	"A217"	"A218"	"A219"
[121]	"A220"	"A221"	"A224"	"A229"	"A237"	"A239"
[127]	"A243"	"A244"	"A245"	"A246"	"B001"	"B002"
[133]	"B004"	"B005"	"B006"	"B007"	"C001"	"C002"
[139]	"C003"	"C004"	"C005"	"C006"	"C007"	"C008"
[145]	"C009"	"C010"	"C011"	"C013"	"C014"	"C015"
[151]	"C016"	"C018"	"C019"	"C020"	"C021"	"C022"
[157]	"C024"	"D001"	"D002"	"D003"	"D004"	"D005"
[163]	"D006"	"D007"	"D008"	"D009"	"D010"	"D011"
[169]	"D012"	"D014"	"D015"	"D016"	"D021"	"D022"
[175]	"D024"	"D026"	"E001"	"E002"	"E003"	"E004"
[181]	"E005"	"E006"	"E008"	"E009"	"E014"	"E015"
[187]	"E016"	"E018"	"E021"	"E024"	"E025"	"E026"
[193]	"E028"	"E030"	"E031"	"E033"	"F002"	"F003"
[199]	"F004"	"F005"	"F008"	"F009"	"F010"	"F011"
[205]	"F013"	"F016"	"F017"	"foliohog"	"folioviv"	"G002"
[211]	"G003"	"G005"	"G007"	"G008"	"G009"	"G010"
[217]	"G011"	"G012"	"G013"	"G021"	"G022"	"H005"
[223]	"H015"	"H016"	"H019"	"H020"	"H021"	"H025"
[229]	"H027"	"H028"	"H034"	"H035"	"H036"	"H039"
[235]	"H040"	"H041"	"H049"	"H054"	"H055"	"H056"
[241]	"H057"	"H058"	"H059"	"H060"	"H061"	"H062"
[247]	"H063"	"H064"	"H067"	"H068"	"H069"	"H070"
[253]	"H071"	"H073"	"H077"	"H078"	"H081"	"H083"
[259]	"H084"	"H086"	"H088"	"H096"	"H098"	"H100"
[265]	"H102"	"H108"	"H109"	"H112"	"H114"	"H115"
[271]	"H123"	"H127"	"H129"	"H130"	"H131"	"H134"
[277]	"I001"	"I002"	"I003"	"I004"	"I005"	"I007"
[283]	"I008"	"I009"	"I014"	"I016"	"I017"	"I019"
[289]	"I021"	"I024"	"I026"	"J001"	"J002"	"J003"
[295]	"J004"	"J005"	"J006"	"J007"	"J008"	"J009"
[301]	"J010"	"J011"	"J012"	"J013"	"J014"	"J015"
[307]	"J016"	"J017"	"J018"	"J019"	"J020"	"J021"
[313]	"J022"	"J023"	"J024"	"J025"	"J026"	"J027"
[319]	"J028"	"J029"	"J030"	"J031"	"J032"	"J033"
[325]	"J034"	"J035"	"J036"	"J037"	"J038"	"J039"
[331]	"J040"	"J041"	"J042"	"J043"	"J044"	"J045"
[337]	"J046"	"J047"	"J048"	"J049"	"J050"	"J051"
[343]	"J052"	"J053"	"J054"	"J055"	"J056"	"J057"
[349]	"J058"	"J059"	"J060"	"J061"	"J065"	"J066"
[355]	"J067"	"J069"	"J070"	"J071"	"K001"	"K002"
[361]	"K007"	"K009"	"K010"	"K011"	"K012"	"K013"
[367]	"K015"	"K016"	"K021"	"K022"	"K023"	"K024"
[373]	"K027"	"K028"	"K030"	"K037"	"K038"	"K039"
[379]	"L001"	"L002"	"L005"	"L006"	"L010"	"L013"

[385]	"L014"	"L015"	"L016"	"L018"	"L023"	"L024"
[391]	"L029"	"M001"	"M002"	"M003"	"M004"	"M005"
[397]	"M007"	"M009"	"M014"	"M016"	"M017"	"M018"
[403]	"N001"	"N002"	"N004"	"N005"	"N006"	"N008"
[409]	"N009"	"N013"	"N015"	"N016"	"numren"	"Q001"
[415]	"Q007"	"Q012"				

Construcción propuesta:

```

agregado[4:416] [is.na(agregado[4:416])] <- 0
agregado <- agregado %>%
  mutate(YE001=A001+A002+A003+A004+A005+A007+A008+A009+A010+A011+A012+A013+A014+
    A015+A017+A019+A021+A022+A024+A025+A026+A030+A033+A034+A035+A036+A037+
    A040+A042+A045+A046+A048+A049+A052+A054+A055+A056+A057+A058+A059+A062+
    A065+A066+A067+A068+A070+A072+A073+A075+A078+A080+A083+A085+A087+A088+
    A089+A090+A091+A092+A093+A095+A099+A102+A106+A108+A111+A112+A113+A115+
    A117+A119+A122+A124+A125+A126+A127+A129+A130+A131+A133+A134+A135+A137+
    A139+A140+A142+A148+A149+A152+A154+A155+A158+A159+A160+A161+A162+A164+
    A166+A167+A173+A176+A177+A187+A191+A192+A198+A199+A200+A201+A202+A205+
    A207+A208+A209)%>%
  mutate(YE002=0)%>%
  mutate(YE003=A215+A216+A217+A218+A219+A220+A221)%>%
  mutate(YE004=A224+A229+A237)%>%
  mutate(YE005=A212)%>%
  mutate(YE006=A243+A244+A245+A246)%>%
  mutate(YE007=A239)%>%
  mutate(YE008=0)%>%
  mutate(YE009=B001+B002+B004+B005+B006+B007)%>%
  mutate(YE010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C013+C014+
    C015+C016+C018+C019)%>%
  mutate(YE011=C020+C021+C022+C024)%>%
  mutate(YE012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D014+
    D015+D016+D021)%>%
  mutate(YE013=D022+D024+D026)%>%
  mutate(YE014=E001+E002+E003+E004+E005+E006+E008+E009)%>%
  mutate(YE015=E014+E015+E016+E018)%>%
  mutate(YE016=E021+E024)%>%
  mutate(YE017=E025+E026+E028+E030+E031+E033)%>%
  mutate(YE018=F002+F003+F004+F005+F008+F009)%>%
  mutate(YE019=F010+F011+F013+F016+F017)%>%
  mutate(YE020=G002+G003+G005)%>%
  mutate(YE021=G007+G008+G009+G010+G011+G012+G013+G021+G022)%>%
  mutate(YE022=H005+H015+H016+H019+H020+H021+H025+H027+H028+H034+H035+H036+H039+
    H040+H041+H049+H054+H055+H056+H057+H058+H059+H060+H061+H062+H063+H064+
    H067+H068+H069+H070+H071+H073+H077+H078+H081+H083+H084+H086+H088+H096+
    H098+H100+H102+H108+H109+H112+H114+H115+H123+H127+H129+H130+H131+H134)%>%
  mutate(YE023=I001+I002+I003+I004+I005+I007+I008+I009+I014+I016+I017+I019+I021+
    I024+I026)%>%
  mutate(YE024=J016+J017+J018+J019+J020+J021+J022+J023+J024+J025+J026+J027+J028+
    J029+J030+J031+J032+J033+J034+J035+J036+J037+J038)%>%
  mutate(YE025=J039+J040+J041+J042+J043)%>%
  mutate(YE026=J001+J002+J003+J004+J005+J006+J007+J008+J009+J010+J011+J012+J013+
    J014+J015)%>%
  mutate(YE027=J044+J045+J046+J047+J048+J049+J050+J051+J052+J053+J054+J055+J056+
    J057+J058+J059+J060+J061)%>%
  mutate(YE028=J065+J066+J067)%>%

```



```

mutate(YE029=J069)%>%
mutate(YE030=J070+J071)%>%
mutate(YE031=0)%>%
mutate(YE032=K001+K002+K007+K009+K010+K011+K012+K013+K015+K016+K021+K022+K023+
      K024)%>%
mutate(YE033=K027+K028+K030)%>%
mutate(YE034=K037+K038+K039)%>%
mutate(YE035=L001+L002+L005+L006+L010+L013+L014+L015+L016+L018+L023+L024+L029)%>%
mutate(YE036=M001+M002+M003+M004+M005)%>%
mutate(YE037=M007+M009)%>%
mutate(YE038=M014+M016+M017+M018)%>%
mutate(YE039=N001+N002+N004+N005+N006+Q012)%>%
mutate(YE040=N008+N009+N013+N015+N016+Q007)%>%
mutate(YE041=0)%>%
mutate(YE042=Q001)%>%
mutate(YE043=0)%>%
mutate(YE044=0)%>%
mutate(YE045=0)

```

Se guarda la tabla de ingreso en especie:

```

agregado <- agregado %>%
  mutate(enc=2008) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog)) %>%
  mutate(foliohog=foliohog+1) %>%
  mutate(numren=as.numeric(numren))
Especie2008 <- agregado %>%
  select(enc, folioviv, foliohog, numren, YE001, YE002, YE003, YE004, YE005, YE006, YE007,
        YE008, YE009, YE010, YE011, YE012, YE013, YE014, YE015, YE016, YE017, YE018, YE019,
        YE020, YE021, YE022, YE023, YE024, YE025, YE026, YE027, YE028, YE029, YE030, YE031,
        YE032, YE033, YE034, YE035, YE036, YE037, YE038, YE039, YE040, YE041, YE042, YE043,
        YE044, YE045)
remove(agregado)

```

M. Tabla especie de 2010

```

gasto <- read.dbf("Bases/2010/nomone.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))

```

Se selecciona pago en especie:

```

gasto <- gasto %>% filter(tipogasto=="2")
agregado <- gasto %>% group_by(folioviv, foliohog, numren, clave) %>%
  summarise(gasto=sum(apo_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=c(folioviv, foliohog, numren), values_from=gasto, names_from=clave)

```

Lista de variables de ingreso para considerar en la construcción:

```
ls(agregado)
```

[1]	"A001"	"A002"	"A003"	"A004"	"A005"	"A006"
[7]	"A007"	"A008"	"A009"	"A010"	"A011"	"A012"
[13]	"A013"	"A014"	"A015"	"A019"	"A021"	"A023"

[19]	"A025"	"A031"	"A034"	"A035"	"A037"	"A038"
[25]	"A040"	"A041"	"A042"	"A048"	"A049"	"A050"
[31]	"A052"	"A055"	"A056"	"A057"	"A058"	"A059"
[37]	"A062"	"A066"	"A067"	"A068"	"A070"	"A072"
[43]	"A073"	"A075"	"A078"	"A079"	"A080"	"A082"
[49]	"A083"	"A084"	"A085"	"A086"	"A087"	"A088"
[55]	"A089"	"A090"	"A091"	"A092"	"A093"	"A095"
[61]	"A102"	"A105"	"A108"	"A109"	"A110"	"A111"
[67]	"A112"	"A113"	"A117"	"A118"	"A119"	"A120"
[73]	"A121"	"A122"	"A124"	"A125"	"A126"	"A127"
[79]	"A129"	"A130"	"A131"	"A133"	"A134"	"A135"
[85]	"A137"	"A140"	"A142"	"A148"	"A149"	"A151"
[91]	"A152"	"A154"	"A155"	"A158"	"A159"	"A160"
[97]	"A161"	"A162"	"A164"	"A165"	"A166"	"A167"
[103]	"A168"	"A172"	"A173"	"A176"	"A177"	"A181"
[109]	"A186"	"A187"	"A191"	"A192"	"A198"	"A199"
[115]	"A200"	"A201"	"A202"	"A205"	"A212"	"A215"
[121]	"A217"	"A218"	"A219"	"A220"	"A221"	"A224"
[127]	"A228"	"A243"	"A244"	"A245"	"A246"	"A247"
[133]	"B001"	"B002"	"B003"	"B004"	"B005"	"B006"
[139]	"B007"	"C001"	"C002"	"C003"	"C004"	"C005"
[145]	"C006"	"C007"	"C008"	"C009"	"C010"	"C013"
[151]	"C015"	"C016"	"C018"	"C021"	"C022"	"C024"
[157]	"D001"	"D002"	"D003"	"D004"	"D005"	"D007"
[163]	"D009"	"D010"	"D011"	"D012"	"D013"	"D014"
[169]	"D015"	"D017"	"D021"	"D022"	"D024"	"E001"
[175]	"E002"	"E003"	"E004"	"E005"	"E006"	"E008"
[181]	"E009"	"E017"	"E022"	"E023"	"E024"	"E026"
[187]	"E027"	"E028"	"E029"	"E032"	"E034"	"F002"
[193]	"F003"	"F006"	"F007"	"F008"	"F009"	"F010"
[199]	"F013"	"foliohog"	"folioviv"	"G001"	"G004"	"G005"
[205]	"G007"	"G009"	"G012"	"G015"	"H001"	"H026"
[211]	"H037"	"H040"	"H041"	"H042"	"H043"	"H044"
[217]	"H056"	"H057"	"H058"	"H059"	"H061"	"H063"
[223]	"H065"	"H067"	"H068"	"H069"	"H070"	"H071"
[229]	"H072"	"H073"	"H074"	"H077"	"H080"	"H081"
[235]	"H083"	"H098"	"H102"	"H103"	"H104"	"H108"
[241]	"H109"	"H114"	"H115"	"H124"	"H130"	"H131"
[247]	"H134"	"H136"	"I001"	"I002"	"I003"	"I009"
[253]	"I012"	"I014"	"I017"	"I019"	"I021"	"J016"
[259]	"J018"	"J032"	"J039"	"J046"	"J051"	"J052"
[265]	"J059"	"J065"	"K002"	"K022"	"K024"	"K038"
[271]	"L001"	"L005"	"L007"	"L012"	"L018"	"L023"
[277]	"M001"	"M003"	"M005"	"M006"	"M012"	"M014"
[283]	"M017"	"M018"	"N001"	"N002"	"N004"	"N005"
[289]	"N008"	"N015"	"N016"	"numren"	"R001"	"R002"
[295]	"R003"	"R004"	"R005"	"R006"	"R007"	"R008"
[301]	"R009"	"R010"	"R011"	"R012"		

Construcción propuesta:

```

agregado[4:304] [is.na(agregado[4:304])] <- 0
agregado <- agregado %>%
  mutate(YE001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A019+A021+A023+A025+A031+A034+A035+A037+A038+A040+A041+A042+
    A048+A049+A050+A052+A055+A056+A057+A058+A059+A062+A066+A067+A068+A070+

```

```

A072+A073+A075+A078+A079+A080+A082+A083+A084+A085+A086+A087+A088+A089+
A090+A091+A092+A093+A095+A102+A105+A108+A109+A110+A111+A112+A113+A117+
A118+A119+A120+A121+A122+A124+A125+A126+A127+A129+A130+A131+A133+A134+
A135+A137+A140+A142+A148+A149+A151+A152+A154+A155+A158+A159+A160+A161+
A162+A164+A165+A166+A167+A168+A172+A173+A176+A177+A181+A186+A187+A191+
A192+A198+A199+A200+A201+A202+A205)%>%
mutate(YE002=0)%>%
mutate(YE003=A215+A217+A218+A219+A220+A221)%>%
mutate(YE004=A224+A228)%>%
mutate(YE005=A212)%>%
mutate(YE006=A243+A244+A245+A246+A247)%>%
mutate(YE007=0)%>%
mutate(YE008=0)%>%
mutate(YE009=B001+B002+B003+B004+B005+B006+B007)%>%
mutate(YE010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C013+C015+C016+
C018)%>%
mutate(YE011=C021+C022+C024)%>%
mutate(YE012=D001+D002+D003+D004+D005+D007+D009+D010+D011+D012+D013+D014+D015+
D017+D021)%>%
mutate(YE013=D022+D024)%>%
mutate(YE014=E001+E002+E003+E004+E005+E006+E008+E009)%>%
mutate(YE015=E017)%>%
mutate(YE016=E022+E023+E024+E026)%>%
mutate(YE017=E027+E028+E029+E032+E034)%>%
mutate(YE018=F002+F003+F006+R005+R006+R007+R008+R009+R010+R011)%>%
mutate(YE019=F007+F008+F009+F010+F013+R012)%>%
mutate(YE020=G001+G004)%>%
mutate(YE021=G005+G007+G009+G012+G015+R001+R002+R003+R004)%>%
mutate(YE022=H001+H026+H037+H040+H041+H042+H043+H044+H056+H057+H058+H059+H061+
H063+H065+H067+H068+H069+H070+H071+H072+H073+H074+H077+H080+H081+H083+
H098+H102+H103+H104+H108+H109+H114+H115+H124+H130+H131+H134+H136)%>%
mutate(YE023=I001+I002+I003+I009+I012+I014+I017+I019+I021)%>%
mutate(YE024=J016+J018+J032)%>%
mutate(YE025=J039)%>%
mutate(YE026=0)%>%
mutate(YE027=J046+J051+J052+J059)%>%
mutate(YE028=J065)%>%
mutate(YE029=0)%>%
mutate(YE030=0)%>%
mutate(YE031=0)%>%
mutate(YE032=K002+K022+K024)%>%
mutate(YE033=0)%>%
mutate(YE034=K038)%>%
mutate(YE035=L001+L005+L007+L012+L018+L023)%>%
mutate(YE036=M001+M003+M005+M006)%>%
mutate(YE037=0)%>%
mutate(YE038=M012+M014+M017+M018)%>%
mutate(YE039=N001+N002+N004+N005)%>%
mutate(YE040=N008+N015+N016)%>%
mutate(YE041=0)%>%
mutate(YE042=0)%>%
mutate(YE043=0)%>%
mutate(YE044=0)%>%
mutate(YE045=0)

```

Se guarda la tabla de ingreso en especie:

```
agregado <- agregado %>%
  mutate(enc=2010) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog)) %>%
  mutate(foliohog=foliohog+1) %>%
  mutate(numren=as.numeric(numren))
Especie2010 <- agregado %>%
  select(enc, folioviv, foliohog, numren, YE001, YE002, YE003, YE004, YE005, YE006, YE007,
         YE008, YE009, YE010, YE011, YE012, YE013, YE014, YE015, YE016, YE017, YE018, YE019,
         YE020, YE021, YE022, YE023, YE024, YE025, YE026, YE027, YE028, YE029, YE030, YE031,
         YE032, YE033, YE034, YE035, YE036, YE037, YE038, YE039, YE040, YE041, YE042, YE043,
         YE044, YE045)
remove(agregado)
```

N. Tabla especie de 2012

```
gasto <- read.dbf("Bases/2012/gastopersona.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona pago en especie:

```
gasto <- gasto %>% filter(tipo_gasto=="G4")
agregado <- gasto %>% group_by(folioviv, foliohog, numren, clave) %>%
  summarise(gasto=sum(gas_nm_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=c(folioviv, foliohog, numren), values_from=gasto, names_from=clave)
```

Lista de variables de ingreso para considerar en la construcción:

```
ls(agregado)
```

[1]	"A001"	"A004"	"A007"	"A008"	"A009"	"A010"
[7]	"A012"	"A013"	"A017"	"A019"	"A021"	"A022"
[13]	"A023"	"A025"	"A026"	"A039"	"A041"	"A042"
[19]	"A052"	"A058"	"A066"	"A068"	"A072"	"A075"
[25]	"A077"	"A078"	"A080"	"A082"	"A085"	"A087"
[31]	"A090"	"A091"	"A093"	"A095"	"A102"	"A106"
[37]	"A108"	"A111"	"A112"	"A115"	"A117"	"A120"
[43]	"A122"	"A124"	"A125"	"A127"	"A129"	"A137"
[49]	"A140"	"A148"	"A152"	"A154"	"A157"	"A158"
[55]	"A159"	"A160"	"A166"	"A167"	"A173"	"A177"
[61]	"A178"	"A180"	"A181"	"A186"	"A187"	"A199"
[67]	"A200"	"A201"	"A202"	"A205"	"A206"	"A208"
[73]	"A209"	"A212"	"A213"	"A215"	"A216"	"A217"
[79]	"A218"	"A220"	"A221"	"A222"	"A239"	"A243"
[85]	"A244"	"A245"	"A246"	"B002"	"B004"	"B005"
[91]	"B006"	"B007"	"C001"	"C002"	"C003"	"C004"
[97]	"C005"	"C006"	"C008"	"C009"	"C010"	"C011"
[103]	"C015"	"C016"	"C019"	"C020"	"C021"	"D001"
[109]	"D002"	"D003"	"D004"	"D005"	"D007"	"D008"
[115]	"D009"	"D010"	"D011"	"D012"	"D014"	"D015"
[121]	"D022"	"D023"	"E002"	"E003"	"E004"	"E005"
[127]	"E008"	"E009"	"E023"	"E026"	"E027"	"E028"

[133]	"E030"	"E034"	"F001"	"F002"	"F003"	"F006"
[139]	"F007"	"F008"	"F009"	"F010"	"foliohog"	"folioviv"
[145]	"G001"	"G002"	"G009"	"G013"	"H017"	"H028"
[151]	"H032"	"H056"	"H057"	"H058"	"H059"	"H061"
[157]	"H063"	"H067"	"H069"	"H071"	"H074"	"H083"
[163]	"H090"	"H096"	"H102"	"H108"	"H109"	"H114"
[169]	"H130"	"H131"	"H134"	"I001"	"I002"	"I005"
[175]	"I010"	"I019"	"I021"	"I024"	"J001"	"J002"
[181]	"J003"	"J004"	"J005"	"J007"	"J009"	"J010"
[187]	"J011"	"J015"	"J016"	"J017"	"J018"	"J019"
[193]	"J020"	"J021"	"J022"	"J023"	"J024"	"J025"
[199]	"J026"	"J027"	"J028"	"J029"	"J030"	"J031"
[205]	"J032"	"J033"	"J034"	"J035"	"J036"	"J037"
[211]	"J039"	"J040"	"J041"	"J042"	"J043"	"J044"
[217]	"J048"	"J050"	"J051"	"J052"	"J053"	"J054"
[223]	"J055"	"J056"	"J057"	"J058"	"J059"	"J061"
[229]	"J065"	"K038"	"L002"	"L007"	"L008"	"L012"
[235]	"L023"	"L027"	"M001"	"M003"	"M005"	"M006"
[241]	"M012"	"M017"	"N002"	"N008"	"N015"	"numren"
[247]	"Q007"	"R001"	"R002"	"R003"	"R004"	"R006"
[253]	"R007"	"R008"	"R009"			

Construcción propuesta:

```

agregado[4:255] [is.na(agregado[4:255])] <- 0
agregado <- agregado %>%
  mutate(YE001=A001+A004+A007+A008+A009+A010+A012+A013+A017+A019+A021+A022+A023+
    A025+A026+A039+A041+A042+A052+A058+A066+A068+A072+A075+A077+A078+A080+
    A082+A085+A087+A090+A091+A093+A095+A102+A106+A108+A111+A112+A115+A117+
    A120+A122+A124+A125+A127+A129+A137+A140+A148+A152+A154+A157+A158+A159+
    A160+A166+A167+A173+A177+A178+A180+A181+A186+A187+A199+A200+A201+A202+
    A205+A206+A208+A209)%>%
  mutate(YE002=A213)%>%
  mutate(YE003=A215+A216+A217+A218+A220+A221+A222)%>%
  mutate(YE004=0)%>%
  mutate(YE005=A212)%>%
  mutate(YE006=A243+A244+A245+A246)%>%
  mutate(YE007=A239)%>%
  mutate(YE008=0)%>%
  mutate(YE009=B002+B004+B005+B006+B007)%>%
  mutate(YE010=C001+C002+C003+C004+C005+C006+C008+C009+C010+C011+C015+C016+C019)%>%
  mutate(YE011=C020+C021)%>%
  mutate(YE012=D001+D002+D003+D004+D005+D007+D008+D009+D010+D011+D012+D014+D015)%>%
  mutate(YE013=D022+D023)%>%
  mutate(YE014=E002+E003+E004+E005+E008+E009)%>%
  mutate(YE015=0)%>%
  mutate(YE016=E023+E026)%>%
  mutate(YE017=E027+E028+E030+E034)%>%
  mutate(YE018=F001+F002+F003+F006+R006+R007+R008+R009)%>%
  mutate(YE019=F007+F008+F009+F010)%>%
  mutate(YE020=G001+G002)%>%
  mutate(YE021=G009+G013+R001+R002+R003+R004)%>%
  mutate(YE022=H017+H028+H032+H056+H057+H058+H059+H061+H063+H067+H069+H071+H074+
    H083+H090+H096+H102+H108+H109+H114+H130+H131+H134)%>%
  mutate(YE023=I001+I002+I005+I010+I019+I021+I024)%>%
  mutate(YE024=J016+J017+J018+J019+J020+J021+J022+J023+J024+J025+J026+J027+J028+

```

```

J029+J030+J031+J032+J033+J034+J035+J036+J037)%>%
mutate(YE025=J039+J040+J041+J042+J043)%>%
mutate(YE026=J001+J002+J003+J004+J005+J007+J009+J010+J011+J015)%>%
mutate(YE027=J044+J048+J050+J051+J052+J053+J054+J055+J056+J057+J058+J059+J061)%>%
mutate(YE028=J065)%>%
mutate(YE029=0)%>%
mutate(YE030=0)%>%
mutate(YE031=0)%>%
mutate(YE032=0)%>%
mutate(YE033=0)%>%
mutate(YE034=K038)%>%
mutate(YE035=L002+L007+L008+L012+L023+L027)%>%
mutate(YE036=M001+M003+M005+M006)%>%
mutate(YE037=0)%>%
mutate(YE038=M012+M017)%>%
mutate(YE039=N002)%>%
mutate(YE040=N008+N015+Q007)%>%
mutate(YE041=0)%>%
mutate(YE042=0)%>%
mutate(YE043=0)%>%
mutate(YE044=0)%>%
mutate(YE045=0)

```

Se guarda la tabla de ingreso en especie:

```

agregado <- agregado %>%
  mutate(enc=2012) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog)) %>%
  mutate(foliohog=foliohog+1) %>%
  mutate(numren=as.numeric(numren))
Especie2012 <- agregado %>%
  select(enc, folioviv, foliohog, numren, YE001, YE002, YE003, YE004, YE005, YE006, YE007,
         YE008, YE009, YE010, YE011, YE012, YE013, YE014, YE015, YE016, YE017, YE018, YE019,
         YE020, YE021, YE022, YE023, YE024, YE025, YE026, YE027, YE028, YE029, YE030, YE031,
         YE032, YE033, YE034, YE035, YE036, YE037, YE038, YE039, YE040, YE041, YE042, YE043,
         YE044, YE045)
remove(agregado)

```

O. Tabla especie de 2014

```

gasto <- read.dbf("Bases/2014/gastopersona.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))

```

Se selecciona pago en especie:

```

gasto <- gasto %>% filter(tipo_gasto=="G4")
agregado <- gasto %>% group_by(folioviv, foliohog, numren, clave) %>%
  summarise(gasto=sum(gas_nm_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=c(folioviv, foliohog, numren), values_from=gasto, names_from=clave)

```

Lista de variables de ingreso para considerar en la construcción:

ls(agregado)

[1]	"A001"	"A002"	"A004"	"A005"	"A006"	"A008"
[7]	"A009"	"A010"	"A011"	"A012"	"A013"	"A014"
[13]	"A015"	"A016"	"A019"	"A021"	"A022"	"A023"
[19]	"A025"	"A029"	"A030"	"A031"	"A034"	"A040"
[25]	"A042"	"A048"	"A049"	"A052"	"A055"	"A057"
[31]	"A058"	"A059"	"A062"	"A066"	"A067"	"A068"
[37]	"A070"	"A072"	"A073"	"A075"	"A079"	"A080"
[43]	"A085"	"A087"	"A088"	"A089"	"A091"	"A092"
[49]	"A093"	"A095"	"A102"	"A108"	"A110"	"A111"
[55]	"A112"	"A113"	"A115"	"A116"	"A117"	"A118"
[61]	"A119"	"A120"	"A121"	"A122"	"A124"	"A125"
[67]	"A126"	"A127"	"A130"	"A131"	"A137"	"A139"
[73]	"A140"	"A141"	"A142"	"A148"	"A149"	"A152"
[79]	"A154"	"A155"	"A157"	"A158"	"A159"	"A160"
[85]	"A161"	"A162"	"A163"	"A164"	"A165"	"A166"
[91]	"A167"	"A168"	"A169"	"A170"	"A173"	"A177"
[97]	"A178"	"A187"	"A191"	"A194"	"A198"	"A199"
[103]	"A200"	"A202"	"A205"	"A212"	"A215"	"A217"
[109]	"A218"	"A220"	"A221"	"A222"	"A224"	"A243"
[115]	"A244"	"A245"	"A246"	"B001"	"B002"	"B003"
[121]	"B004"	"B005"	"B006"	"B007"	"C001"	"C002"
[127]	"C003"	"C004"	"C005"	"C006"	"C007"	"C008"
[133]	"C009"	"C016"	"C019"	"C020"	"C021"	"C022"
[139]	"C024"	"D001"	"D002"	"D003"	"D004"	"D005"
[145]	"D006"	"D007"	"D009"	"D010"	"D011"	"D012"
[151]	"D013"	"D014"	"D015"	"D016"	"D017"	"D021"
[157]	"D022"	"D023"	"E001"	"E002"	"E003"	"E004"
[163]	"E005"	"E008"	"E009"	"E015"	"E017"	"E022"
[169]	"E023"	"E026"	"E027"	"E030"	"E034"	"F001"
[175]	"F002"	"F003"	"F005"	"F007"	"F008"	"F010"
[181]	"F011"	"F012"	"F014"	"foliohog"	"folioviv"	"G001"
[187]	"G005"	"G006"	"G009"	"G010"	"G013"	"H004"
[193]	"H013"	"H016"	"H020"	"H028"	"H029"	"H030"
[199]	"H031"	"H033"	"H036"	"H039"	"H040"	"H043"
[205]	"H047"	"H048"	"H056"	"H057"	"H058"	"H065"
[211]	"H067"	"H068"	"H069"	"H070"	"H073"	"H077"
[217]	"H081"	"H083"	"H096"	"H103"	"H108"	"H109"
[223]	"H110"	"H114"	"H115"	"H116"	"H124"	"H126"
[229]	"H129"	"H130"	"H131"	"H134"	"I002"	"I003"
[235]	"I004"	"I005"	"I009"	"I011"	"I016"	"I017"
[241]	"I019"	"I021"	"J001"	"J002"	"J003"	"J004"
[247]	"J006"	"J007"	"J009"	"J010"	"J011"	"J012"
[253]	"J016"	"J017"	"J018"	"J019"	"J020"	"J021"
[259]	"J022"	"J023"	"J024"	"J025"	"J026"	"J027"
[265]	"J028"	"J029"	"J030"	"J031"	"J032"	"J033"
[271]	"J034"	"J035"	"J036"	"J037"	"J039"	"J040"
[277]	"J041"	"J042"	"J043"	"J044"	"J045"	"J046"
[283]	"J048"	"J049"	"J050"	"J051"	"J052"	"J053"
[289]	"J054"	"J055"	"J056"	"J057"	"J058"	"J059"
[295]	"J060"	"J061"	"J062"	"J065"	"J071"	"K001"
[301]	"K009"	"K011"	"K012"	"K019"	"K021"	"K027"
[307]	"K028"	"K029"	"K038"	"K039"	"K040"	"K041"

[313]	"K042"	"K044"	"L001"	"L005"	"L006"	"L007"
[319]	"L008"	"L010"	"L018"	"L023"	"M001"	"M002"
[325]	"M003"	"M005"	"M006"	"M010"	"M012"	"M017"
[331]	"M018"	"N004"	"N005"	"N016"	"numren"	"Q004"
[337]	"R001"	"R002"	"R003"	"R004"	"R006"	"R007"
[343]	"R008"	"R009"	"R010"	"R011"	"R012"	

Construcción propuesta:

```

agregado[4:347] [is.na(agregado[4:347])] <- 0
agregado <- agregado %>%
  mutate(YE001=A001+A002+A004+A005+A006+A008+A009+A010+A011+A012+A013+A014+A015+
    A016+A019+A021+A022+A023+A025+A029+A030+A031+A034+A040+A042+A048+A049+
    A052+A055+A057+A058+A059+A062+A066+A067+A068+A070+A072+A073+A075+A079+
    A080+A085+A087+A088+A089+A091+A092+A093+A095+A102+A108+A110+A111+A112+
    A113+A115+A116+A117+A118+A119+A120+A121+A122+A124+A125+A126+A127+A130+
    A131+A137+A139+A140+A141+A142+A148+A149+A152+A154+A155+A157+A158+A159+
    A160+A161+A162+A163+A164+A165+A166+A167+A168+A169+A170+A173+A177+A178+
    A187+A191+A194+A198+A199+A200+A202+A205)%>%
  mutate(YE002=0)%>%
  mutate(YE003=A215+A217+A218+A220+A221+A222)%>%
  mutate(YE004=A224)%>%
  mutate(YE005=A212)%>%
  mutate(YE006=A243+A244+A245+A246)%>%
  mutate(YE007=0)%>%
  mutate(YE008=0)%>%
  mutate(YE009=B001+B002+B003+B004+B005+B006+B007)%>%
  mutate(YE010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C016+C019)%>%
  mutate(YE011=C020+C021+C022+C024)%>%
  mutate(YE012=D001+D002+D003+D004+D005+D006+D007+D009+D010+D011+D012+D013+D014+
    D015+D016+D017+D021)%>%
  mutate(YE013=D022+D023)%>%
  mutate(YE014=E001+E002+E003+E004+E005+E008+E009)%>%
  mutate(YE015=E015+E017)%>%
  mutate(YE016=E022+E023+E026)%>%
  mutate(YE017=E027+E030+E034)%>%
  mutate(YE018=F001+F002+F003+F005+R006+R007+R008+R009+R010+R011)%>%
  mutate(YE019=F007+F008+F010+F011+F012+F014+R012)%>%
  mutate(YE020=G001)%>%
  mutate(YE021=G005+G006+G009+G010+G013+R001+R002+R003+R004)%>%
  mutate(YE022=H004+H013+H016+H020+H028+H029+H030+H031+H033+H036+H039+H040+H043+
    H047+H048+H056+H057+H058+H065+H067+H068+H069+H070+H073+H077+H081+H083+
    H096+H103+H108+H109+H110+H114+H115+H116+H124+H126+H129+H130+H131+H134)%>%
  mutate(YE023=I002+I003+I004+I005+I009+I011+I016+I017+I019+I021)%>%
  mutate(YE024=J016+J017+J018+J019+J020+J021+J022+J023+J024+J025+J026+J027+J028+
    J029+J030+J031+J032+J033+J034+J035+J036+J037+J062)%>%
  mutate(YE025=J039+J040+J041+J042+J043)%>%
  mutate(YE026=J001+J002+J003+J004+J006+J007+J009+J010+J011+J012)%>%
  mutate(YE027=J044+J045+J046+J048+J049+J050+J051+J052+J053+J054+J055+J056+J057+
    J058+J059+J060+J061)%>%
  mutate(YE028=J065)%>%
  mutate(YE029=0)%>%
  mutate(YE030=J071)%>%
  mutate(YE031=0)%>%
  mutate(YE032=K001+K009+K011+K012+K019+K021)%>%
  mutate(YE033=K027+K028+K029)%>%

```



```
mutate(YE034=K038+K039+K040+K041+K042+K044)%>%
mutate(YE035=L001+L005+L006+L007+L008+L010+L018+L023)%>%
mutate(YE036=M001+M002+M003+M005+M006)%>%
mutate(YE037=M010)%>%
mutate(YE038=M012+M017+M018)%>%
mutate(YE039=N004+N005)%>%
mutate(YE040=N016)%>%
mutate(YE041=0)%>%
mutate(YE042=0)%>%
mutate(YE043=Q004)%>%
mutate(YE044=0)%>%
mutate(YE045=0)
```

Se guarda la tabla de ingreso en especie:

```
agregado <- agregado %>%
  mutate(enc=2014) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog)) %>%
  mutate(numren=as.numeric(numren))
Especie2014 <- agregado %>%
  select(enc, folioviv, foliohog, numren, YE001, YE002, YE003, YE004, YE005, YE006, YE007,
         YE008, YE009, YE010, YE011, YE012, YE013, YE014, YE015, YE016, YE017, YE018, YE019,
         YE020, YE021, YE022, YE023, YE024, YE025, YE026, YE027, YE028, YE029, YE030, YE031,
         YE032, YE033, YE034, YE035, YE036, YE037, YE038, YE039, YE040, YE041, YE042, YE043,
         YE044, YE045)
remove(agregado)
```

P. Tabla especie de 2016

```
gasto <- read.dbf("Bases/2016/gastospersona.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona pago en especie:

```
gasto <- gasto %>% filter(tipo_gasto=="G4")
agregado <- gasto %>% group_by(folioviv, foliohog, numren, clave) %>%
  summarise(gasto=sum(gas_nm_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=c(folioviv, foliohog, numren), values_from=gasto, names_from=clave)
```

Lista de variables de ingreso para considerar en la construcción:

```
ls(agregado)
```

[1]	"A001"	"A002"	"A003"	"A004"	"A005"	"A007"
[7]	"A008"	"A009"	"A010"	"A011"	"A012"	"A013"
[13]	"A014"	"A015"	"A016"	"A019"	"A021"	"A022"
[19]	"A023"	"A024"	"A025"	"A029"	"A030"	"A031"
[25]	"A034"	"A035"	"A036"	"A037"	"A038"	"A039"
[31]	"A040"	"A041"	"A042"	"A048"	"A049"	"A050"
[37]	"A051"	"A052"	"A053"	"A055"	"A056"	"A057"
[43]	"A058"	"A059"	"A062"	"A066"	"A067"	"A068"
[49]	"A070"	"A072"	"A073"	"A075"	"A078"	"A080"
[55]	"A081"	"A083"	"A085"	"A088"	"A089"	"A090"

[61]	"A091"	"A092"	"A093"	"A095"	"A098"	"A099"
[67]	"A102"	"A103"	"A106"	"A107"	"A108"	"A109"
[73]	"A110"	"A111"	"A112"	"A113"	"A115"	"A116"
[79]	"A117"	"A118"	"A119"	"A120"	"A121"	"A122"
[85]	"A124"	"A125"	"A126"	"A127"	"A129"	"A130"
[91]	"A131"	"A133"	"A135"	"A136"	"A137"	"A140"
[97]	"A142"	"A144"	"A148"	"A149"	"A151"	"A152"
[103]	"A154"	"A155"	"A156"	"A158"	"A159"	"A160"
[109]	"A161"	"A163"	"A164"	"A165"	"A166"	"A167"
[115]	"A168"	"A169"	"A170"	"A171"	"A173"	"A174"
[121]	"A176"	"A177"	"A180"	"A181"	"A182"	"A186"
[127]	"A187"	"A189"	"A190"	"A191"	"A192"	"A194"
[133]	"A198"	"A199"	"A200"	"A201"	"A202"	"A205"
[139]	"A208"	"A209"	"A210"	"A212"	"A215"	"A217"
[145]	"A218"	"A219"	"A220"	"A221"	"A222"	"A224"
[151]	"A233"	"A239"	"A243"	"A244"	"A245"	"A246"
[157]	"A247"	"B001"	"B002"	"B003"	"B004"	"B005"
[163]	"B006"	"B007"	"C001"	"C002"	"C003"	"C004"
[169]	"C005"	"C006"	"C007"	"C008"	"C009"	"C010"
[175]	"C011"	"C012"	"C013"	"C014"	"C015"	"C016"
[181]	"C018"	"C019"	"C020"	"C021"	"C023"	"C024"
[187]	"D001"	"D002"	"D003"	"D004"	"D005"	"D006"
[193]	"D007"	"D008"	"D009"	"D010"	"D011"	"D012"
[199]	"D013"	"D014"	"D015"	"D016"	"D017"	"D021"
[205]	"D022"	"D024"	"D025"	"D026"	"E001"	"E002"
[211]	"E003"	"E004"	"E005"	"E006"	"E007"	"E008"
[217]	"E009"	"E012"	"E013"	"E016"	"E017"	"E019"
[223]	"E020"	"E022"	"E023"	"E026"	"E027"	"E028"
[229]	"E030"	"E032"	"E034"	"F001"	"F002"	"F003"
[235]	"F006"	"F007"	"F008"	"F009"	"F010"	"F012"
[241]	"F013"	"F014"	"foliohog"	"folioviv"	"G001"	"G002"
[247]	"G003"	"G005"	"G006"	"G007"	"G008"	"G009"
[253]	"G013"	"G015"	"H001"	"H002"	"H004"	"H013"
[259]	"H015"	"H017"	"H022"	"H023"	"H028"	"H029"
[265]	"H036"	"H037"	"H039"	"H040"	"H041"	"H043"
[271]	"H044"	"H045"	"H048"	"H049"	"H056"	"H057"
[277]	"H058"	"H059"	"H061"	"H062"	"H063"	"H064"
[283]	"H065"	"H066"	"H067"	"H068"	"H069"	"H070"
[289]	"H071"	"H072"	"H073"	"H074"	"H075"	"H076"
[295]	"H077"	"H078"	"H079"	"H080"	"H081"	"H083"
[301]	"H084"	"H086"	"H087"	"H088"	"H090"	"H096"
[307]	"H097"	"H098"	"H100"	"H101"	"H102"	"H104"
[313]	"H108"	"H109"	"H110"	"H111"	"H114"	"H115"
[319]	"H116"	"H117"	"H118"	"H119"	"H120"	"H123"
[325]	"H124"	"H127"	"H128"	"H129"	"H130"	"H131"
[331]	"H134"	"H136"	"I001"	"I002"	"I003"	"I004"
[337]	"I008"	"I009"	"I010"	"I011"	"I012"	"I014"
[343]	"I015"	"I016"	"I017"	"I019"	"I021"	"I024"
[349]	"I025"	"I026"	"J001"	"J002"	"J003"	"J004"
[355]	"J005"	"J006"	"J007"	"J008"	"J009"	"J010"
[361]	"J011"	"J012"	"J013"	"J014"	"J015"	"J016"
[367]	"J017"	"J018"	"J019"	"J020"	"J021"	"J022"
[373]	"J023"	"J024"	"J025"	"J026"	"J027"	"J028"
[379]	"J029"	"J030"	"J031"	"J032"	"J033"	"J034"
[385]	"J035"	"J036"	"J037"	"J038"	"J039"	"J040"

[391]	"J041"	"J042"	"J043"	"J044"	"J045"	"J046"
[397]	"J047"	"J048"	"J049"	"J050"	"J051"	"J052"
[403]	"J053"	"J054"	"J055"	"J056"	"J057"	"J058"
[409]	"J059"	"J060"	"J061"	"J062"	"J063"	"J065"
[415]	"J067"	"J069"	"J071"	"K001"	"K006"	"K007"
[421]	"K009"	"K010"	"K011"	"K012"	"K014"	"K015"
[427]	"K016"	"K017"	"K018"	"K019"	"K024"	"K029"
[433]	"K032"	"K036"	"K038"	"K039"	"K040"	"L001"
[439]	"L002"	"L005"	"L006"	"L007"	"L008"	"L009"
[445]	"L010"	"L012"	"L013"	"L021"	"L023"	"L027"
[451]	"M001"	"M002"	"M003"	"M004"	"M005"	"M006"
[457]	"M007"	"M008"	"M009"	"M010"	"M011"	"M012"
[463]	"M014"	"M015"	"M016"	"M017"	"M018"	"N001"
[469]	"N002"	"N004"	"N005"	"N007"	"N008"	"N009"
[475]	"N010"	"N015"	"N016"	"numren"	"Q001"	"R001"
[481]	"R002"	"R003"	"R004"	"R005"	"R006"	"R007"
[487]	"R008"	"R009"	"R010"	"R011"	"R012"	

Construcción propuesta:

```

agregado[4:491] [is.na(agregado[4:491])] <- 0
agregado <- agregado %>%
  mutate(YE001=A001+A002+A003+A004+A005+A007+A008+A009+A010+A011+A012+A013+A014+
    A015+A016+A019+A021+A022+A023+A024+A025+A029+A030+A031+A034+A035+A036+
    A037+A038+A039+A040+A041+A042+A048+A049+A050+A051+A052+A053+A055+A056+
    A057+A058+A059+A062+A066+A067+A068+A070+A072+A073+A075+A078+A080+A081+
    A083+A085+A088+A089+A090+A091+A092+A093+A095+A098+A099+A102+A103+A106+
    A107+A108+A109+A110+A111+A112+A113+A115+A116+A117+A118+A119+A120+A121+
    A122+A124+A125+A126+A127+A129+A130+A131+A133+A135+A136+A137+A140+A142+
    A144+A148+A149+A151+A152+A154+A155+A156+A158+A159+A160+A161+A163+A164+
    A165+A166+A167+A168+A169+A170+A171+A173+A174+A176+A177+A180+A181+A182+
    A186+A187+A189+A190+A191+A192+A194+A198+A199+A200+A201+A202+A205+A208+
    A209+A210)%>%
  mutate(YE002=0)%>%
  mutate(YE003=A215+A217+A218+A219+A220+A221+A222)%>%
  mutate(YE004=A224+A233)%>%
  mutate(YE005=A212)%>%
  mutate(YE006=A243+A244+A245+A246+A247)%>%
  mutate(YE007=A239)%>%
  mutate(YE008=0)%>%
  mutate(YE009=B001+B002+B003+B004+B005+B006+B007)%>%
  mutate(YE010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
    C014+C015+C016+C018+C019)%>%
  mutate(YE011=C020+C021+C023+C024)%>%
  mutate(YE012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
    D014+D015+D016+D017+D021)%>%
  mutate(YE013=D022+D024+D025+D026)%>%
  mutate(YE014=E001+E002+E003+E004+E005+E006+E007+E008+E009+E012+E013)%>%
  mutate(YE015=E016+E017+E019+E020)%>%
  mutate(YE016=E022+E023+E026)%>%
  mutate(YE017=E027+E028+E030+E032+E034)%>%
  mutate(YE018=F001+F002+F003+F006+R005+R006+R007+R008+R009+R010+R011)%>%
  mutate(YE019=F007+F008+F009+F010+F012+F013+F014+R012)%>%
  mutate(YE020=G001+G002+G003)%>%
  mutate(YE021=G005+G006+G007+G008+G009+G013+G015+R001+R002+R003+R004)%>%
  mutate(YE022=H001+H002+H004+H013+H015+H017+H022+H023+H028+H029+H036+H037+H039+

```

```

H040+H041+H043+H044+H045+H048+H049+H056+H057+H058+H059+H061+H062+H063+
H064+H065+H066+H067+H068+H069+H070+H071+H072+H073+H074+H075+H076+H077+
H078+H079+H080+H081+H083+H084+H086+H087+H088+H090+H096+H097+H098+H100+
H101+H102+H104+H108+H109+H110+H111+H114+H115+H116+H117+H118+H119+H120+
H123+H124+H127+H128+H129+H130+H131+H134+H136)%>%
mutate(YE023=I001+I002+I003+I004+I008+I009+I010+I011+I012+I014+I015+I016+I017+
I019+I021+I024+I025+I026)%>%
mutate(YE024=J016+J017+J018+J019+J020+J021+J022+J023+J024+J025+J026+J027+J028+
J029+J030+J031+J032+J033+J034+J035+J036+J037+J038+J062+J063)%>%
mutate(YE025=J039+J040+J041+J042+J043)%>%
mutate(YE026=J001+J002+J003+J004+J005+J006+J007+J008+J009+J010+J011+J012+J013+
J014+J015)%>%
mutate(YE027=J044+J045+J046+J047+J048+J049+J050+J051+J052+J053+J054+J055+J056+
J057+J058+J059+J060+J061)%>%
mutate(YE028=J065+J067)%>%
mutate(YE029=J069)%>%
mutate(YE030=J071)%>%
mutate(YE031=0)%>%
mutate(YE032=K001+K006+K007+K009+K010+K011+K012+K014+K015+K016+K017+K018+K019+
K024)%>%
mutate(YE033=K029+K032+K036)%>%
mutate(YE034=K038+K039+K040)%>%
mutate(YE035=L001+L002+L005+L006+L007+L008+L009+L010+L012+L013+L021+L023+L027)%>%
mutate(YE036=M001+M002+M003+M004+M005+M006)%>%
mutate(YE037=M007+M008+M009+M010+M011)%>%
mutate(YE038=M012+M014+M015+M016+M017+M018)%>%
mutate(YE039=N001+N002+N004+N005+N007+N010)%>%
mutate(YE040=N008+N009+N015+N016)%>%
mutate(YE041=0)%>%
mutate(YE042=Q001)%>%
mutate(YE043=0)%>%
mutate(YE044=0)%>%
mutate(YE045=0)

```

Se guarda la tabla de ingreso en especie:

```

agregado <- agregado %>%
  mutate(enc=2016) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog)) %>%
  mutate(numren=as.numeric(numren))
Especie2016 <- agregado %>%
  select(enc, folioviv, foliohog, numren, YE001, YE002, YE003, YE004, YE005, YE006, YE007,
    YE008, YE009, YE010, YE011, YE012, YE013, YE014, YE015, YE016, YE017, YE018, YE019,
    YE020, YE021, YE022, YE023, YE024, YE025, YE026, YE027, YE028, YE029, YE030, YE031,
    YE032, YE033, YE034, YE035, YE036, YE037, YE038, YE039, YE040, YE041, YE042, YE043,
    YE044, YE045)
remove(agregado)

```

Q. Tabla especie de 2018

```
gasto <- read.dbf("Bases/2018/gastospersona.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona pago en especie:

```
gasto <- gasto %>% filter(tipo_gasto=="G4")
agregado <- gasto %>% group_by(folioviv, foliohog, numren, clave) %>%
  summarise(gasto=sum(gas_nm_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=c(folioviv, foliohog, numren), values_from=gasto, names_from=clave)
```

Lista de variables de ingreso para considerar en la construcción:

```
ls(agregado)
```

[1]	"A001"	"A002"	"A004"	"A005"	"A006"	"A007"
[7]	"A008"	"A009"	"A010"	"A011"	"A012"	"A013"
[13]	"A014"	"A015"	"A016"	"A017"	"A018"	"A019"
[19]	"A021"	"A022"	"A023"	"A024"	"A025"	"A026"
[25]	"A027"	"A029"	"A030"	"A034"	"A035"	"A036"
[31]	"A037"	"A038"	"A039"	"A040"	"A041"	"A042"
[37]	"A043"	"A045"	"A048"	"A049"	"A050"	"A052"
[43]	"A054"	"A055"	"A056"	"A057"	"A058"	"A059"
[49]	"A060"	"A062"	"A066"	"A067"	"A068"	"A069"
[55]	"A070"	"A071"	"A072"	"A073"	"A075"	"A078"
[61]	"A080"	"A081"	"A084"	"A085"	"A087"	"A088"
[67]	"A090"	"A091"	"A092"	"A093"	"A095"	"A096"
[73]	"A097"	"A098"	"A099"	"A102"	"A103"	"A106"
[79]	"A107"	"A108"	"A110"	"A111"	"A112"	"A113"
[85]	"A115"	"A116"	"A117"	"A118"	"A119"	"A121"
[91]	"A122"	"A123"	"A124"	"A125"	"A126"	"A127"
[97]	"A129"	"A130"	"A131"	"A133"	"A135"	"A137"
[103]	"A140"	"A142"	"A146"	"A148"	"A149"	"A152"
[109]	"A153"	"A154"	"A155"	"A156"	"A157"	"A158"
[115]	"A159"	"A160"	"A161"	"A162"	"A163"	"A165"
[121]	"A166"	"A167"	"A168"	"A169"	"A170"	"A173"
[127]	"A176"	"A177"	"A180"	"A181"	"A182"	"A186"
[133]	"A187"	"A189"	"A191"	"A192"	"A198"	"A199"
[139]	"A200"	"A201"	"A202"	"A203"	"A205"	"A207"
[145]	"A208"	"A209"	"A210"	"A212"	"A213"	"A215"
[151]	"A217"	"A218"	"A219"	"A220"	"A221"	"A222"
[157]	"A224"	"A228"	"A236"	"A237"	"A239"	"A242"
[163]	"A243"	"A244"	"A245"	"A246"	"B001"	"B002"
[169]	"B003"	"B004"	"B005"	"B006"	"B007"	"C001"
[175]	"C002"	"C003"	"C004"	"C005"	"C006"	"C007"
[181]	"C008"	"C009"	"C010"	"C011"	"C012"	"C013"
[187]	"C014"	"C015"	"C016"	"C019"	"C020"	"C021"
[193]	"C022"	"C024"	"D001"	"D002"	"D003"	"D004"
[199]	"D005"	"D006"	"D007"	"D008"	"D009"	"D010"
[205]	"D011"	"D013"	"D014"	"D015"	"D016"	"D021"
[211]	"D022"	"D024"	"D025"	"D026"	"E001"	"E002"
[217]	"E003"	"E004"	"E005"	"E006"	"E007"	"E008"
[223]	"E009"	"E013"	"E014"	"E015"	"E016"	"E017"

[229]	"E020"	"E022"	"E023"	"E024"	"E026"	"E027"
[235]	"E028"	"E030"	"E032"	"E034"	"F002"	"F003"
[241]	"F004"	"F006"	"F007"	"F008"	"F009"	"F010"
[247]	"F011"	"F012"	"F013"	"foliohog"	"folioviv"	"G001"
[253]	"G002"	"G003"	"G004"	"G005"	"G009"	"G013"
[259]	"G014"	"G015"	"H001"	"H002"	"H004"	"H006"
[265]	"H008"	"H009"	"H013"	"H014"	"H017"	"H018"
[271]	"H019"	"H027"	"H028"	"H029"	"H030"	"H036"
[277]	"H037"	"H039"	"H040"	"H041"	"H042"	"H045"
[283]	"H047"	"H050"	"H053"	"H056"	"H057"	"H058"
[289]	"H059"	"H060"	"H061"	"H062"	"H063"	"H064"
[295]	"H065"	"H067"	"H068"	"H069"	"H070"	"H071"
[301]	"H072"	"H073"	"H074"	"H081"	"H083"	"H090"
[307]	"H096"	"H098"	"H102"	"H103"	"H108"	"H109"
[313]	"H110"	"H112"	"H114"	"H115"	"H116"	"H117"
[319]	"H119"	"H123"	"H124"	"H126"	"H127"	"H128"
[325]	"H130"	"H131"	"H134"	"I001"	"I002"	"I003"
[331]	"I004"	"I005"	"I007"	"I009"	"I010"	"I011"
[337]	"I014"	"I016"	"I017"	"I019"	"I021"	"I022"
[343]	"I026"	"J001"	"J002"	"J003"	"J004"	"J005"
[349]	"J006"	"J007"	"J008"	"J009"	"J010"	"J011"
[355]	"J012"	"J013"	"J014"	"J015"	"J016"	"J017"
[361]	"J018"	"J019"	"J020"	"J021"	"J022"	"J023"
[367]	"J024"	"J025"	"J026"	"J027"	"J028"	"J029"
[373]	"J030"	"J031"	"J032"	"J033"	"J034"	"J035"
[379]	"J036"	"J037"	"J038"	"J039"	"J040"	"J041"
[385]	"J042"	"J043"	"J044"	"J045"	"J046"	"J047"
[391]	"J048"	"J049"	"J050"	"J051"	"J052"	"J053"
[397]	"J054"	"J055"	"J056"	"J057"	"J058"	"J059"
[403]	"J060"	"J061"	"J062"	"J063"	"J065"	"J066"
[409]	"J067"	"J069"	"J071"	"K001"	"K002"	"K004"
[415]	"K005"	"K007"	"K008"	"K009"	"K010"	"K011"
[421]	"K012"	"K013"	"K014"	"K015"	"K016"	"K022"
[427]	"K024"	"K026"	"K027"	"K028"	"K031"	"K036"
[433]	"K037"	"K038"	"L001"	"L002"	"L005"	"L006"
[439]	"L007"	"L008"	"L009"	"L010"	"L016"	"L023"
[445]	"L026"	"L028"	"L029"	"M001"	"M002"	"M003"
[451]	"M005"	"M006"	"M007"	"M008"	"M009"	"M010"
[457]	"M012"	"M013"	"M014"	"M015"	"M017"	"M018"
[463]	"N001"	"N002"	"N004"	"N005"	"N008"	"N009"
[469]	"N010"	"N015"	"N016"	"numren"	"Q002"	"R001"
[475]	"R002"	"R003"	"R004"	"R007"	"R008"	"R009"
[481]	"R010"	"R011"	"R012"			

Construcción propuesta:

```

agregado[4:483] [is.na(agregado[4:483])] <- 0
agregado <- agregado %>%
  mutate(YE001=A001+A002+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+A014+
    A015+A016+A017+A018+A019+A021+A022+A023+A024+A025+A026+A027+A029+A030+
    A034+A035+A036+A037+A038+A039+A040+A041+A042+A043+A045+A048+A049+A050+
    A052+A054+A055+A056+A057+A058+A059+A060+A062+A066+A067+A068+A069+A070+
    A071+A072+A073+A075+A078+A080+A081+A084+A085+A087+A088+A090+A091+A092+
    A093+A095+A096+A097+A098+A099+A102+A103+A106+A107+A108+A110+A111+A112+
    A113+A115+A116+A117+A118+A119+A121+A122+A123+A124+A125+A126+A127+A129+
    A130+A131+A133+A135+A137+A140+A142+A146+A148+A149+A152+A153+A154+A155+

```

```

A156+A157+A158+A159+A160+A161+A162+A163+A165+A166+A167+A168+A169+A170+
A173+A176+A177+A180+A181+A182+A186+A187+A189+A191+A192+A198+A199+A200+
A201+A202+A203+A205+A207+A208+A209+A210)%>%
mutate(YE002=A213)%>%
mutate(YE003=A215+A217+A218+A219+A220+A221+A222)%>%
mutate(YE004=A224+A228+A236+A237)%>%
mutate(YE005=A212)%>%
mutate(YE006=A243+A244+A245+A246)%>%
mutate(YE007=A239)%>%
mutate(YE008=A242)%>%
mutate(YE009=B001+B002+B003+B004+B005+B006+B007)%>%
mutate(YE010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
C014+C015+C016+C019)%>%
mutate(YE011=C020+C021+C022+C024)%>%
mutate(YE012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D013+D014+
D015+D016+D021)%>%
mutate(YE013=D022+D024+D025+D026)%>%
mutate(YE014=E001+E002+E003+E004+E005+E006+E007+E008+E009+E013)%>%
mutate(YE015=E014+E015+E016+E017+E020)%>%
mutate(YE016=E022+E023+E024+E026)%>%
mutate(YE017=E027+E028+E030+E032+E034)%>%
mutate(YE018=F002+F003+F004+F006+R007+R008+R009+R010+R011)%>%
mutate(YE019=F007+F008+F009+F010+F011+F012+F013+R012)%>%
mutate(YE020=G001+G002+G003+G004)%>%
mutate(YE021=G005+G009+G013+G014+G015+R001+R002+R003+R004)%>%
mutate(YE022=H001+H002+H004+H006+H008+H009+H013+H014+H017+H018+H019+H027+H028+
H029+H030+H036+H037+H039+H040+H041+H042+H045+H047+H050+H053+H056+H057+
H058+H059+H060+H061+H062+H063+H064+H065+H067+H068+H069+H070+H071+H072+
H073+H074+H081+H083+H090+H096+H098+H102+H103+H108+H109+H110+H112+H114+
H115+H116+H117+H119+H123+H124+H126+H127+H128+H130+H131+H134)%>%
mutate(YE023=I001+I002+I003+I004+I005+I007+I009+I010+I011+I014+I016+I017+I019+
I021+I022+I026)%>%
mutate(YE024=J016+J017+J018+J019+J020+J021+J022+J023+J024+J025+J026+J027+J028+
J029+J030+J031+J032+J033+J034+J035+J036+J037+J038+J062+J063)%>%
mutate(YE025=J039+J040+J041+J042+J043)%>%
mutate(YE026=J001+J002+J003+J004+J005+J006+J007+J008+J009+J010+J011+J012+J013+
J014+J015)%>%
mutate(YE027=J044+J045+J046+J047+J048+J049+J050+J051+J052+J053+J054+J055+J056+
J057+J058+J059+J060+J061)%>%
mutate(YE028=J065+J066+J067)%>%
mutate(YE029=J069)%>%
mutate(YE030=J071)%>%
mutate(YE031=0)%>%
mutate(YE032=K001+K002+K004+K005+K007+K008+K009+K010+K011+K012+K013+K014+K015+
K016+K022+K024)%>%
mutate(YE033=K026+K027+K028+K031+K036+K037)%>%
mutate(YE034=K038)%>%
mutate(YE035=L001+L002+L005+L006+L007+L008+L009+L010+L016+L023+L026+L028+L029)%>%
mutate(YE036=M001+M002+M003+M005+M006)%>%
mutate(YE037=M007+M008+M009+M010)%>%
mutate(YE038=M012+M013+M014+M015+M017+M018)%>%
mutate(YE039=N001+N002+N004+N005+N010)%>%
mutate(YE040=N008+N009+N015+N016)%>%
mutate(YE041=0)%>%
mutate(YE042=Q002)%>%

```



```
mutate(YE043=0)%>%
mutate(YE044=0)%>%
mutate(YE045=0)
```

Se guarda la tabla de ingreso en especie:

```
agregado <- agregado %>%
  mutate(enc=2018) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog)) %>%
  mutate(numren=as.numeric(numren))
Especie2018 <- agregado %>%
  select(enc, folioviv, foliohog, numren, YE001, YE002, YE003, YE004, YE005, YE006, YE007,
    YE008, YE009, YE010, YE011, YE012, YE013, YE014, YE015, YE016, YE017, YE018, YE019,
    YE020, YE021, YE022, YE023, YE024, YE025, YE026, YE027, YE028, YE029, YE030, YE031,
    YE032, YE033, YE034, YE035, YE036, YE037, YE038, YE039, YE040, YE041, YE042, YE043,
    YE044, YE045)
remove(agregado)
```

R. Tabla especie de 2020

```
gasto <- read.dbf("Bases/2020/gastospersona.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona pago en especie:

```
gasto <- gasto %>% filter(tipo_gasto=="G4")
agregado <- gasto %>% group_by(folioviv, foliohog, numren, clave) %>%
  summarise(gasto=sum(gas_nm_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=c(folioviv, foliohog, numren), values_from=gasto, names_from=clave)
```

Lista de variables de ingreso para considerar en la construcción:

```
ls(agregado)

[1] "A001" "A002" "A003" "A004" "A005" "A007"
[7] "A008" "A009" "A010" "A011" "A012" "A013"
[13] "A014" "A015" "A016" "A017" "A019" "A021"
[19] "A022" "A023" "A024" "A025" "A026" "A029"
[25] "A030" "A032" "A033" "A034" "A035" "A037"
[31] "A038" "A039" "A040" "A041" "A042" "A044"
[37] "A045" "A047" "A048" "A049" "A050" "A051"
[43] "A052" "A055" "A057" "A058" "A059" "A062"
[49] "A066" "A067" "A068" "A072" "A073" "A074"
[55] "A075" "A076" "A078" "A079" "A080" "A083"
[61] "A084" "A085" "A086" "A087" "A088" "A089"
[67] "A091" "A093" "A095" "A097" "A098" "A099"
[73] "A102" "A103" "A106" "A107" "A108" "A109"
[79] "A110" "A111" "A112" "A113" "A115" "A116"
[85] "A117" "A118" "A119" "A120" "A121" "A122"
[91] "A123" "A124" "A125" "A126" "A127" "A129"
[97] "A130" "A131" "A134" "A135" "A137" "A138"
[103] "A139" "A140" "A142" "A144" "A146" "A148"
[109] "A149" "A152" "A154" "A155" "A157" "A158"
```

[115]	"A159"	"A160"	"A161"	"A162"	"A163"	"A164"
[121]	"A165"	"A166"	"A167"	"A168"	"A169"	"A170"
[127]	"A171"	"A173"	"A176"	"A177"	"A179"	"A180"
[133]	"A182"	"A183"	"A185"	"A186"	"A187"	"A188"
[139]	"A191"	"A192"	"A194"	"A198"	"A199"	"A200"
[145]	"A201"	"A202"	"A205"	"A206"	"A208"	"A209"
[151]	"A210"	"A212"	"A213"	"A215"	"A216"	"A217"
[157]	"A218"	"A220"	"A221"	"A222"	"A224"	"A228"
[163]	"A229"	"A234"	"A239"	"A242"	"A243"	"A244"
[169]	"A245"	"A246"	"A247"	"B001"	"B002"	"B003"
[175]	"B004"	"B005"	"B006"	"B007"	"C001"	"C002"
[181]	"C003"	"C004"	"C005"	"C006"	"C007"	"C008"
[187]	"C009"	"C010"	"C011"	"C012"	"C013"	"C014"
[193]	"C015"	"C016"	"C017"	"C018"	"C019"	"C020"
[199]	"C021"	"C022"	"C023"	"C024"	"D001"	"D002"
[205]	"D003"	"D004"	"D005"	"D006"	"D007"	"D008"
[211]	"D009"	"D010"	"D011"	"D012"	"D013"	"D014"
[217]	"D015"	"D016"	"D017"	"D018"	"D019"	"D021"
[223]	"D022"	"D024"	"D025"	"D026"	"E001"	"E002"
[229]	"E003"	"E004"	"E005"	"E006"	"E007"	"E008"
[235]	"E009"	"E010"	"E014"	"E017"	"E020"	"E022"
[241]	"E023"	"E026"	"E032"	"E034"	"F001"	"F002"
[247]	"F003"	"F005"	"F006"	"F007"	"F008"	"F010"
[253]	"F012"	"F013"	"foliohog"	"folioviv"	"G001"	"G002"
[259]	"G003"	"G005"	"G007"	"G009"	"G013"	"G014"
[265]	"G015"	"G016"	"H001"	"H002"	"H007"	"H013"
[271]	"H014"	"H018"	"H028"	"H029"	"H030"	"H031"
[277]	"H033"	"H036"	"H037"	"H038"	"H040"	"H041"
[283]	"H043"	"H056"	"H057"	"H058"	"H059"	"H060"
[289]	"H061"	"H062"	"H063"	"H065"	"H066"	"H067"
[295]	"H068"	"H069"	"H070"	"H071"	"H072"	"H074"
[301]	"H075"	"H077"	"H079"	"H081"	"H083"	"H086"
[307]	"H088"	"H090"	"H093"	"H096"	"H097"	"H100"
[313]	"H102"	"H103"	"H108"	"H109"	"H110"	"H114"
[319]	"H115"	"H116"	"H118"	"H123"	"H124"	"H126"
[325]	"H127"	"H128"	"H129"	"H130"	"H131"	"H132"
[331]	"H133"	"H134"	"H136"	"I001"	"I002"	"I003"
[337]	"I004"	"I005"	"I007"	"I009"	"I011"	"I012"
[343]	"I014"	"I015"	"I016"	"I017"	"I018"	"I019"
[349]	"I021"	"I022"	"I023"	"I026"	"J001"	"J002"
[355]	"J003"	"J004"	"J005"	"J006"	"J007"	"J009"
[361]	"J010"	"J011"	"J012"	"J013"	"J014"	"J015"
[367]	"J016"	"J017"	"J018"	"J019"	"J020"	"J021"
[373]	"J022"	"J023"	"J024"	"J025"	"J026"	"J027"
[379]	"J028"	"J029"	"J030"	"J031"	"J032"	"J033"
[385]	"J034"	"J035"	"J036"	"J037"	"J038"	"J039"
[391]	"J040"	"J041"	"J042"	"J043"	"J044"	"J045"
[397]	"J046"	"J047"	"J048"	"J049"	"J050"	"J051"
[403]	"J052"	"J053"	"J054"	"J055"	"J056"	"J057"
[409]	"J058"	"J059"	"J060"	"J061"	"J062"	"J063"
[415]	"J065"	"J066"	"J067"	"J068"	"J069"	"J070"
[421]	"J071"	"K001"	"K002"	"K004"	"K007"	"K008"
[427]	"K009"	"K010"	"K012"	"K014"	"K016"	"K024"
[433]	"K027"	"K029"	"K030"	"K031"	"K032"	"K038"
[439]	"K039"	"K040"	"L002"	"L004"	"L005"	"L006"

[445]	"L007"	"L008"	"L010"	"L023"	"L024"	"L029"
[451]	"M001"	"M002"	"M003"	"M004"	"M005"	"M006"
[457]	"M008"	"M009"	"M010"	"M011"	"M012"	"M014"
[463]	"M016"	"M017"	"M018"	"N001"	"N002"	"N004"
[469]	"N005"	"N006"	"N008"	"N009"	"N010"	"N016"
[475]	"numren"	"Q011"	"R001"	"R002"	"R003"	"R004"
[481]	"R006"	"R007"	"R008"	"R009"	"R010"	"R011"
[487]	"R012"	"R013"				

Construcción propuesta:

```

agregado[4:488] [is.na(agregado[4:488])] <- 0
agregado <- agregado %>%
  mutate(YE001=A001+A002+A003+A004+A005+A007+A008+A009+A010+A011+A012+A013+A014+
    A015+A016+A017+A019+A021+A022+A023+A024+A025+A026+A029+A030+A032+A033+
    A034+A035+A037+A038+A039+A040+A041+A042+A044+A045+A047+A048+A049+A050+
    A051+A052+A055+A057+A058+A059+A062+A066+A067+A068+A072+A073+A074+A075+
    A076+A078+A079+A080+A083+A084+A085+A086+A087+A088+A089+A091+A093+A095+
    A097+A098+A099+A102+A103+A106+A107+A108+A109+A110+A111+A112+A113+A115+
    A116+A117+A118+A119+A120+A121+A122+A123+A124+A125+A126+A127+A129+A130+
    A131+A134+A135+A137+A138+A139+A140+A142+A144+A146+A148+A149+A152+A154+
    A155+A157+A158+A159+A160+A161+A162+A163+A164+A165+A166+A167+A168+A169+
    A170+A171+A173+A176+A177+A179+A180+A182+A183+A185+A186+A187+A188+A191+
    A192+A194+A198+A199+A200+A201+A202+A205+A206+A208+A209+A210)%>%
  mutate(YE002=A213)%>%
  mutate(YE003=A215+A216+A217+A218+A220+A221+A222)%>%
  mutate(YE004=A224+A228+A229+A234)%>%
  mutate(YE005=A212)%>%
  mutate(YE006=A243+A244+A245+A246+A247)%>%
  mutate(YE007=A239)%>%
  mutate(YE008=A242)%>%
  mutate(YE009=B001+B002+B003+B004+B005+B006+B007)%>%
  mutate(YE010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
    C014+C015+C016+C017+C018+C019)%>%
  mutate(YE011=C020+C021+C022+C023+C024)%>%
  mutate(YE012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
    D014+D015+D016+D017+D018+D019+D021)%>%
  mutate(YE013=D022+D024+D025+D026)%>%
  mutate(YE014=E001+E002+E003+E004+E005+E006+E007+E008+E009+E010)%>%
  mutate(YE015=E014+E017+E020)%>%
  mutate(YE016=E022+E023+E026)%>%
  mutate(YE017=E032+E034)%>%
  mutate(YE018=F001+F002+F003+F005+F006+R006+R007+R008+R009+R010+R011)%>%
  mutate(YE019=F007+F008+F010+F012+F013+R012)%>%
  mutate(YE020=G001+G002+G003)%>%
  mutate(YE021=G005+G007+G009+G013+G014+G015+G016+R001+R002+R003+R004+R013)%>%
  mutate(YE022=H001+H002+H007+H013+H014+H018+H028+H029+H030+H031+H033+H036+H037+
    H038+H040+H041+H043+H056+H057+H058+H059+H060+H061+H062+H063+H065+H066+
    H067+H068+H069+H070+H071+H072+H074+H075+H077+H079+H081+H083+H086+H088+
    H090+H093+H096+H097+H100+H102+H103+H108+H109+H110+H114+H115+H116+H118+
    H123+H124+H126+H127+H128+H129+H130+H131+H132+H133+H134+H136)%>%
  mutate(YE023=I001+I002+I003+I004+I005+I007+I009+I011+I012+I014+I015+I016+I017+
    I018+I019+I021+I022+I023+I026)%>%
  mutate(YE024=J016+J017+J018+J019+J020+J021+J022+J023+J024+J025+J026+J027+J028+
    J029+J030+J031+J032+J033+J034+J035+J036+J037+J038+J062+J063)%>%
  mutate(YE025=J039+J040+J041+J042+J043)%>%

```

```

mutate(YE026=J001+J002+J003+J004+J005+J006+J007+J009+J010+J011+J012+J013+J014+
      J015)%>%
mutate(YE027=J044+J045+J046+J047+J048+J049+J050+J051+J052+J053+J054+J055+J056+
      J057+J058+J059+J060+J061)%>%
mutate(YE028=J065+J066+J067+J068)%>%
mutate(YE029=J069)%>%
mutate(YE030=J070+J071)%>%
mutate(YE031=0)%>%
mutate(YE032=K001+K002+K004+K007+K008+K009+K010+K012+K014+K016+K024)%>%
mutate(YE033=K027+K029+K030+K031+K032)%>%
mutate(YE034=K038+K039+K040)%>%
mutate(YE035=L002+L004+L005+L006+L007+L008+L010+L023+L024+L029)%>%
mutate(YE036=M001+M002+M003+M004+M005+M006)%>%
mutate(YE037=M008+M009+M010+M011)%>%
mutate(YE038=M012+M014+M016+M017+M018)%>%
mutate(YE039=N001+N002+N004+N005+N006+N010)%>%
mutate(YE040=N008+N009+N016)%>%
mutate(YE041=0)%>%
mutate(YE042=0)%>%
mutate(YE043=0)%>%
mutate(YE044=Q011)%>%
mutate(YE045=0)

```

Se guarda la tabla de ingreso en especie:

```

agregado <- agregado %>%
  mutate(enc=2020) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog)) %>%
  mutate(numren=as.numeric(numren))
Especie2020 <- agregado %>%
  select(enc, folioviv, foliohog, numren, YE001, YE002, YE003, YE004, YE005, YE006, YE007,
        YE008, YE009, YE010, YE011, YE012, YE013, YE014, YE015, YE016, YE017, YE018, YE019,
        YE020, YE021, YE022, YE023, YE024, YE025, YE026, YE027, YE028, YE029, YE030, YE031,
        YE032, YE033, YE034, YE035, YE036, YE037, YE038, YE039, YE040, YE041, YE042, YE043,
        YE044, YE045)
remove(agregado)

```

Se genera el cuadro de control. De acuerdo con la definición de la última construcción del INEGI, se han excluido para el cuadro de control las claves de gasto Q001 a Q016 y K038 a K045, es decir, se excluyen las claves Y034 (mantenimiento de la vivienda), clave Y041-Y044 (financieras) y las claves Y045 (regalos en especie) y Y046 (balance negativo del negocio).

Cuadro 18
Especie: cuadro de control

enc	Perceptores	PagoEspecie
1984	2 734 564	49 691 904
1989	3 020 416	1 112 626 345
1992	3 693 896	3 233 348 246
1994	3 244 684	2 751 358 837
1996	4 878 393	5 433 137 989
1998	4 995 054	7 426 459 371
2000	5 877 363	10 379 120 774
2002	5 242 071	11 361 684 426
2004	4 031 076	11 702 356 890
2005	4 098 405	11 023 946 582
2006	4 959 745	14 577 679 822
2008	4 728 271	14 962 659 268
2010	3 090 637	9 862 343 110
2012	5 366 854	16 843 554 597
2014	4 985 729	14 189 996 413
2016	6 648 675	23 774 768 379
2018	7 084 291	29 335 012 451
2020	6 780 486	27 657 201 445

Fuente: Elaboración propia.

VI. Base de autoconsumo homologada de la ENIGH

A. Tabla de autoconsumo de 1984

```
gasto <- read.dbf("Bases/1984/nomon.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona autoconsumo y se cambia a nuevos pesos:

```
gasto <- gasto %>% filter(tipo_gas=="1")
gasto <- gasto %>% mutate(gas_tri=gas_tri/1000)
agregado <- gasto %>% group_by(folio,clave) %>%
  summarise(gas_tri=sum(gas_tri),.groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=folio,values_from=gas_tri,names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)
[1] "A001" "A003" "A004" "A007" "A008" "A011" "A012" "A017" "A021"
[10] "A022" "A023" "A027" "A028" "A029" "A030" "A031" "A032" "A033"
[19] "A034" "A036" "A038" "A039" "A047" "A049" "A050" "A052" "A053"
[28] "A054" "A059" "A060" "A065" "A066" "A067" "A068" "A072" "A073"
[37] "A074" "A075" "A076" "A077" "A078" "A081" "A084" "A086" "A087"
[46] "A088" "A089" "A091" "A092" "A093" "A094" "A095" "A096" "A097"
[55] "A098" "A100" "A101" "A102" "A103" "A104" "A105" "A106" "A107"
[64] "A109" "A110" "A111" "A114" "A116" "A117" "A119" "A121" "A122"
[73] "A123" "A124" "A125" "A126" "A127" "A128" "A131" "A132" "A134"
[82] "A135" "A136" "A140" "A142" "A144" "A145" "A147" "A148" "A150"
[91] "A165" "A168" "A169" "A170" "A172" "A182" "A183" "A184" "A189"
[100] "A192" "A199" "A200" "A201" "A202" "A205" "C009" "C023" "D018"
```



```
[109] "D020" "D021" "E002" "F010" "folio" "G022" "G023" "G024" "G026"
[118] "H013" "H019" "H034" "I002" "J001" "J002" "J006" "J016" "J022"
[127] "K019" "K023" "K031" "M014" "M015"
```

Construcción propuesta:

```
agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YA001=A001+A003+A004+A007+A008+A011+A012+A017+A021+A022+A023+A027+A028+
    A029+A030+A031+A032+A033+A034+A036+A038+A039+A047+A049+A050+A052+A053+
    A054+A059+A060+A065+A066+A067+A068+A072+A073+A074+A075+A076+A077+A078+
    A081+A084+A086+A087+A088+A089+A091+A092+A093+A094+A095+A096+A097+A098+
    A100+A101+A102+A103+A104+A105+A106+A107+A109+A110+A111+A114+A116+A117+
    A119+A121+A122+A123+A124+A125+A126+A127+A128+A131+A132+A134+A135+A136+
    A140+A142+A144+A145+A147+A148+A150+A165+A168+A169+A170+A172+A182)%>%
  mutate(YA002=A183+A184)%>%
  mutate(YA003=A189)%>%
  mutate(YA004=A192)%>%
  mutate(YA005=0)%>%
  mutate(YA006=A199+A200+A201+A202)%>%
  mutate(YA007=A205)%>%
  mutate(YA008=0)%>%
  mutate(YA009=0)%>%
  mutate(YA010=C009)%>%
  mutate(YA011=C023)%>%
  mutate(YA012=0)%>%
  mutate(YA013=D018+D020+D021)%>%
  mutate(YA014=E002)%>%
  mutate(YA015=0)%>%
  mutate(YA016=0)%>%
  mutate(YA017=0)%>%
  mutate(YA018=0)%>%
  mutate(YA019=F010)%>%
  mutate(YA020=0)%>%
  mutate(YA021=G022+G023+G024+G026)%>%
  mutate(YA022=H013+H019+H034)%>%
  mutate(YA023=I002)%>%
  mutate(YA024=J001+J002+J006)%>%
  mutate(YA025=0)%>%
  mutate(YA026=J016+J022)%>%
  mutate(YA027=0)%>%
  mutate(YA028=0)%>%
  mutate(YA029=0)%>%
  mutate(YA030=0)%>%
  mutate(YA031=0)%>%
  mutate(YA032=K019)%>%
  mutate(YA033=K023)%>%
  mutate(YA034=K031)%>%
  mutate(YA035=0)%>%
  mutate(YA036=0)%>%
  mutate(YA037=0)%>%
  mutate(YA038=M014+M015)%>%
  mutate(YA039=0)%>%
  mutate(YA040=0)%>%
  mutate(YA041=0)%>%
  mutate(YA042=0)%>%
```

```
mutate(YA043=0)%>%
mutate(YA044=0)%>%
mutate(YA045=0)
```

Se guarda la tabla de autoconsumo:

```
agregado <- agregado %>%
  mutate(enc=1984) %>%
  mutate(folioviv=substr(folio,5,11)) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliahog=1)
Autocon1984 <- agregado %>%
  select(enc, folioviv, foliahog, YA001, YA002, YA003, YA004, YA005, YA006, YA007, YA008, YA009,
        YA010, YA011, YA012, YA013, YA014, YA015, YA016, YA017, YA018, YA019, YA020, YA021,
        YA022, YA023, YA024, YA025, YA026, YA027, YA028, YA029, YA030, YA031, YA032, YA033,
        YA034, YA035, YA036, YA037, YA038, YA039, YA040, YA041, YA042, YA043, YA044, YA045)
remove(agregado)
```

B. Tabla de autoconsumo de 1989

```
gasto <- read.dbf("Bases/1989/nomon.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona autoconsumo y se cambia a nuevos pesos:

```
gasto <- gasto %>% filter(tipo_gas=="1")
gasto <- gasto %>% mutate(gas_tri=gas_tri/1000)
agregado <- gasto %>% group_by(folio, clave) %>%
  summarise(gas_tri=sum(gas_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=folio, values_from=gas_tri, names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)

[1] "A001" "A002" "A003" "A004" "A005" "A006" "A007" "A008" "A009"
[10] "A010" "A011" "A012" "A013" "A014" "A015" "A016" "A017" "A018"
[19] "A019" "A020" "A021" "A022" "A023" "A024" "A025" "A026" "A027"
[28] "A028" "A029" "A030" "A031" "A032" "A033" "A034" "A035" "A036"
[37] "A037" "A038" "A039" "A040" "A041" "A042" "A043" "A045" "A046"
[46] "A047" "A048" "A049" "A050" "A052" "A053" "A054" "A055" "A056"
[55] "A057" "A058" "A059" "A060" "A061" "A062" "A063" "A065" "A066"
[64] "A067" "A068" "A070" "A071" "A072" "A073" "A074" "A075" "A076"
[73] "A077" "A078" "A079" "A080" "A081" "A083" "A084" "A085" "A086"
[82] "A087" "A088" "A089" "A090" "A091" "A092" "A093" "A094" "A095"
[91] "A096" "A097" "A098" "A099" "A100" "A101" "A102" "A103" "A104"
[100] "A106" "A107" "A108" "A109" "A110" "A111" "A112" "A113" "A114"
[109] "A115" "A116" "A117" "A118" "A119" "A120" "A121" "A122" "A123"
[118] "A124" "A125" "A126" "A127" "A128" "A131" "A132" "A134" "A135"
[127] "A136" "A137" "A138" "A139" "A140" "A141" "A142" "A143" "A144"
[136] "A146" "A147" "A148" "A149" "A150" "A152" "A153" "A154" "A155"
[145] "A156" "A157" "A158" "A159" "A160" "A162" "A163" "A164" "A165"
[154] "A166" "A168" "A169" "A170" "A171" "A172" "A173" "A174" "A175"
[163] "A176" "A177" "A179" "A180" "A181" "A182" "A183" "A184" "A185"
```

[172]	"A186"	"A187"	"A188"	"A189"	"A190"	"A191"	"A192"	"A194"	"A195"
[181]	"A198"	"A199"	"A200"	"A201"	"A202"	"A203"	"B004"	"B005"	"B007"
[190]	"C001"	"C002"	"C003"	"C004"	"C005"	"C006"	"C007"	"C008"	"C009"
[199]	"C010"	"C011"	"C012"	"C013"	"C015"	"C017"	"C018"	"C019"	"C020"
[208]	"D001"	"D002"	"D003"	"D004"	"D005"	"D006"	"D007"	"D008"	"D010"
[217]	"D011"	"D012"	"D013"	"D014"	"D017"	"D018"	"D019"	"D020"	"D021"
[226]	"D022"	"E004"	"E011"	"E015"	"F001"	"F006"	"F007"	"F009"	"F010"
[235]	"folio"	"G009"	"G016"	"G020"	"G023"	"G024"	"G025"	"G026"	"G027"
[244]	"G028"	"G029"	"H001"	"H002"	"H003"	"H004"	"H005"	"H006"	"H007"
[253]	"H008"	"H009"	"H010"	"H011"	"H012"	"H013"	"H014"	"H015"	"H016"
[262]	"H019"	"H020"	"H021"	"H024"	"H025"	"H026"	"H027"	"H032"	"H033"
[271]	"H034"	"H035"	"H036"	"H037"	"H038"	"H040"	"H043"	"I003"	"I012"
[280]	"I013"	"I014"	"I015"	"I017"	"I018"	"I019"	"I020"	"J001"	"J002"
[289]	"J003"	"J006"	"J007"	"J008"	"J020"	"J028"	"J030"	"J031"	"K008"
[298]	"K010"	"K019"	"K021"	"K023"	"K025"	"K028"	"K030"	"K031"	"L003"
[307]	"L004"	"L008"	"L010"	"L016"	"M001"	"M003"	"M011"	"M012"	"M013"
[316]	"M014"	"M015"	"N003"	"N005"	"N014"				

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YA001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A018+A019+A020+A021+A022+A023+A024+A025+A026+A027+
    A028+A029+A030+A031+A032+A033+A034+A035+A036+A037+A038+A039+A040+A041+
    A042+A043+A045+A046+A047+A048+A049+A050+A052+A053+A054+A055+A056+A057+
    A058+A059+A060+A061+A062+A063+A065+A066+A067+A068+A070+A071+A072+A073+
    A074+A075+A076+A077+A078+A079+A080+A081+A083+A084+A085+A086+A087+A088+
    A089+A090+A091+A092+A093+A094+A095+A096+A097+A098+A099+A100+A101+A102+
    A103+A104+A106+A107+A108+A109+A110+A111+A112+A113+A114+A115+A116+A117+
    A118+A119+A120+A121+A122+A123+A124+A125+A126+A127+A128+A131+A132+A134+
    A135+A136+A137+A138+A139+A140+A141+A142+A143+A144+A146+A147+A148+A149+
    A150+A152+A153+A154+A155+A156+A157+A158+A159+A160+A162+A163+A164+A165+
    A166+A168+A169+A170+A171+A172+A173+A174+A175+A176+A177+A179+A180+A181+
    A182)%>%
  mutate(YA002=A183+A184)%>%
  mutate(YA003=A185+A186+A187+A188+A189)%>%
  mutate(YA004=A190+A191+A192+A194+A195+A198)%>%
  mutate(YA005=0)%>%
  mutate(YA006=A199+A200+A201+A202)%>%
  mutate(YA007=A203)%>%
  mutate(YA008=0)%>%
  mutate(YA009=B004+B005+B007)%>%
  mutate(YA010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
    C015+C017+C018+C019)%>%
  mutate(YA011=C020)%>%
  mutate(YA012=D001+D002+D003+D004+D005+D006+D007+D008+D010+D011+D012+D013+D014+
    D017)%>%
  mutate(YA013=D018+D019+D020+D021+D022)%>%
  mutate(YA014=E004)%>%
  mutate(YA015=E011)%>%
  mutate(YA016=E015)%>%
  mutate(YA017=0)%>%
  mutate(YA018=F001)%>%
  mutate(YA019=F006+F007+F009+F010)%>%
  mutate(YA020=G009)%>%

```

```
mutate(YA021=G016+G020+G023+G024+G025+G026+G027+G028+G029)%>%
mutate(YA022=H001+H002+H003+H004+H005+H006+H007+H008+H009+H010+H011+H012+H013+
      H014+H015+H016+H019+H020+H021+H024+H025+H026+H027+H032+H033+H034+H035+
      H036+H037+H038+H040+H043)%>%
mutate(YA023=I003+I012+I013+I014+I015+I017+I018+I019+I020)%>%
mutate(YA024=J001+J002+J003+J006+J007+J008)%>%
mutate(YA025=0)%>%
mutate(YA026=J020)%>%
mutate(YA027=J028+J030+J031)%>%
mutate(YA028=0)%>%
mutate(YA029=0)%>%
mutate(YA030=0)%>%
mutate(YA031=0)%>%
mutate(YA032=K008+K010+K019)%>%
mutate(YA033=K021+K023+K025+K028)%>%
mutate(YA034=K030+K031)%>%
mutate(YA035=L003+L004+L008+L010+L016)%>%
mutate(YA036=M001+M003)%>%
mutate(YA037=0)%>%
mutate(YA038=M011+M012+M013+M014+M015)%>%
mutate(YA039=N003+N005)%>%
mutate(YA040=0)%>%
mutate(YA041=N014)%>%
mutate(YA042=0)%>%
mutate(YA043=0)%>%
mutate(YA044=0)%>%
mutate(YA045=0)
```

Se guarda la tabla de autoconsumo:

```
agregado <- agregado %>%
  mutate(enc=1989) %>%
  mutate(folioviv=substr(folio,5,11)) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=1)
Autocon1989 <- agregado %>%
  select(enc, folioviv, foliohog, YA001, YA002, YA003, YA004, YA005, YA006, YA007, YA008, YA009,
        YA010, YA011, YA012, YA013, YA014, YA015, YA016, YA017, YA018, YA019, YA020, YA021,
        YA022, YA023, YA024, YA025, YA026, YA027, YA028, YA029, YA030, YA031, YA032, YA033,
        YA034, YA035, YA036, YA037, YA038, YA039, YA040, YA041, YA042, YA043, YA044, YA045)
remove(agregado)
```

C. Tabla de autoconsumo de 1992

```
gasto <- read.dbf("Bases/1992/nomon.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona autoconsumo y se cambia a nuevos pesos:

```
gasto <- gasto %>% filter(tipo_gas=="1")
gasto <- gasto %>% mutate(gas_tri=gas_tri/1000)
agregado <- gasto %>% group_by(folio, clave) %>%
  summarise(gas_tri=sum(gas_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
```

```
agregado <- agregado %>%
  pivot_wider(id_cols=folio, values_from=gas_tri, names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)
```

```
[1] "A001" "A002" "A003" "A004" "A005" "A006" "A007" "A008" "A009"
[10] "A010" "A011" "A012" "A013" "A014" "A015" "A016" "A017" "A018"
[19] "A019" "A020" "A021" "A022" "A023" "A024" "A025" "A026" "A027"
[28] "A028" "A029" "A030" "A031" "A032" "A033" "A034" "A035" "A036"
[37] "A037" "A038" "A039" "A040" "A041" "A042" "A043" "A044" "A045"
[46] "A046" "A047" "A048" "A049" "A050" "A051" "A052" "A053" "A054"
[55] "A055" "A056" "A057" "A059" "A060" "A061" "A062" "A063" "A065"
[64] "A066" "A067" "A068" "A069" "A070" "A071" "A072" "A073" "A074"
[73] "A075" "A076" "A077" "A078" "A079" "A080" "A081" "A082" "A084"
[82] "A085" "A086" "A087" "A088" "A089" "A090" "A091" "A092" "A093"
[91] "A094" "A095" "A096" "A097" "A098" "A099" "A100" "A101" "A102"
[100] "A103" "A104" "A106" "A107" "A108" "A109" "A110" "A111" "A112"
[109] "A113" "A114" "A115" "A116" "A117" "A118" "A119" "A120" "A121"
[118] "A122" "A123" "A124" "A125" "A126" "A127" "A128" "A129" "A131"
[127] "A132" "A134" "A135" "A136" "A137" "A138" "A139" "A140" "A141"
[136] "A142" "A144" "A145" "A146" "A147" "A149" "A150" "A152" "A153"
[145] "A154" "A155" "A156" "A157" "A158" "A160" "A161" "A162" "A163"
[154] "A164" "A165" "A166" "A168" "A169" "A172" "A173" "A174" "A175"
[163] "A176" "A177" "A178" "A179" "A180" "A181" "A182" "A183" "A184"
[172] "A185" "A186" "A187" "A188" "A189" "A190" "A191" "A192" "A197"
[181] "A199" "A200" "A201" "A202" "A203" "A205" "B002" "B004" "B005"
[190] "B007" "C001" "C002" "C003" "C004" "C005" "C006" "C007" "C008"
[199] "C009" "C010" "C011" "C012" "C013" "C014" "C015" "C016" "C017"
[208] "C018" "C019" "C021" "C022" "C023" "D001" "D002" "D003" "D004"
[217] "D005" "D006" "D007" "D008" "D009" "D011" "D012" "D013" "D014"
[226] "D016" "D017" "D018" "D020" "D022" "E001" "E004" "E005" "E010"
[235] "E011" "E018" "E025" "F007" "F009" "F010" "folio" "G003" "G008"
[244] "G011" "G016" "G018" "G020" "G022" "G023" "G024" "G025" "G026"
[253] "G027" "G028" "G029" "H001" "H002" "H003" "H004" "H005" "H006"
[262] "H007" "H008" "H009" "H010" "H011" "H012" "H013" "H014" "H015"
[271] "H017" "H018" "H020" "H021" "H022" "H023" "H024" "H026" "H029"
[280] "H030" "H032" "H033" "H035" "H036" "H037" "H040" "H041" "H043"
[289] "H045" "H046" "H047" "H052" "H053" "H054" "H055" "H056" "H060"
[298] "H062" "H063" "I002" "I003" "I005" "I010" "I014" "I016" "I018"
[307] "I019" "I020" "I021" "I022" "I023" "I024" "J001" "J002" "J003"
[316] "J004" "J006" "J007" "J008" "J010" "J012" "J014" "J017" "J018"
[325] "J021" "J022" "J024" "J029" "J030" "J031" "J032" "J036" "K007"
[334] "K017" "K018" "K021" "K023" "K028" "K030" "K031" "L003" "L004"
[343] "L006" "L010" "L012" "L015" "L018" "M001" "M003" "M015" "M016"
[352] "N003" "N005" "N010"
```

Construcción propuesta:

```
agregado[is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YA001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A018+A019+A020+A021+A022+A023+A024+A025+A026+A027+
    A028+A029+A030+A031+A032+A033+A034+A035+A036+A037+A038+A039+A040+A041+
    A042+A043+A044+A045+A046+A047+A048+A049+A050+A051+A052+A053+A054+A055+
    A056+A057+A059+A060+A061+A062+A063+A065+A066+A067+A068+A069+A070+A071+
    A072+A073+A074+A075+A076+A077+A078+A079+A080+A081+A082+A084+A085+A086+
    A087+A088+A089+A090+A091+A092+A093+A094+A095+A096+A097+A098+A099+A100+
    A101+A102+A103+A104+A106+A107+A108+A109+A110+A111+A112+A113+A114+A115+
    A116+A117+A118+A119+A120+A121+A122+A123+A124+A125+A126+A127+A128+A129+
    A131+A132+A134+A135+A136+A137+A138+A139+A140+A141+A142+A144+A145+A146+
    A147+A149+A150+A152+A153+A154+A155+A156+A157+A158+A160+A161+A162+A163+
    A164+A165+A166+A168+A169+A172+A173+A174+A175+A176+A177+A178+A179+
    A180+A181+A182+A183+A184+A185+A186+A187+A188+A189+A190+A191+A192+A197+
    A199+A200+A201+A202+A203+A205+B002+B004+B005+B007+C001+C002+C003+C004+
    C005+C006+C007+C008+C009+C010+C011+C012+C013+C014+C015+C016+C017+
    C018+C019+C021+C022+C023+D001+D002+D003+D004+D005+D006+D007+D008+
    D009+D011+D012+D013+D014+D016+D017+D018+D020+D022+E001+E004+E005+E010+
    E011+E018+E025+F007+F009+F010+folio+G003+G008+G011+G016+G018+G020+
    G022+G023+G024+G025+G026+G027+G028+G029+H001+H002+H003+H004+H005+
    H006+H007+H008+H009+H010+H011+H012+H013+H014+H015+H017+H018+H020+
    H021+H022+H023+H024+H026+H029+H030+H032+H033+H035+H036+H037+H040+
    H041+H043+H045+H046+H047+H052+H053+H054+H055+H056+H060+H062+H063+
    I002+I003+I005+I010+I014+I016+I018+I019+I020+I021+I022+I023+I024+
    J001+J002+J003+J004+J006+J007+J008+J010+J012+J014+J017+J018+J021+
    J022+J024+J029+J030+J031+J032+J036+K007+K017+K018+K021+K023+K028+
    K030+K031+L003+L004+L006+L010+L012+L015+L018+M001+M003+M015+M016+
    N003+N005+N010)
```

```

A072+A073+A074+A075+A076+A077+A078+A079+A080+A081+A082+A084+A085+A086+
A087+A088+A089+A090+A091+A092+A093+A094+A095+A096+A097+A098+A099+A100+
A101+A102+A103+A104+A106+A107+A108+A109+A110+A111+A112+A113+A114+A115+
A116+A117+A118+A119+A120+A121+A122+A123+A124+A125+A126+A127+A128+A129+
A131+A132+A134+A135+A136+A137+A138+A139+A140+A141+A142+A144+A145+A146+
A147+A149+A150+A152+A153+A154+A155+A156+A157+A158+A160+A161+A162+A163+
A164+A165+A166+A168+A169+A172+A173+A174+A175+A176+A177+A178+A179+A180+
A181+A182)%>%
mutate(YA002=A183+A184)%>%
mutate(YA003=A185+A186+A187+A188+A189)%>%
mutate(YA004=A190+A191+A192+A197)%>%
mutate(YA005=0)%>%
mutate(YA006=A199+A200+A201+A202)%>%
mutate(YA007=A203+A205)%>%
mutate(YA008=0)%>%
mutate(YA009=B002+B004+B005+B007)%>%
mutate(YA010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
C014+C015+C016+C017+C018+C019)%>%
mutate(YA011=C021+C022+C023)%>%
mutate(YA012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D011+D012+D013+D014+
D016+D017)%>%
mutate(YA013=D018+D020+D022)%>%
mutate(YA014=E001+E004+E005)%>%
mutate(YA015=E010+E011)%>%
mutate(YA016=0)%>%
mutate(YA017=E018+E025)%>%
mutate(YA018=0)%>%
mutate(YA019=F007+F009+F010)%>%
mutate(YA020=0)%>%
mutate(YA021=G003+G008+G011+G016+G018+G020+G022+G023+G024+G025+G026+G027+G028+
G029)%>%
mutate(YA022=H001+H002+H003+H004+H005+H006+H007+H008+H009+H010+H011+H012+H013+
H014+H015+H017+H018+H020+H021+H022+H023+H024+H026+H029+H030+H032+H033+
H035+H036+H037+H040+H041+H043+H045+H046+H047+H052+H053+H054+H055+H056+
H060+H062+H063)%>%
mutate(YA023=I002+I003+I005+I010+I014+I016+I018+I019+I020+I021+I022+I023+I024)%>%
mutate(YA024=J001+J002+J003+J004+J006+J007+J008)%>%
mutate(YA025=J010+J012+J014)%>%
mutate(YA026=J017+J018+J021+J022+J024)%>%
mutate(YA027=J029+J030+J031+J032+J036)%>%
mutate(YA028=0)%>%
mutate(YA029=0)%>%
mutate(YA030=0)%>%
mutate(YA031=0)%>%
mutate(YA032=K007+K017+K018)%>%
mutate(YA033=K021+K023+K028)%>%
mutate(YA034=K030+K031)%>%
mutate(YA035=L003+L004+L006+L010+L012+L015+L018)%>%
mutate(YA036=M001+M003)%>%
mutate(YA037=0)%>%
mutate(YA038=M015+M016)%>%
mutate(YA039=N003+N005+N010)%>%
mutate(YA040=0)%>%
mutate(YA041=0)%>%
mutate(YA042=0)%>%

```

```
mutate(YA043=0)%>%
mutate(YA044=0)%>%
mutate(YA045=0)
```

Se guarda la tabla de autoconsumo:

```
agregado <- agregado %>%
  mutate(enc=1992) %>%
  mutate(folioviv=substr(folio,5,10)) %>%
  mutate(foliohog=substr(folio,11,11)) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog)) %>%
  mutate(foliohog=foliohog+1)
Autocon1992 <- agregado %>%
  select(enc, folioviv, foliohog, YA001, YA002, YA003, YA004, YA005, YA006, YA007, YA008, YA009,
    YA010, YA011, YA012, YA013, YA014, YA015, YA016, YA017, YA018, YA019, YA020, YA021,
    YA022, YA023, YA024, YA025, YA026, YA027, YA028, YA029, YA030, YA031, YA032, YA033,
    YA034, YA035, YA036, YA037, YA038, YA039, YA040, YA041, YA042, YA043, YA044, YA045)
remove(agregado)
```

D. Tabla de autoconsumo de 1994

```
gasto <- read.dbf("Bases/1994/nomon.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona autoconsumo:

```
gasto <- gasto %>% filter(tipo_gas=="1")
agregado <- gasto %>% group_by(folio, clave) %>%
  summarise(gas_tri=sum(gas_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=folio, values_from=gas_tri, names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)

[1] "A001" "A002" "A003" "A004" "A005" "A006" "A007" "A008" "A009"
[10] "A010" "A011" "A012" "A013" "A014" "A015" "A016" "A017" "A018"
[19] "A019" "A020" "A021" "A022" "A023" "A024" "A025" "A027" "A028"
[28] "A029" "A030" "A031" "A032" "A033" "A034" "A035" "A036" "A037"
[37] "A038" "A039" "A040" "A041" "A042" "A043" "A044" "A045" "A046"
[46] "A047" "A048" "A049" "A050" "A051" "A052" "A053" "A054" "A055"
[55] "A056" "A057" "A058" "A059" "A060" "A061" "A062" "A063" "A064"
[64] "A066" "A067" "A068" "A069" "A070" "A071" "A072" "A073" "A074"
[73] "A075" "A076" "A077" "A078" "A079" "A080" "A081" "A082" "A083"
[82] "A085" "A086" "A087" "A088" "A089" "A090" "A091" "A092" "A093"
[91] "A094" "A095" "A096" "A097" "A098" "A099" "A100" "A101" "A102"
[100] "A103" "A104" "A105" "A106" "A107" "A108" "A109" "A110" "A111"
[109] "A112" "A113" "A114" "A116" "A117" "A118" "A119" "A120" "A121"
[118] "A122" "A123" "A124" "A125" "A126" "A127" "A128" "A129" "A130"
[127] "A131" "A132" "A133" "A134" "A136" "A137" "A138" "A139" "A140"
[136] "A141" "A142" "A143" "A144" "A146" "A147" "A148" "A149" "A150"
[145] "A151" "A152" "A154" "A155" "A156" "A157" "A158" "A159" "A160"
[154] "A161" "A162" "A163" "A164" "A165" "A166" "A167" "A169" "A170"
```


[163]	"A171"	"A172"	"A173"	"A175"	"A177"	"A178"	"A179"	"A180"	"A181"
[172]	"A182"	"A184"	"A186"	"A187"	"A188"	"A189"	"A190"	"A191"	"A192"
[181]	"A193"	"A194"	"A195"	"A196"	"A200"	"A204"	"A205"	"A206"	"A207"
[190]	"A208"	"A210"	"B004"	"B005"	"B007"	"C001"	"C002"	"C003"	"C004"
[199]	"C005"	"C006"	"C007"	"C008"	"C009"	"C010"	"C011"	"C012"	"C013"
[208]	"C014"	"C015"	"C016"	"C018"	"C019"	"C020"	"C021"	"C022"	"C024"
[217]	"D001"	"D002"	"D003"	"D004"	"D005"	"D006"	"D007"	"D008"	"D009"
[226]	"D010"	"D011"	"D012"	"D013"	"D014"	"D017"	"D018"	"D019"	"D020"
[235]	"D021"	"D022"	"E011"	"E014"	"E015"	"E019"	"E022"	"F007"	"F009"
[244]	"F010"	"folio"	"G027"	"G028"	"G029"	"G030"	"G031"	"G032"	"G033"
[253]	"H001"	"H002"	"H003"	"H004"	"H005"	"H007"	"H008"	"H009"	"H012"
[262]	"H013"	"H014"	"H015"	"H017"	"H018"	"H019"	"H020"	"H021"	"H024"
[271]	"H025"	"H029"	"H031"	"H032"	"H033"	"H036"	"H037"	"H038"	"H040"
[280]	"H041"	"H046"	"H047"	"H049"	"H050"	"H052"	"H053"	"H054"	"H055"
[289]	"H056"	"H057"	"H060"	"H062"	"H063"	"I002"	"I006"	"I011"	"I014"
[298]	"I016"	"I017"	"I019"	"I021"	"I022"	"I023"	"I024"	"I026"	"J001"
[307]	"J002"	"J004"	"J005"	"J007"	"J009"	"J015"	"J017"	"J018"	"J020"
[316]	"J021"	"J029"	"J030"	"J031"	"J032"	"J034"	"J035"	"J040"	"K001"
[325]	"K010"	"K012"	"K019"	"K021"	"K022"	"K023"	"K028"	"K030"	"K031"
[334]	"K033"	"L001"	"L004"	"L015"	"L025"	"M001"	"M013"	"M014"	"M016"
[343]	"M017"	"M018"	"N001"	"N010"					

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YA001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A018+A019+A020+A021+A022+A023+A024+A025+A027+A028+
    A029+A030+A031+A032+A033+A034+A035+A036+A037+A038+A039+A040+A041+A042+
    A043+A044+A045+A046+A047+A048+A049+A050+A051+A052+A053+A054+A055+A056+
    A057+A058+A059+A060+A061+A062+A063+A064+A066+A067+A068+A069+A070+A071+
    A072+A073+A074+A075+A076+A077+A078+A079+A080+A081+A082+A083+A085+A086+
    A087+A088+A089+A090+A091+A092+A093+A094+A095+A096+A097+A098+A099+A100+
    A101+A102+A103+A104+A105+A106+A107+A108+A109+A110+A111+A112+A113+A114+
    A116+A117+A118+A119+A120+A121+A122+A123+A124+A125+A126+A127+A128+A129+
    A130+A131+A132+A133+A134+A136+A137+A138+A139+A140+A141+A142+A143+A144+
    A146+A147+A148+A149+A150+A151+A152+A154+A155+A156+A157+A158+A159+A160+
    A161+A162+A163+A164+A165+A166+A167+A169+A170+A171+A172+A173+A175+A177+
    A178+A179+A180+A181+A182+A184)%>%
  mutate(YA002=A186+A187)%>%
  mutate(YA003=A188+A189+A190+A191+A192+A193)%>%
  mutate(YA004=A194+A195+A196+A200)%>%
  mutate(YA005=0)%>%
  mutate(YA006=A204+A205+A206+A207)%>%
  mutate(YA007=A208+A210)%>%
  mutate(YA008=0)%>%
  mutate(YA009=B004+B005+B007)%>%
  mutate(YA010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
    C014+C015+C016+C018+C019)%>%
  mutate(YA011=C020+C021+C022+C024)%>%
  mutate(YA012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
    D014+D017)%>%
  mutate(YA013=D018+D019+D020+D021+D022)%>%
  mutate(YA014=E011)%>%
  mutate(YA015=E014+E015)%>%
  mutate(YA016=E019+E022)%>%

```



```

mutate(YA017=0)%>%
mutate(YA018=0)%>%
mutate(YA019=F007+F009+F010)%>%
mutate(YA020=0)%>%
mutate(YA021=G027+G028+G029+G030+G031+G032+G033)%>%
mutate(YA022=H001+H002+H003+H004+H005+H007+H008+H009+H012+H013+H014+H015+H017+
      H018+H019+H020+H021+H024+H025+H029+H031+H032+H033+H036+H037+H038+H040+
      H041+H046+H047+H049+H050+H052+H053+H054+H055+H056+H057+H060+H062+H063)%>%
mutate(YA023=I002+I006+I011+I014+I016+I017+I019+I021+I022+I023+I024+I026)%>%
mutate(YA024=J001+J002+J004+J005+J007+J009)%>%
mutate(YA025=J015)%>%
mutate(YA026=J017+J018+J020+J021)%>%
mutate(YA027=J029+J030+J031+J032+J034+J035)%>%
mutate(YA028=J040)%>%
mutate(YA029=0)%>%
mutate(YA030=0)%>%
mutate(YA031=0)%>%
mutate(YA032=K001+K010+K012+K019)%>%
mutate(YA033=K021+K022+K023+K028)%>%
mutate(YA034=K030+K031+K033)%>%
mutate(YA035=L001+L004+L015+L025)%>%
mutate(YA036=M001)%>%
mutate(YA037=0)%>%
mutate(YA038=M013+M014+M016+M017+M018)%>%
mutate(YA039=N001+N010)%>%
mutate(YA040=0)%>%
mutate(YA041=0)%>%
mutate(YA042=0)%>%
mutate(YA043=0)%>%
mutate(YA044=0)%>%
mutate(YA045=0)

```

Se guarda la tabla de autoconsumo:

```

agregado <- agregado %>%
  mutate(enc=1994) %>%
  mutate(folioviv=substr(folio,5,10)) %>%
  mutate(foliohog=substr(folio,11,11)) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog)) %>%
  mutate(foliohog=foliohog+1)
Autocon1994 <- agregado %>%
  select(enc, folioviv, foliohog, YA001, YA002, YA003, YA004, YA005, YA006, YA007, YA008, YA009,
        YA010, YA011, YA012, YA013, YA014, YA015, YA016, YA017, YA018, YA019, YA020, YA021,
        YA022, YA023, YA024, YA025, YA026, YA027, YA028, YA029, YA030, YA031, YA032, YA033,
        YA034, YA035, YA036, YA037, YA038, YA039, YA040, YA041, YA042, YA043, YA044, YA045)
remove(agregado)

```

E. Tabla de autoconsumo de 1996

```

gasto <- read.dbf("Bases/1996/nomon.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))

```

Se selecciona autoconsumo:

```
gasto <- gasto %>% filter(tipo_gas=="1")
agregado <- gasto %>% group_by(folio,clave) %>%
  summarise(gas_tri=sum(gas_tri),.groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=folio,values_from=gas_tri,names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)

[1] "A001" "A002" "A003" "A004" "A005" "A006" "A007" "A008" "A009"
[10] "A010" "A011" "A012" "A013" "A014" "A015" "A016" "A017" "A018"
[19] "A019" "A020" "A021" "A022" "A023" "A024" "A025" "A026" "A027"
[28] "A028" "A029" "A030" "A031" "A032" "A033" "A034" "A035" "A036"
[37] "A037" "A038" "A039" "A041" "A042" "A043" "A044" "A045" "A047"
[46] "A048" "A049" "A050" "A051" "A052" "A053" "A054" "A055" "A056"
[55] "A057" "A058" "A059" "A060" "A061" "A062" "A063" "A064" "A066"
[64] "A067" "A068" "A069" "A070" "A071" "A072" "A073" "A074" "A075"
[73] "A076" "A077" "A078" "A079" "A080" "A081" "A082" "A083" "A084"
[82] "A085" "A086" "A087" "A088" "A089" "A090" "A091" "A092" "A093"
[91] "A094" "A095" "A096" "A097" "A098" "A099" "A100" "A101" "A102"
[100] "A103" "A104" "A105" "A106" "A107" "A109" "A110" "A111" "A112"
[109] "A113" "A114" "A115" "A117" "A119" "A120" "A121" "A122" "A123"
[118] "A124" "A125" "A126" "A127" "A128" "A129" "A130" "A131" "A132"
[127] "A134" "A135" "A137" "A138" "A139" "A141" "A142" "A143" "A144"
[136] "A145" "A146" "A147" "A148" "A149" "A150" "A151" "A152" "A153"
[145] "A154" "A155" "A156" "A157" "A158" "A159" "A160" "A162" "A163"
[154] "A164" "A165" "A166" "A167" "A168" "A169" "A170" "A171" "A172"
[163] "A173" "A174" "A175" "A176" "A178" "A179" "A180" "A181" "A182"
[172] "A183" "A184" "A185" "A186" "A187" "A188" "A189" "A190" "A191"
[181] "A192" "A193" "A194" "A195" "A197" "A201" "A202" "A204" "A205"
[190] "A206" "A207" "A208" "A209" "B004" "B005" "B007" "C001" "C002"
[199] "C003" "C004" "C005" "C006" "C007" "C008" "C009" "C010" "C011"
[208] "C012" "C013" "C014" "C015" "C016" "C017" "C018" "C019" "C022"
[217] "C023" "D001" "D002" "D003" "D004" "D005" "D006" "D007" "D008"
[226] "D009" "D010" "D011" "D012" "D013" "D014" "D015" "D017" "D018"
[235] "D019" "D020" "D021" "D022" "E015" "E021" "E022" "E033" "F001"
[244] "F002" "F006" "F007" "F009" "F010" "folio" "G022" "G028" "G029"
[253] "G030" "G032" "G033" "H001" "H002" "H003" "H004" "H005" "H006"
[262] "H007" "H008" "H009" "H010" "H012" "H013" "H014" "H015" "H017"
[271] "H018" "H019" "H020" "H021" "H022" "H023" "H024" "H025" "H029"
[280] "H031" "H032" "H033" "H035" "H036" "H037" "H038" "H039" "H040"
[289] "H042" "H044" "H045" "H046" "H047" "H050" "H051" "H052" "H053"
[298] "H054" "H055" "H057" "H059" "H060" "H061" "H062" "H063" "I016"
[307] "I020" "I022" "I023" "I024" "I025" "I026" "J001" "J002" "J003"
[316] "J004" "J005" "J006" "J007" "J008" "J009" "J014" "J016" "J018"
[325] "J021" "J033" "J034" "J035" "J036" "J037" "J038" "J039" "J040"
[334] "K001" "K002" "K020" "K022" "K029" "K031" "K032" "K034" "L015"
[343] "L018" "L021" "L025" "L027" "M006" "M012" "M013" "M014" "M015"
[352] "M017" "M018" "N003" "Q005" "Q012"
```

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YA001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A018+A019+A020+A021+A022+A023+A024+A025+A026+A027+
    A028+A029+A030+A031+A032+A033+A034+A035+A036+A037+A038+A039+A041+A042+
    A043+A044+A045+A047+A048+A049+A050+A051+A052+A053+A054+A055+A056+A057+
    A058+A059+A060+A061+A062+A063+A064+A066+A067+A068+A069+A070+A071+A072+
    A073+A074+A075+A076+A077+A078+A079+A080+A081+A082+A083+A084+A085+A086+
    A087+A088+A089+A090+A091+A092+A093+A094+A095+A096+A097+A098+A099+A100+
    A101+A102+A103+A104+A105+A106+A107+A109+A110+A111+A112+A113+A114+A115+
    A117+A119+A120+A121+A122+A123+A124+A125+A126+A127+A128+A129+A130+A131+
    A132+A134+A135+A137+A138+A139+A141+A142+A143+A144+A145+A146+A147+A148+
    A149+A150+A151+A152+A153+A154+A155+A156+A157+A158+A159+A160+A162+A163+
    A164+A165+A166+A167+A168+A169+A170+A171+A172+A173+A174+A175+A176+A178+
    A179+A180+A181+A182+A183+A184+A185+A186)%>%
  mutate(YA002=A187+A188)%>%
  mutate(YA003=A189+A190+A191+A192+A193+A194)%>%
  mutate(YA004=A195+A197+A201+A202+A204)%>%
  mutate(YA005=0)%>%
  mutate(YA006=A205+A206+A207+A208)%>%
  mutate(YA007=A209)%>%
  mutate(YA008=0)%>%
  mutate(YA009=B004+B005+B007)%>%
  mutate(YA010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
    C014+C015+C016+C017+C018+C019)%>%
  mutate(YA011=C022+C023)%>%
  mutate(YA012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
    D014+D015+D017)%>%
  mutate(YA013=D018+D019+D020+D021+D022)%>%
  mutate(YA014=0)%>%
  mutate(YA015=E015)%>%
  mutate(YA016=E021+E022)%>%
  mutate(YA017=E033)%>%
  mutate(YA018=F001+F002)%>%
  mutate(YA019=F006+F007+F009+F010)%>%
  mutate(YA020=0)%>%
  mutate(YA021=G022+G028+G029+G030+G032+G033)%>%
  mutate(YA022=H001+H002+H003+H004+H005+H006+H007+H008+H009+H010+H012+H013+H014+
    H015+H017+H018+H019+H020+H021+H022+H023+H024+H025+H029+H031+H032+H033+
    H035+H036+H037+H038+H039+H040+H042+H044+H045+H046+H047+H050+H051+H052+
    H053+H054+H055+H057+H059+H060+H061+H062+H063)%>%
  mutate(YA023=I016+I020+I022+I023+I024+I025+I026)%>%
  mutate(YA024=J001+J002+J003+J004+J005+J006+J007+J008+J009)%>%
  mutate(YA025=J014)%>%
  mutate(YA026=J016+J018+J021)%>%
  mutate(YA027=J033+J034+J035+J036+J037+J038)%>%
  mutate(YA028=J039+J040)%>%
  mutate(YA029=0)%>%
  mutate(YA030=0)%>%
  mutate(YA031=0)%>%
  mutate(YA032=K001+K002+K020)%>%
  mutate(YA033=K022+K029)%>%
  mutate(YA034=K031+K032+K034)%>%

```

```
mutate(YA035=L015+L018+L021+L025+L027)%>%
mutate(YA036=M006)%>%
mutate(YA037=0)%>%
mutate(YA038=M012+M013+M014+M015+M017+M018)%>%
mutate(YA039=N003)%>%
mutate(YA040=0)%>%
mutate(YA041=Q012)%>%
mutate(YA042=Q005)%>%
mutate(YA043=0)%>%
mutate(YA044=0)%>%
mutate(YA045=0)
```

Se guarda la tabla de autoconsumo:

```
agregado <- agregado %>%
  mutate(enc=1996) %>%
  mutate(folioviv=substr(folio,5,10)) %>%
  mutate(foliohog=substr(folio,11,11)) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog)) %>%
  mutate(foliohog=foliohog+1)
Autocon1996 <- agregado %>%
  select(enc,folioviv,foliohog,YA001,YA002,YA003,YA004,YA005,YA006,YA007,YA008,YA009,
        YA010,YA011,YA012,YA013,YA014,YA015,YA016,YA017,YA018,YA019,YA020,YA021,
        YA022,YA023,YA024,YA025,YA026,YA027,YA028,YA029,YA030,YA031,YA032,YA033,
        YA034,YA035,YA036,YA037,YA038,YA039,YA040,YA041,YA042,YA043,YA044,YA045)
remove(agregado)
```

F. Tabla de autoconsumo de 1998

```
gasto <- read.dbf("Bases/1998/nomon.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona autoconsumo:

```
gasto <- gasto %>% filter(tipo_gas=="1")
agregado <- gasto %>% group_by(folio,clave) %>%
  summarise(gasto=sum(gas_tri),.groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=folio,values_from=gasto,names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)

[1] "A001" "A002" "A003" "A004" "A005" "A006" "A007" "A008" "A009"
[10] "A010" "A011" "A012" "A013" "A014" "A015" "A016" "A017" "A018"
[19] "A019" "A020" "A021" "A022" "A023" "A024" "A025" "A026" "A027"
[28] "A028" "A029" "A030" "A031" "A032" "A033" "A034" "A035" "A036"
[37] "A037" "A038" "A041" "A042" "A043" "A044" "A045" "A046" "A047"
[46] "A048" "A050" "A051" "A052" "A053" "A054" "A055" "A056" "A057"
[55] "A058" "A059" "A060" "A061" "A063" "A064" "A066" "A067" "A068"
[64] "A069" "A071" "A072" "A073" "A074" "A075" "A076" "A077" "A078"
[73] "A080" "A081" "A082" "A083" "A084" "A085" "A087" "A088" "A089"
[82] "A090" "A091" "A092" "A093" "A094" "A095" "A096" "A097" "A098"
```

[91]	"A099"	"A100"	"A101"	"A102"	"A103"	"A104"	"A105"	"A106"	"A107"
[100]	"A108"	"A109"	"A110"	"A111"	"A112"	"A113"	"A114"	"A115"	"A117"
[109]	"A118"	"A119"	"A120"	"A121"	"A122"	"A123"	"A124"	"A125"	"A126"
[118]	"A127"	"A128"	"A129"	"A130"	"A131"	"A134"	"A137"	"A138"	"A139"
[127]	"A140"	"A143"	"A146"	"A147"	"A149"	"A150"	"A151"	"A152"	"A153"
[136]	"A154"	"A155"	"A157"	"A158"	"A159"	"A160"	"A162"	"A163"	"A164"
[145]	"A165"	"A167"	"A168"	"A171"	"A172"	"A173"	"A176"	"A178"	"A179"
[154]	"A180"	"A181"	"A183"	"A184"	"A185"	"A186"	"A187"	"A188"	"A189"
[163]	"A191"	"A192"	"A193"	"A194"	"A195"	"A197"	"A198"	"A200"	"A204"
[172]	"A205"	"A206"	"A207"	"A208"	"A210"	"B002"	"B004"	"B005"	"B006"
[181]	"B007"	"C001"	"C002"	"C003"	"C004"	"C005"	"C006"	"C007"	"C008"
[190]	"C009"	"C010"	"C011"	"C012"	"C013"	"C014"	"C015"	"C016"	"C017"
[199]	"C018"	"C019"	"C021"	"C022"	"C023"	"D001"	"D002"	"D003"	"D004"
[208]	"D005"	"D006"	"D007"	"D008"	"D009"	"D010"	"D011"	"D012"	"D013"
[217]	"D014"	"D015"	"D017"	"D020"	"D021"	"D022"	"E008"	"E014"	"E015"
[226]	"E020"	"E023"	"E030"	"E033"	"F002"	"F006"	"F007"	"F008"	"F010"
[235]	"F011"	"folio"	"G029"	"G030"	"G031"	"G032"	"G033"	"H001"	"H002"
[244]	"H003"	"H004"	"H005"	"H006"	"H007"	"H008"	"H009"	"H010"	"H012"
[253]	"H013"	"H014"	"H015"	"H017"	"H018"	"H019"	"H020"	"H021"	"H022"
[262]	"H024"	"H029"	"H031"	"H032"	"H033"	"H036"	"H037"	"H038"	"H039"
[271]	"H040"	"H042"	"H043"	"H044"	"H045"	"H046"	"H047"	"H048"	"H050"
[280]	"H051"	"H052"	"H053"	"H054"	"H055"	"H056"	"H062"	"H063"	"I001"
[289]	"I002"	"I003"	"I004"	"I008"	"I009"	"I020"	"I021"	"I022"	"I024"
[298]	"I025"	"J001"	"J002"	"J003"	"J004"	"J005"	"J007"	"J008"	"J009"
[307]	"J023"	"J024"	"J025"	"J033"	"J035"	"J036"	"J038"	"K001"	"K011"
[316]	"K013"	"K015"	"K020"	"K022"	"K024"	"K025"	"K026"	"K027"	"K031"
[325]	"K034"	"K035"	"K037"	"L009"	"L021"	"L022"	"M004"	"M006"	"M018"

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YA001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A018+A019+A020+A021+A022+A023+A024+A025+A026+A027+
    A028+A029+A030+A031+A032+A033+A034+A035+A036+A037+A038+A041+A042+A043+
    A044+A045+A046+A047+A048+A050+A051+A052+A053+A054+A055+A056+A057+A058+
    A059+A060+A061+A063+A064+A066+A067+A068+A069+A071+A072+A073+A074+A075+
    A076+A077+A078+A080+A081+A082+A083+A084+A085+A087+A088+A089+A090+A091+
    A092+A093+A094+A095+A096+A097+A098+A099+A100+A101+A102+A103+A104+A105+
    A106+A107+A108+A109+A110+A111+A112+A113+A114+A115+A117+A118+A119+A120+
    A121+A122+A123+A124+A125+A126+A127+A128+A129+A130+A131+A134+A137+A138+
    A139+A140+A143+A146+A147+A149+A150+A151+A152+A153+A154+A155+A157+A158+
    A159+A160+A162+A163+A164+A165+A167+A168+A171+A172+A173+A176+A178+A179+
    A180+A181+A183+A184+A185+A186)%>%
  mutate(YA002=A187+A188)%>%
  mutate(YA003=A189+A191+A192+A193+A194)%>%
  mutate(YA004=A195+A197+A198+A200+A204)%>%
  mutate(YA005=0)%>%
  mutate(YA006=A205+A206+A207+A208)%>%
  mutate(YA007=A210)%>%
  mutate(YA008=0)%>%
  mutate(YA009=B002+B004+B005+B006+B007)%>%
  mutate(YA010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
    C014+C015+C016+C017+C018+C019)%>%
  mutate(YA011=C021+C022+C023)%>%
  mutate(YA012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+

```

```

      D014+D015+D017)%>%
mutate(YA013=D020+D021+D022)%>%
mutate(YA014=E008)%>%
mutate(YA015=E014+E015+E020)%>%
mutate(YA016=E023)%>%
mutate(YA017=E030+E033)%>%
mutate(YA018=F002+F006)%>%
mutate(YA019=F007+F008+F010+F011)%>%
mutate(YA020=0)%>%
mutate(YA021=G029+G030+G031+G032+G033)%>%
mutate(YA022=H001+H002+H003+H004+H005+H006+H007+H008+H009+H010+H012+H013+H014+
      H015+H017+H018+H019+H020+H021+H022+H024+H029+H031+H032+H033+H036+H037+
      H038+H039+H040+H042+H043+H044+H045+H046+H047+H048+H050+H051+H052+H053+
      H054+H055+H056+H062+H063)%>%
mutate(YA023=I001+I002+I003+I004+I008+I009+I020+I021+I022+I024+I025)%>%
mutate(YA024=J001+J002+J003+J004+J005+J007+J008+J009)%>%
mutate(YA025=0)%>%
mutate(YA026=J023+J024+J025)%>%
mutate(YA027=J033+J035+J036+J038)%>%
mutate(YA028=0)%>%
mutate(YA029=0)%>%
mutate(YA030=0)%>%
mutate(YA031=0)%>%
mutate(YA032=K001+K011+K013+K015+K020+K022)%>%
mutate(YA033=K024+K025+K026+K027+K031)%>%
mutate(YA034=K034+K035+K037)%>%
mutate(YA035=L009+L021+L022)%>%
mutate(YA036=M004+M006)%>%
mutate(YA037=0)%>%
mutate(YA038=M018)%>%
mutate(YA039=0)%>%
mutate(YA040=0)%>%
mutate(YA041=0)%>%
mutate(YA042=0)%>%
mutate(YA043=0)%>%
mutate(YA044=0)%>%
mutate(YA045=0)

```

Se guarda la tabla de autoconsumo:

```

agregado <- agregado %>%
  mutate(enc=1998) %>%
  mutate(folioviv=substr(folio,5,10)) %>%
  mutate(foliohog=substr(folio,11,11)) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog)) %>%
  mutate(foliohog=foliohog+1)
Autocon1998 <- agregado %>%
  select(enc, folioviv, foliohog, YA001, YA002, YA003, YA004, YA005, YA006, YA007, YA008, YA009,
        YA010, YA011, YA012, YA013, YA014, YA015, YA016, YA017, YA018, YA019, YA020, YA021,
        YA022, YA023, YA024, YA025, YA026, YA027, YA028, YA029, YA030, YA031, YA032, YA033,
        YA034, YA035, YA036, YA037, YA038, YA039, YA040, YA041, YA042, YA043, YA044, YA045)
remove(agregado)

```

G. Tabla de autoconsumo de 2000

```
gasto <- read.dbf("Bases/2000/nomon.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona autoconsumo:

```
gasto <- gasto %>% filter(tipo_gas=="1")
agregado <- gasto %>% group_by(folio, clave) %>%
  summarise(gasto=sum(gas_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=c(folio), values_from=gasto, names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)
```

```
[1] "A001" "A002" "A003" "A004" "A005" "A006" "A007" "A008" "A009"
[10] "A010" "A011" "A012" "A013" "A014" "A015" "A016" "A017" "A018"
[19] "A019" "A020" "A021" "A022" "A023" "A024" "A027" "A028" "A029"
[28] "A030" "A031" "A032" "A033" "A034" "A035" "A036" "A037" "A038"
[37] "A041" "A042" "A043" "A044" "A045" "A046" "A047" "A048" "A049"
[46] "A050" "A051" "A052" "A053" "A054" "A055" "A056" "A057" "A058"
[55] "A059" "A060" "A061" "A062" "A063" "A064" "A066" "A067" "A068"
[64] "A069" "A070" "A071" "A072" "A073" "A074" "A075" "A076" "A077"
[73] "A078" "A080" "A081" "A082" "A083" "A084" "A085" "A086" "A087"
[82] "A088" "A089" "A090" "A091" "A092" "A093" "A094" "A095" "A096"
[91] "A097" "A098" "A099" "A100" "A101" "A102" "A103" "A104" "A105"
[100] "A106" "A107" "A109" "A111" "A112" "A113" "A114" "A115" "A117"
[109] "A118" "A119" "A120" "A121" "A122" "A123" "A124" "A125" "A126"
[118] "A127" "A128" "A129" "A130" "A131" "A134" "A135" "A137" "A138"
[127] "A139" "A140" "A141" "A142" "A143" "A144" "A145" "A147" "A149"
[136] "A150" "A151" "A152" "A153" "A154" "A155" "A156" "A157" "A158"
[145] "A159" "A160" "A161" "A162" "A163" "A164" "A165" "A167" "A168"
[154] "A169" "A171" "A172" "A173" "A175" "A176" "A177" "A178" "A179"
[163] "A180" "A181" "A182" "A183" "A184" "A185" "A186" "A187" "A188"
[172] "A189" "A190" "A191" "A192" "A193" "A194" "A195" "A197" "A201"
[181] "A205" "A206" "A207" "A208" "A209" "A211" "B002" "B004" "B005"
[190] "B006" "B007" "C001" "C002" "C003" "C004" "C005" "C006" "C007"
[199] "C008" "C009" "C010" "C011" "C012" "C013" "C014" "C015" "C016"
[208] "C017" "C018" "C019" "C020" "C021" "C022" "D001" "D002" "D003"
[217] "D004" "D005" "D006" "D007" "D008" "D009" "D010" "D011" "D012"
[226] "D013" "D014" "D017" "D018" "D019" "D020" "D021" "D022" "E015"
[235] "E017" "E024" "E030" "E033" "F002" "F007" "F008" "F010" "F011"
[244] "folio" "G028" "G029" "G030" "G032" "G033" "H001" "H002" "H003"
[253] "H004" "H005" "H006" "H007" "H008" "H009" "H012" "H013" "H014"
[262] "H015" "H017" "H018" "H019" "H020" "H021" "H022" "H023" "H024"
[271] "H026" "H029" "H031" "H032" "H036" "H046" "H047" "H050" "H052"
[280] "H053" "H054" "H055" "H057" "H059" "H060" "H062" "H063" "I001"
[289] "I002" "I003" "I006" "I009" "I019" "I021" "I023" "I024" "J001"
[298] "J002" "J004" "J008" "J009" "J033" "J035" "J036" "J038" "J039"
[307] "K009" "K011" "K026" "K029" "K032" "K034" "K035" "K037" "L003"
[316] "L015" "L021" "M014" "M017" "M018" "N002" "Q005"
```


Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YA001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A018+A019+A020+A021+A022+A023+A024+A027+A028+A029+
    A030+A031+A032+A033+A034+A035+A036+A037+A038+A041+A042+A043+A044+A045+
    A046+A047+A048+A049+A050+A051+A052+A053+A054+A055+A056+A057+A058+A059+
    A060+A061+A062+A063+A064+A066+A067+A068+A069+A070+A071+A072+A073+A074+
    A075+A076+A077+A078+A080+A081+A082+A083+A084+A085+A086+A087+A088+A089+
    A090+A091+A092+A093+A094+A095+A096+A097+A098+A099+A100+A101+A102+A103+
    A104+A105+A106+A107+A109+A111+A112+A113+A114+A115+A117+A118+A119+A120+
    A121+A122+A123+A124+A125+A126+A127+A128+A129+A130+A131+A134+A135+A137+
    A138+A139+A140+A141+A142+A143+A144+A145+A147+A149+A150+A151+A152+A153+
    A154+A155+A156+A157+A158+A159+A160+A161+A162+A163+A164+A165+A167+A168+
    A169+A171+A172+A173+A175+A176+A177+A178+A179+A180+A181+A182+A183+A184+
    A185+A186)%>%
  mutate(YA002=A187+A188)%>%
  mutate(YA003=A189+A190+A191+A192+A193+A194)%>%
  mutate(YA004=A195+A197+A201)%>%
  mutate(YA005=A205)%>%
  mutate(YA006=A206+A207+A208+A209)%>%
  mutate(YA007=A211)%>%
  mutate(YA008=0)%>%
  mutate(YA009=B002+B004+B005+B006+B007)%>%
  mutate(YA010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
    C014+C015+C016+C017+C018+C019)%>%
  mutate(YA011=C020+C021+C022)%>%
  mutate(YA012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
    D014+D017)%>%
  mutate(YA013=D018+D019+D020+D021+D022)%>%
  mutate(YA014=0)%>%
  mutate(YA015=E015+E017)%>%
  mutate(YA016=E024)%>%
  mutate(YA017=E030+E033)%>%
  mutate(YA018=F002)%>%
  mutate(YA019=F007+F008+F010+F011)%>%
  mutate(YA020=0)%>%
  mutate(YA021=G028+G029+G030+G032+G033)%>%
  mutate(YA022=H001+H002+H003+H004+H005+H006+H007+H008+H009+H012+H013+H014+H015+
    H017+H018+H019+H020+H021+H022+H023+H024+H026+H029+H031+H032+H036+H046+
    H047+H050+H052+H053+H054+H055+H057+H059+H060+H062+H063)%>%
  mutate(YA023=I001+I002+I003+I006+I009+I019+I021+I023+I024)%>%
  mutate(YA024=J001+J002+J004+J008+J009)%>%
  mutate(YA025=0)%>%
  mutate(YA026=0)%>%
  mutate(YA027=J033+J035+J036+J038)%>%
  mutate(YA028=J039)%>%
  mutate(YA029=0)%>%
  mutate(YA030=0)%>%
  mutate(YA031=0)%>%
  mutate(YA032=K009+K011)%>%
  mutate(YA033=K026+K029+K032)%>%
  mutate(YA034=K034+K035+K037)%>%
  mutate(YA035=L003+L015+L021)%>%

```



```
mutate(YA036=0)%>%
mutate(YA037=0)%>%
mutate(YA038=M014+M017+M018)%>%
mutate(YA039=N002)%>%
mutate(YA040=0)%>%
mutate(YA041=0)%>%
mutate(YA042=Q005)%>%
mutate(YA043=0)%>%
mutate(YA044=0)%>%
mutate(YA045=0)
```

Se guarda la tabla de autoconsumo:

```
agregado <- agregado %>%
  mutate(enc=2000) %>%
  mutate(folioviv=substr(folio,5,11)) %>%
  mutate(foliohog=substr(folio,12,12)) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog)) %>%
  mutate(foliohog=foliohog+1)
Autocon2000 <- agregado %>%
  select(enc,folioviv,foliohog,YA001,YA002,YA003,YA004,YA005,YA006,YA007,YA008,YA009,
        YA010,YA011,YA012,YA013,YA014,YA015,YA016,YA017,YA018,YA019,YA020,YA021,
        YA022,YA023,YA024,YA025,YA026,YA027,YA028,YA029,YA030,YA031,YA032,YA033,
        YA034,YA035,YA036,YA037,YA038,YA039,YA040,YA041,YA042,YA043,YA044,YA045)
remove(agregado)
```

H. Tabla de autoconsumo de 2002

```
gasto <- read.dbf("Bases/2002/nomon.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona autoconsumo:

```
gasto <- gasto %>% filter(tipo_gas=="1")
agregado <- gasto %>% group_by(folio,clave) %>%
  summarise(gasto=sum(gas_tri),.groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=c(folio),values_from=gasto,names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)

[1] "A001" "A002" "A003" "A004" "A005" "A006" "A007" "A008" "A009"
[10] "A010" "A011" "A012" "A013" "A014" "A015" "A016" "A017" "A018"
[19] "A019" "A020" "A021" "A022" "A023" "A024" "A025" "A026" "A029"
[28] "A030" "A031" "A032" "A033" "A034" "A035" "A036" "A038" "A039"
[37] "A040" "A041" "A042" "A043" "A044" "A045" "A046" "A048" "A049"
[46] "A050" "A051" "A052" "A053" "A054" "A055" "A056" "A057" "A058"
[55] "A059" "A060" "A062" "A063" "A064" "A065" "A066" "A067" "A068"
[64] "A069" "A071" "A072" "A073" "A074" "A076" "A077" "A078" "A079"
[73] "A080" "A081" "A082" "A083" "A084" "A085" "A086" "A087" "A088"
[82] "A089" "A090" "A091" "A092" "A093" "A094" "A095" "A097" "A098"
[91] "A099" "A100" "A101" "A102" "A103" "A104" "A105" "A106" "A107"
```

[100]	"A108"	"A109"	"A110"	"A111"	"A112"	"A113"	"A114"	"A115"	"A116"
[109]	"A117"	"A118"	"A119"	"A120"	"A121"	"A122"	"A123"	"A125"	"A126"
[118]	"A127"	"A129"	"A130"	"A131"	"A132"	"A133"	"A134"	"A135"	"A136"
[127]	"A137"	"A138"	"A139"	"A140"	"A141"	"A142"	"A143"	"A144"	"A145"
[136]	"A148"	"A149"	"A150"	"A151"	"A152"	"A154"	"A155"	"A156"	"A157"
[145]	"A158"	"A159"	"A160"	"A161"	"A162"	"A163"	"A164"	"A165"	"A166"
[154]	"A167"	"A168"	"A169"	"A171"	"A172"	"A173"	"A174"	"A175"	"A176"
[163]	"A177"	"A178"	"A179"	"A181"	"A182"	"A183"	"A184"	"A185"	"A186"
[172]	"A187"	"A188"	"A189"	"A190"	"A191"	"A192"	"A193"	"A194"	"A195"
[181]	"A196"	"A197"	"A198"	"A199"	"A200"	"A201"	"A202"	"A204"	"A205"
[190]	"A206"	"A207"	"A208"	"A210"	"A211"	"A212"	"A213"	"A214"	"A215"
[199]	"A216"	"A217"	"A218"	"A219"	"A220"	"A224"	"A230"	"A232"	"A235"
[208]	"A236"	"A237"	"A238"	"A240"	"B002"	"B004"	"B005"	"B006"	"B007"
[217]	"C001"	"C002"	"C003"	"C004"	"C005"	"C006"	"C007"	"C008"	"C009"
[226]	"C010"	"C011"	"C012"	"C013"	"C014"	"C015"	"C016"	"C017"	"C018"
[235]	"C019"	"C021"	"C022"	"C023"	"C024"	"D001"	"D002"	"D003"	"D004"
[244]	"D005"	"D006"	"D007"	"D008"	"D009"	"D010"	"D011"	"D012"	"D013"
[253]	"D014"	"D015"	"D016"	"D018"	"D019"	"D020"	"D022"	"D023"	"D024"
[262]	"E002"	"E003"	"E004"	"E005"	"E006"	"E015"	"E016"	"E019"	"E021"
[271]	"E022"	"E023"	"E024"	"E025"	"E033"	"E035"	"F001"	"F002"	"F003"
[280]	"F005"	"F006"	"F008"	"F010"	"F011"	"F012"	"F014"	"F015"	"folio"
[289]	"G041"	"G043"	"G044"	"G046"	"H001"	"H002"	"H003"	"H004"	"H005"
[298]	"H006"	"H007"	"H008"	"H009"	"H010"	"H011"	"H012"	"H013"	"H014"
[307]	"H015"	"H017"	"H018"	"H019"	"H020"	"H023"	"H025"	"H026"	"H027"
[316]	"H028"	"H032"	"H033"	"H035"	"H036"	"H039"	"H040"	"H041"	"H042"
[325]	"H043"	"H045"	"H046"	"H047"	"H050"	"H051"	"H052"	"H053"	"H057"
[334]	"H059"	"H060"	"H061"	"H066"	"H067"	"H068"	"H069"	"H071"	"H072"
[343]	"H073"	"H074"	"H075"	"H077"	"H078"	"H079"	"H081"	"H082"	"H083"
[352]	"H084"	"H085"	"H086"	"H087"	"H089"	"H090"	"H091"	"H093"	"H095"
[361]	"H096"	"H097"	"H100"	"H106"	"H108"	"H112"	"H114"	"H115"	"H116"
[370]	"H118"	"H119"	"H120"	"H121"	"H122"	"H124"	"H126"	"H127"	"H130"
[379]	"H131"	"H132"	"H133"	"H134"	"H136"	"H137"	"H139"	"H140"	"H141"
[388]	"I002"	"I003"	"I004"	"I007"	"I016"	"I017"	"I019"	"I020"	"I021"
[397]	"I023"	"I024"	"I025"	"I026"	"J001"	"J002"	"J004"	"J005"	"J006"
[406]	"J009"	"J010"	"J011"	"J012"	"J014"	"J021"	"J022"	"J023"	"J024"
[415]	"J025"	"J026"	"J027"	"J031"	"J033"	"J034"	"J038"	"J044"	"J048"
[424]	"J049"	"J052"	"J053"	"J054"	"J055"	"J056"	"J057"	"J059"	"J062"
[433]	"J063"	"J065"	"J066"	"J067"	"J068"	"J069"	"K001"	"K004"	"K005"
[442]	"K010"	"K012"	"K019"	"K028"	"K031"	"K037"	"K038"	"K039"	"K040"
[451]	"K042"	"K044"	"L005"	"L006"	"L007"	"L011"	"L016"	"L019"	"L020"
[460]	"L023"	"L028"	"M001"	"M006"	"M014"	"M016"	"M017"	"M018"	"N001"
[469]	"N003"								

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YA001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A018+A019+A020+A021+A022+A023+A024+A025+A026+A029+
    A030+A031+A032+A033+A034+A035+A036+A038+A039+A040+A041+A042+A043+A044+
    A045+A046+A048+A049+A050+A051+A052+A053+A054+A055+A056+A057+A058+A059+
    A060+A062+A063+A064+A065+A066+A067+A068+A069+A071+A072+A073+A074+A076+
    A077+A078+A079+A080+A081+A082+A083+A084+A085+A086+A087+A088+A089+A090+
    A091+A092+A093+A094+A095+A097+A098+A099+A100+A101+A102+A103+A104+A105+
    A106+A107+A108+A109+A110+A111+A112+A113+A114+A115+A116+A117+A118+A119+
    A120+A121+A122+A123+A125+A126+A127+A129+A130+A131+A132+A133+A134+A135+

```

```

A136+A137+A138+A139+A140+A141+A142+A143+A144+A145+A148+A149+A150+A151+
A152+A154+A155+A156+A157+A158+A159+A160+A161+A162+A163+A164+A165+A166+
A167+A168+A169+A171+A172+A173+A174+A175+A176+A177+A178+A179+A181+A182+
A183+A184+A185+A186+A187+A188+A189+A190+A191+A192+A193+A194+A195+A196+
A197+A198+A199+A200+A201+A202+A204+A205+A206+A207+A208)%>%
mutate(YA002=A210+A211)%>%
mutate(YA003=A212+A213+A214+A215+A216+A217+A218)%>%
mutate(YA004=A219+A220+A224+A230+A232)%>%
mutate(YA005=0)%>%
mutate(YA006=A235+A236+A237+A238)%>%
mutate(YA007=A240)%>%
mutate(YA008=0)%>%
mutate(YA009=B002+B004+B005+B006+B007)%>%
mutate(YA010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
C014+C015+C016+C017+C018+C019)%>%
mutate(YA011=C021+C022+C023+C024)%>%
mutate(YA012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
D014+D015+D016+D018+D019)%>%
mutate(YA013=D020+D022+D023+D024)%>%
mutate(YA014=E002+E003+E004+E005+E006)%>%
mutate(YA015=E015+E016+E019)%>%
mutate(YA016=E021+E022+E023+E024+E025)%>%
mutate(YA017=E033+E035)%>%
mutate(YA018=F001+F002+F003+F005+F006+F008)%>%
mutate(YA019=F010+F011+F012+F014+F015)%>%
mutate(YA020=0)%>%
mutate(YA021=G041+G043+G044+G046)%>%
mutate(YA022=H001+H002+H003+H004+H005+H006+H007+H008+H009+H010+H011+H012+H013+
H014+H015+H017+H018+H019+H020+H023+H025+H026+H027+H028+H032+H033+H035+
H036+H039+H040+H041+H042+H043+H045+H046+H047+H050+H051+H052+H053+H057+
H059+H060+H061+H066+H067+H068+H069+H071+H072+H073+H074+H075+H077+H078+
H079+H081+H082+H083+H084+H085+H086+H087+H089+H090+H091+H093+H095+H096+
H097+H100+H106+H108+H112+H114+H115+H116+H118+H119+H120+H121+H122+H124+
H126+H127+H130+H131+H132+H133+H134+H136+H137+H139+H140+H141)%>%
mutate(YA023=I002+I003+I004+I007+I016+I017+I019+I020+I021+I023+I024+I025+I026)%>%
mutate(YA024=J001+J002+J004+J005+J006+J009+J010+J011+J012+J014+J021+J022+J023+
J024+J025+J026+J027)%>%
mutate(YA025=J031+J033+J034+J038)%>%
mutate(YA026=J044)%>%
mutate(YA027=J048+J049+J052+J053+J054+J055+J056+J057+J059+J062+J063+J065+J066+
J067+J068+J069)%>%
mutate(YA028=0)%>%
mutate(YA029=0)%>%
mutate(YA030=0)%>%
mutate(YA031=0)%>%
mutate(YA032=K001+K004+K005+K010+K012+K019)%>%
mutate(YA033=K028+K031)%>%
mutate(YA034=K037+K038+K039+K040+K042+K044)%>%
mutate(YA035=L005+L006+L007+L011+L016+L019+L020+L023+L028)%>%
mutate(YA036=M001+M006)%>%
mutate(YA037=0)%>%
mutate(YA038=M014+M016+M017+M018)%>%
mutate(YA039=N001+N003)%>%
mutate(YA040=0)%>%
mutate(YA041=0)%>%

```

```
mutate(YA042=0)%>%
mutate(YA043=0)%>%
mutate(YA044=0)%>%
mutate(YA045=0)
```

Se guarda la tabla de autoconsumo:

```
agregado <- agregado %>%
  mutate(enc=2002) %>%
  mutate(folioviv=substr(folio,5,10)) %>%
  mutate(foliohog=substr(folio,11,11)) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog)) %>%
  mutate(foliohog=foliohog+1)
Autocon2002 <- agregado %>%
  select(enc, folioviv, foliohog, YA001, YA002, YA003, YA004, YA005, YA006, YA007, YA008, YA009,
        YA010, YA011, YA012, YA013, YA014, YA015, YA016, YA017, YA018, YA019, YA020, YA021,
        YA022, YA023, YA024, YA025, YA026, YA027, YA028, YA029, YA030, YA031, YA032, YA033,
        YA034, YA035, YA036, YA037, YA038, YA039, YA040, YA041, YA042, YA043, YA044, YA045)
remove(agregado)
```

I. Tabla de autoconsumo de 2004

```
gasto <- read.dbf("Bases/2004/nomon.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona autoconsumo:

```
gasto <- gasto %>% filter(tipo_gas=="1")
agregado <- gasto %>% group_by(folio, clave) %>%
  summarise(gasto=sum(gas_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=c(folio), values_from=gasto, names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)

[1] "A001" "A002" "A003" "A004" "A005" "A006" "A007" "A008" "A009"
[10] "A010" "A011" "A012" "A013" "A014" "A015" "A016" "A017" "A018"
[19] "A019" "A020" "A021" "A022" "A023" "A024" "A025" "A026" "A027"
[28] "A028" "A029" "A030" "A032" "A033" "A034" "A035" "A036" "A037"
[37] "A038" "A039" "A040" "A041" "A042" "A043" "A044" "A046" "A047"
[46] "A048" "A049" "A050" "A052" "A053" "A054" "A055" "A056" "A057"
[55] "A058" "A059" "A060" "A061" "A062" "A063" "A064" "A065" "A066"
[64] "A067" "A068" "A070" "A071" "A072" "A073" "A074" "A075" "A076"
[73] "A077" "A078" "A079" "A080" "A081" "A082" "A083" "A084" "A085"
[82] "A086" "A087" "A088" "A089" "A090" "A091" "A092" "A093" "A094"
[91] "A095" "A096" "A097" "A099" "A100" "A101" "A102" "A103" "A104"
[100] "A105" "A106" "A107" "A108" "A109" "A110" "A111" "A112" "A113"
[109] "A114" "A115" "A116" "A117" "A118" "A119" "A120" "A121" "A122"
[118] "A123" "A124" "A126" "A127" "A128" "A129" "A130" "A131" "A132"
[127] "A133" "A134" "A135" "A136" "A137" "A138" "A139" "A141" "A142"
[136] "A143" "A145" "A146" "A148" "A149" "A151" "A152" "A153" "A154"
[145] "A155" "A156" "A157" "A158" "A159" "A160" "A161" "A162" "A163"
```

[154]	"A164"	"A165"	"A166"	"A167"	"A168"	"A169"	"A170"	"A171"	"A172"
[163]	"A173"	"A174"	"A175"	"A176"	"A177"	"A178"	"A179"	"A180"	"A181"
[172]	"A182"	"A183"	"A184"	"A185"	"A186"	"A187"	"A188"	"A189"	"A190"
[181]	"A191"	"A192"	"A193"	"A194"	"A195"	"A196"	"A197"	"A198"	"A199"
[190]	"A200"	"A201"	"A202"	"A203"	"A204"	"A205"	"A206"	"A207"	"A208"
[199]	"A209"	"A210"	"A211"	"A212"	"A213"	"A214"	"A215"	"A216"	"A217"
[208]	"A218"	"A219"	"A220"	"A225"	"A227"	"A235"	"A236"	"A237"	"A238"
[217]	"A239"	"A240"	"A241"	"B002"	"B004"	"B005"	"B007"	"C001"	"C002"
[226]	"C003"	"C004"	"C005"	"C006"	"C007"	"C008"	"C009"	"C010"	"C011"
[235]	"C012"	"C013"	"C014"	"C015"	"C016"	"C017"	"C018"	"C019"	"C021"
[244]	"D001"	"D002"	"D003"	"D004"	"D005"	"D006"	"D007"	"D008"	"D009"
[253]	"D010"	"D011"	"D012"	"D013"	"D014"	"D015"	"D016"	"D019"	"D020"
[262]	"D021"	"D022"	"D023"	"D024"	"E001"	"E002"	"E003"	"E004"	"E005"
[271]	"E009"	"E014"	"E015"	"E016"	"E018"	"E021"	"E023"	"E024"	"E027"
[280]	"E032"	"E033"	"F002"	"F003"	"F005"	"F006"	"F008"	"F011"	"F012"
[289]	"F013"	"F014"	"folio"	"G009"	"G023"	"G025"	"G026"	"G027"	"G028"
[298]	"G029"	"H001"	"H002"	"H003"	"H004"	"H005"	"H006"	"H007"	"H008"
[307]	"H009"	"H010"	"H011"	"H012"	"H016"	"H017"	"H018"	"H019"	"H021"
[316]	"H023"	"H025"	"H028"	"H029"	"H030"	"H031"	"H032"	"H033"	"H034"
[325]	"H037"	"H038"	"H040"	"H042"	"H043"	"H044"	"H045"	"H046"	"H047"
[334]	"H048"	"H049"	"H051"	"H052"	"H054"	"H055"	"H057"	"H058"	"H059"
[343]	"H060"	"H061"	"H062"	"H063"	"H064"	"H065"	"H066"	"H067"	"H068"
[352]	"H069"	"H070"	"H071"	"H072"	"H073"	"H075"	"H076"	"H078"	"H079"
[361]	"H082"	"H083"	"H084"	"H085"	"H088"	"H090"	"H091"	"H094"	"H096"
[370]	"H097"	"H098"	"H100"	"H101"	"H102"	"H103"	"H104"	"H106"	"H107"
[379]	"H108"	"H109"	"H110"	"H112"	"H113"	"H114"	"H116"	"H117"	"I001"
[388]	"I002"	"I004"	"I005"	"I007"	"I009"	"I011"	"I013"	"I016"	"I017"
[397]	"I019"	"I020"	"I021"	"I022"	"I023"	"I024"	"I025"	"J001"	"J004"
[406]	"J010"	"J016"	"J017"	"J018"	"J020"	"J021"	"J022"	"J024"	"J025"
[415]	"J026"	"J027"	"J028"	"J030"	"J031"	"J032"	"J033"	"J035"	"J038"
[424]	"J044"	"J045"	"J048"	"J049"	"J050"	"J053"	"J054"	"J055"	"J056"
[433]	"J057"	"J060"	"J061"	"J063"	"J064"	"J065"	"K001"	"K004"	"K010"
[442]	"K014"	"K019"	"K020"	"K025"	"K026"	"K027"	"K028"	"K030"	"K035"
[451]	"K037"	"K038"	"K039"	"K040"	"K042"	"L002"	"L005"	"L006"	"L011"
[460]	"L019"	"L020"	"L023"	"L026"	"L028"	"L029"	"M008"	"M010"	"M012"
[469]	"M013"	"M014"	"M015"	"M017"	"M018"	"N001"			

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YA001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A018+A019+A020+A021+A022+A023+A024+A025+A026+A027+
    A028+A029+A030+A032+A033+A034+A035+A036+A037+A038+A039+A040+A041+A042+
    A043+A044+A046+A047+A048+A049+A050+A052+A053+A054+A055+A056+A057+A058+
    A059+A060+A061+A062+A063+A064+A065+A066+A067+A068+A070+A071+A072+A073+
    A074+A075+A076+A077+A078+A079+A080+A081+A082+A083+A084+A085+A086+A087+
    A088+A089+A090+A091+A092+A093+A094+A095+A096+A097+A099+A100+A101+A102+
    A103+A104+A105+A106+A107+A108+A109+A110+A111+A112+A113+A114+A115+A116+
    A117+A118+A119+A120+A121+A122+A123+A124+A126+A127+A128+A129+A130+A131+
    A132+A133+A134+A135+A136+A137+A138+A139+A141+A142+A143+A145+A146+A148+
    A149+A151+A152+A153+A154+A155+A156+A157+A158+A159+A160+A161+A162+A163+
    A164+A165+A166+A167+A168+A169+A170+A171+A172+A173+A174+A175+A176+A177+
    A178+A179+A180+A181+A182+A183+A184+A185+A186+A187+A188+A189+A190+A191+
    A192+A193+A194+A195+A196+A197+A198+A199+A200+A201+A202+A203+A204+A205+
    A206+A207+A208)%>%

```

```

mutate(YA002=A210+A211)%>%
mutate(YA003=A212+A213+A214+A215+A216+A217+A218)%>%
mutate(YA004=A219+A220+A225+A227)%>%
mutate(YA005=A209)%>%
mutate(YA006=A235+A236+A237+A238+A239)%>%
mutate(YA007=A240+A241)%>%
mutate(YA008=0)%>%
mutate(YA009=B002+B004+B005+B007)%>%
mutate(YA010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
      C014+C015+C016+C017+C018+C019)%>%
mutate(YA011=C021)%>%
mutate(YA012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
      D014+D015+D016+D019)%>%
mutate(YA013=D020+D021+D022+D023+D024)%>%
mutate(YA014=E001+E002+E003+E004+E005+E009)%>%
mutate(YA015=E014+E015+E016+E018)%>%
mutate(YA016=E021+E023+E024)%>%
mutate(YA017=E027+E032+E033)%>%
mutate(YA018=F002+F003+F005+F006+F008)%>%
mutate(YA019=F011+F012+F013+F014)%>%
mutate(YA020=0)%>%
mutate(YA021=G009+G023+G025+G026+G027+G028+G029)%>%
mutate(YA022=H001+H002+H003+H004+H005+H006+H007+H008+H009+H010+H011+H012+H016+
      H017+H018+H019+H021+H023+H025+H028+H029+H030+H031+H032+H033+H034+H037+
      H038+H040+H042+H043+H044+H045+H046+H047+H048+H049+H051+H052+H054+H055+
      H057+H058+H059+H060+H061+H062+H063+H064+H065+H066+H067+H068+H069+H070+
      H071+H072+H073+H075+H076+H078+H079+H082+H083+H084+H085+H088+H090+H091+
      H094+H096+H097+H098+H100+H101+H102+H103+H104+H106+H107+H108+H109+H110+
      H112+H113+H114+H116+H117)%>%
mutate(YA023=I001+I002+I004+I005+I007+I009+I011+I013+I016+I017+I019+I020+I021+
      I022+I023+I024+I025)%>%
mutate(YA024=J016+J017+J018+J020+J021+J022+J024+J025+J026+J027+J028+J030+J031+
      J032+J033+J035+J038+J063+J064)%>%
mutate(YA025=0)%>%
mutate(YA026=J001+J004+J010)%>%
mutate(YA027=J044+J045+J048+J049+J050+J053+J054+J055+J056+J057+J060+J061)%>%
mutate(YA028=J065)%>%
mutate(YA029=0)%>%
mutate(YA030=0)%>%
mutate(YA031=0)%>%
mutate(YA032=K001+K004+K010+K014+K019+K020)%>%
mutate(YA033=K025+K026+K027+K028+K030+K035)%>%
mutate(YA034=K037+K038+K039+K040+K042)%>%
mutate(YA035=L002+L005+L006+L011+L019+L020+L023+L026+L028+L029)%>%
mutate(YA036=0)%>%
mutate(YA037=M008+M010)%>%
mutate(YA038=M012+M013+M014+M015+M017+M018)%>%
mutate(YA039=N001)%>%
mutate(YA040=0)%>%
mutate(YA041=0)%>%
mutate(YA042=0)%>%
mutate(YA043=0)%>%
mutate(YA044=0)%>%
mutate(YA045=0)

```

Se guarda la tabla de autoconsumo:

```
agregado <- agregado %>%
  mutate(enc=2004) %>%
  mutate(folioviv=substr(folio,5,10)) %>%
  mutate(foliohog=substr(folio,11,11)) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog)) %>%
  mutate(foliohog=foliohog+1)
Autocon2004 <- agregado %>%
  select(enc, folioviv, foliohog, YA001, YA002, YA003, YA004, YA005, YA006, YA007, YA008, YA009,
        YA010, YA011, YA012, YA013, YA014, YA015, YA016, YA017, YA018, YA019, YA020, YA021,
        YA022, YA023, YA024, YA025, YA026, YA027, YA028, YA029, YA030, YA031, YA032, YA033,
        YA034, YA035, YA036, YA037, YA038, YA039, YA040, YA041, YA042, YA043, YA044, YA045)
remove(agregado)
```

J. Tabla de autoconsumo de 2005

```
gasto <- read.dbf("Bases/2005/nomon.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona autoconsumo:

```
gasto <- gasto %>% filter(tipo_gas=="1")
agregado <- gasto %>% group_by(folio, clave) %>%
  summarise(gasto=sum(gas_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=c(folio), values_from=gasto, names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)

[1] "A001" "A002" "A003" "A004" "A005" "A006" "A007" "A008" "A009"
[10] "A010" "A011" "A012" "A013" "A014" "A015" "A016" "A017" "A019"
[19] "A020" "A021" "A022" "A023" "A024" "A025" "A026" "A027" "A028"
[28] "A029" "A030" "A032" "A033" "A035" "A036" "A037" "A038" "A039"
[37] "A040" "A041" "A042" "A043" "A044" "A045" "A046" "A047" "A049"
[46] "A050" "A051" "A052" "A053" "A054" "A055" "A056" "A057" "A058"
[55] "A059" "A060" "A064" "A065" "A066" "A068" "A069" "A070" "A071"
[64] "A072" "A073" "A074" "A075" "A077" "A078" "A079" "A080" "A081"
[73] "A082" "A083" "A084" "A085" "A086" "A087" "A088" "A089" "A090"
[82] "A091" "A092" "A094" "A095" "A096" "A099" "A100" "A101" "A102"
[91] "A103" "A104" "A105" "A106" "A107" "A108" "A109" "A110" "A111"
[100] "A112" "A113" "A114" "A115" "A116" "A117" "A118" "A119" "A120"
[109] "A121" "A122" "A123" "A124" "A126" "A127" "A128" "A129" "A130"
[118] "A131" "A132" "A133" "A134" "A135" "A136" "A137" "A138" "A139"
[127] "A140" "A141" "A142" "A143" "A144" "A145" "A146" "A149" "A150"
[136] "A151" "A152" "A153" "A154" "A155" "A156" "A157" "A158" "A159"
[145] "A160" "A161" "A162" "A163" "A164" "A165" "A166" "A167" "A168"
[154] "A170" "A172" "A173" "A174" "A175" "A176" "A177" "A178" "A179"
[163] "A180" "A181" "A182" "A183" "A184" "A185" "A186" "A187" "A188"
[172] "A189" "A191" "A192" "A193" "A194" "A195" "A196" "A197" "A198"
[181] "A199" "A200" "A202" "A203" "A204" "A205" "A206" "A207" "A208"
[190] "A209" "A210" "A211" "A212" "A213" "A214" "A215" "A216" "A217"
```


[199]	"A218"	"A219"	"A220"	"A224"	"A225"	"A226"	"A231"	"A235"	"A236"
[208]	"A237"	"A238"	"A240"	"B004"	"B005"	"B006"	"B007"	"C001"	"C002"
[217]	"C003"	"C004"	"C005"	"C006"	"C007"	"C008"	"C009"	"C010"	"C011"
[226]	"C012"	"C013"	"C014"	"C015"	"C016"	"C018"	"C021"	"C022"	"C023"
[235]	"C024"	"D001"	"D002"	"D003"	"D004"	"D005"	"D006"	"D007"	"D008"
[244]	"D009"	"D010"	"D011"	"D012"	"D013"	"D014"	"D015"	"D016"	"D017"
[253]	"D018"	"D019"	"D020"	"D021"	"D022"	"D023"	"D024"	"E001"	"E002"
[262]	"E003"	"E004"	"E005"	"E007"	"E014"	"E016"	"E017"	"E018"	"E021"
[271]	"E022"	"E023"	"E031"	"E032"	"E033"	"F002"	"F003"	"F005"	"F008"
[280]	"F009"	"F011"	"F012"	"F014"	"F015"	"folio"	"G006"	"G007"	"G009"
[289]	"G019"	"G023"	"G025"	"G026"	"G027"	"G028"	"G029"	"H001"	"H002"
[298]	"H003"	"H004"	"H005"	"H008"	"H011"	"H012"	"H015"	"H016"	"H017"
[307]	"H018"	"H019"	"H021"	"H022"	"H023"	"H024"	"H025"	"H026"	"H028"
[316]	"H029"	"H030"	"H031"	"H032"	"H033"	"H034"	"H036"	"H037"	"H038"
[325]	"H039"	"H040"	"H042"	"H043"	"H044"	"H045"	"H046"	"H047"	"H048"
[334]	"H050"	"H051"	"H052"	"H053"	"H055"	"H056"	"H057"	"H058"	"H059"
[343]	"H060"	"H061"	"H062"	"H063"	"H064"	"H065"	"H066"	"H067"	"H069"
[352]	"H070"	"H071"	"H072"	"H073"	"H075"	"H076"	"H077"	"H078"	"H082"
[361]	"H083"	"H084"	"H085"	"H088"	"H089"	"H090"	"H091"	"H092"	"H094"
[370]	"H095"	"H096"	"H097"	"H098"	"H099"	"H100"	"H102"	"H103"	"H104"
[379]	"H106"	"H107"	"H108"	"H109"	"H110"	"H111"	"H112"	"H113"	"H115"
[388]	"H116"	"H117"	"H119"	"I001"	"I002"	"I003"	"I004"	"I005"	"I006"
[397]	"I009"	"I010"	"I012"	"I016"	"I017"	"I019"	"I020"	"I021"	"I022"
[406]	"I023"	"I024"	"I025"	"I026"	"J014"	"J016"	"J017"	"J018"	"J020"
[415]	"J021"	"J023"	"J025"	"J028"	"J029"	"J031"	"J032"	"J033"	"J035"
[424]	"J037"	"J043"	"J044"	"J045"	"J048"	"J049"	"J050"	"J051"	"J052"
[433]	"J053"	"J054"	"J055"	"J056"	"J057"	"J058"	"J059"	"J060"	"J061"
[442]	"J063"	"K001"	"K012"	"K017"	"K019"	"K023"	"K026"	"K027"	"K028"
[451]	"K031"	"K032"	"K035"	"K036"	"K037"	"K038"	"K039"	"K040"	"K043"
[460]	"K044"	"L006"	"L016"	"L019"	"L020"	"L023"	"L029"	"M001"	"M007"
[469]	"M012"	"M014"	"M017"	"M018"	"N001"	"N004"			

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YA001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A019+A020+A021+A022+A023+A024+A025+A026+A027+A028+
    A029+A030+A032+A033+A035+A036+A037+A038+A039+A040+A041+A042+A043+A044+
    A045+A046+A047+A049+A050+A051+A052+A053+A054+A055+A056+A057+A058+A059+
    A060+A064+A065+A066+A068+A069+A070+A071+A072+A073+A074+A075+A077+A078+
    A079+A080+A081+A082+A083+A084+A085+A086+A087+A088+A089+A090+A091+A092+
    A094+A095+A096+A099+A100+A101+A102+A103+A104+A105+A106+A107+A108+A109+
    A110+A111+A112+A113+A114+A115+A116+A117+A118+A119+A120+A121+A122+A123+
    A124+A126+A127+A128+A129+A130+A131+A132+A133+A134+A135+A136+A137+A138+
    A139+A140+A141+A142+A143+A144+A145+A146+A149+A150+A151+A152+A153+A154+
    A155+A156+A157+A158+A159+A160+A161+A162+A163+A164+A165+A166+A167+A168+
    A170+A172+A173+A174+A175+A176+A177+A178+A179+A180+A181+A182+A183+A184+
    A185+A186+A187+A188+A189+A191+A192+A193+A194+A195+A196+A197+A198+A199+
    A200+A202+A203+A204+A205+A206+A207+A208)%>%
  mutate(YA002=A210+A211)%>%
  mutate(YA003=A212+A213+A214+A215+A216+A217+A218)%>%
  mutate(YA004=A219+A220+A224+A225+A226+A231)%>%
  mutate(YA005=A209)%>%
  mutate(YA006=A235+A236+A237+A238)%>%
  mutate(YA007=A240)%>%

```



```

mutate(YA008=0)%>%
mutate(YA009=B004+B005+B006+B007)%>%
mutate(YA010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
  C014+C015+C016+C018)%>%
mutate(YA011=C021+C022+C023+C024)%>%
mutate(YA012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
  D014+D015+D016+D017+D018+D019)%>%
mutate(YA013=D020+D021+D022+D023+D024)%>%
mutate(YA014=E001+E002+E003+E004+E005+E007)%>%
mutate(YA015=E014+E016+E017+E018)%>%
mutate(YA016=E021+E022+E023)%>%
mutate(YA017=E031+E032+E033)%>%
mutate(YA018=F002+F003+F005+F008+F009)%>%
mutate(YA019=F011+F012+F014+F015)%>%
mutate(YA020=G006)%>%
mutate(YA021=G007+G009+G019+G023+G025+G026+G027+G028+G029)%>%
mutate(YA022=H001+H002+H003+H004+H005+H008+H011+H012+H015+H016+H017+H018+H019+
  H021+H022+H023+H024+H025+H026+H028+H029+H030+H031+H032+H033+H034+H036+
  H037+H038+H039+H040+H042+H043+H044+H045+H046+H047+H048+H050+H051+H052+
  H053+H055+H056+H057+H058+H059+H060+H061+H062+H063+H064+H065+H066+H067+
  H069+H070+H071+H072+H073+H075+H076+H077+H078+H082+H083+H084+H085+H088+
  H089+H090+H091+H092+H094+H095+H096+H097+H098+H099+H100+H102+H103+H104+
  H106+H107+H108+H109+H110+H111+H112+H113+H115+H116+H117+H119)%>%
mutate(YA023=I001+I002+I003+I004+I005+I006+I009+I010+I012+I016+I017+I019+I020+
  I021+I022+I023+I024+I025+I026)%>%
mutate(YA024=J016+J017+J018+J020+J021+J023+J025+J028+J029+J031+J032+J033+J035+
  J037+J063)%>%
mutate(YA025=J043)%>%
mutate(YA026=J014)%>%
mutate(YA027=J044+J045+J048+J049+J050+J051+J052+J053+J054+J055+J056+J057+J058+
  J059+J060+J061)%>%
mutate(YA028=0)%>%
mutate(YA029=0)%>%
mutate(YA030=0)%>%
mutate(YA031=0)%>%
mutate(YA032=K001+K012+K017+K019+K023)%>%
mutate(YA033=K026+K027+K028+K031+K032+K035+K036)%>%
mutate(YA034=K037+K038+K039+K040+K043+K044)%>%
mutate(YA035=L006+L016+L019+L020+L023+L029)%>%
mutate(YA036=M001)%>%
mutate(YA037=M007)%>%
mutate(YA038=M012+M014+M017+M018)%>%
mutate(YA039=N001+N004)%>%
mutate(YA040=0)%>%
mutate(YA041=0)%>%
mutate(YA042=0)%>%
mutate(YA043=0)%>%
mutate(YA044=0)%>%
mutate(YA045=0)

```

Se guarda la tabla de autoconsumo:

```

agregado <- agregado %>%
  mutate(enc=2005) %>%
  mutate(folioviv=substr(folio,5,10)) %>%
  mutate(foliohog=substr(folio,11,11)) %>%

```

```
mutate(folioviv=as.numeric(folioviv)) %>%
mutate(foliohog=as.numeric(foliohog)) %>%
mutate(foliohog=foliohog+1)
Autocon2005 <- agregado %>%
  select(enc,folioviv,foliohog,YA001,YA002,YA003,YA004,YA005,YA006,YA007,YA008,YA009,
YA010,YA011,YA012,YA013,YA014,YA015,YA016,YA017,YA018,YA019,YA020,YA021,
YA022,YA023,YA024,YA025,YA026,YA027,YA028,YA029,YA030,YA031,YA032,YA033,
YA034,YA035,YA036,YA037,YA038,YA039,YA040,YA041,YA042,YA043,YA044,YA045)
remove(agregado)
```

K. Tabla de autoconsumo de 2006

```
gasto <- read.dbf("Bases/2006/nomon.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona autoconsumo:

```
gasto <- gasto %>% filter(tipo_gas=="1")
agregado <- gasto %>% group_by(folio,clave) %>%
  summarise(gasto=sum(gas_tri),.groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=folio,values_from=gasto,names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)
```

```
[1] "A001" "A002" "A003" "A004" "A005" "A006" "A007" "A008" "A009"
[10] "A010" "A011" "A012" "A013" "A014" "A015" "A016" "A017" "A018"
[19] "A019" "A020" "A021" "A022" "A023" "A024" "A025" "A026" "A027"
[28] "A029" "A030" "A031" "A033" "A034" "A035" "A036" "A037" "A038"
[37] "A039" "A040" "A041" "A042" "A043" "A045" "A046" "A047" "A048"
[46] "A049" "A050" "A051" "A052" "A053" "A054" "A055" "A056" "A057"
[55] "A058" "A059" "A060" "A061" "A062" "A064" "A065" "A066" "A067"
[64] "A068" "A070" "A072" "A073" "A075" "A076" "A077" "A078" "A079"
[73] "A080" "A081" "A082" "A083" "A084" "A085" "A086" "A087" "A088"
[82] "A089" "A090" "A091" "A092" "A093" "A094" "A095" "A097" "A098"
[91] "A099" "A101" "A102" "A103" "A104" "A105" "A106" "A107" "A108"
[100] "A109" "A110" "A111" "A112" "A113" "A114" "A115" "A116" "A117"
[109] "A118" "A119" "A120" "A121" "A122" "A123" "A124" "A125" "A126"
[118] "A127" "A128" "A129" "A130" "A131" "A132" "A133" "A134" "A135"
[127] "A136" "A137" "A138" "A139" "A140" "A141" "A142" "A143" "A144"
[136] "A146" "A147" "A149" "A152" "A153" "A154" "A155" "A156" "A157"
[145] "A158" "A159" "A160" "A161" "A162" "A163" "A164" "A165" "A166"
[154] "A167" "A168" "A169" "A170" "A171" "A172" "A173" "A175" "A176"
[163] "A177" "A178" "A179" "A180" "A181" "A182" "A183" "A184" "A185"
[172] "A186" "A187" "A188" "A189" "A190" "A191" "A192" "A193" "A194"
[181] "A195" "A196" "A198" "A199" "A200" "A201" "A202" "A203" "A205"
[190] "A206" "A207" "A208" "A209" "A210" "A211" "A213" "A214" "A215"
[199] "A216" "A217" "A218" "A219" "A220" "A221" "A222" "A224" "A225"
[208] "A229" "A234" "A239" "A243" "A244" "A245" "A246" "A247" "B002"
[217] "B004" "B005" "B007" "C001" "C002" "C003" "C004" "C005" "C006"
[226] "C007" "C008" "C009" "C010" "C011" "C012" "C013" "C014" "C015"
[235] "C016" "C017" "C018" "C019" "C020" "C021" "C022" "C023" "C024"
[244] "D001" "D002" "D003" "D004" "D005" "D006" "D007" "D008" "D009"
```

[253]	"D010"	"D011"	"D012"	"D013"	"D014"	"D015"	"D016"	"D017"	"D018"
[262]	"D019"	"D021"	"D022"	"D023"	"D024"	"D025"	"D026"	"E001"	"E002"
[271]	"E003"	"E004"	"E005"	"E008"	"E015"	"E016"	"E020"	"E021"	"E022"
[280]	"E023"	"E032"	"F002"	"F004"	"F005"	"F006"	"F008"	"F010"	"F012"
[289]	"F013"	"F014"	"F015"	"folio"	"G006"	"G009"	"G021"	"G024"	"G026"
[298]	"G027"	"G029"	"G030"	"H001"	"H002"	"H003"	"H004"	"H005"	"H006"
[307]	"H007"	"H008"	"H010"	"H011"	"H012"	"H013"	"H015"	"H017"	"H018"
[316]	"H019"	"H020"	"H021"	"H023"	"H024"	"H025"	"H026"	"H027"	"H028"
[325]	"H029"	"H030"	"H031"	"H032"	"H033"	"H034"	"H037"	"H038"	"H039"
[334]	"H040"	"H042"	"H043"	"H044"	"H045"	"H046"	"H047"	"H049"	"H050"
[343]	"H051"	"H052"	"H053"	"H054"	"H056"	"H057"	"H058"	"H059"	"H060"
[352]	"H061"	"H062"	"H063"	"H064"	"H065"	"H066"	"H067"	"H068"	"H069"
[361]	"H070"	"H071"	"H072"	"H075"	"H076"	"H078"	"H079"	"H082"	"H084"
[370]	"H085"	"H088"	"H089"	"H090"	"H092"	"H094"	"H095"	"H097"	"H098"
[379]	"H100"	"H102"	"H103"	"H104"	"H106"	"H107"	"H108"	"H109"	"H110"
[388]	"H111"	"H112"	"H113"	"H115"	"H116"	"H117"	"I001"	"I002"	"I003"
[397]	"I004"	"I005"	"I006"	"I011"	"I012"	"I017"	"I019"	"I020"	"I021"
[406]	"I022"	"I023"	"I024"	"I025"	"I026"	"J002"	"J008"	"J015"	"J016"
[415]	"J017"	"J018"	"J020"	"J021"	"J022"	"J024"	"J025"	"J027"	"J028"
[424]	"J029"	"J030"	"J031"	"J033"	"J035"	"J036"	"J037"	"J044"	"J045"
[433]	"J047"	"J048"	"J049"	"J050"	"J051"	"J052"	"J053"	"J054"	"J055"
[442]	"J058"	"J059"	"J060"	"J061"	"J062"	"J063"	"K006"	"K009"	"K010"
[451]	"K012"	"K014"	"K020"	"K023"	"K026"	"K028"	"K031"	"K032"	"K034"
[460]	"K035"	"K037"	"K038"	"K039"	"K040"	"K042"	"K044"	"L007"	"L015"
[469]	"L020"	"L023"	"L025"	"L027"	"L029"	"M014"	"M018"	"N001"	"N004"
[478]	"Q006"								

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YA001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A018+A019+A020+A021+A022+A023+A024+A025+A026+A027+
    A029+A030+A031+A033+A034+A035+A036+A037+A038+A039+A040+A041+A042+A043+
    A045+A046+A047+A048+A049+A050+A051+A052+A053+A054+A055+A056+A057+A058+
    A059+A060+A061+A062+A064+A065+A066+A067+A068+A070+A072+A073+A075+A076+
    A077+A078+A079+A080+A081+A082+A083+A084+A085+A086+A087+A088+A089+A090+
    A091+A092+A093+A094+A095+A097+A098+A099+A101+A102+A103+A104+A105+A106+
    A107+A108+A109+A110+A111+A112+A113+A114+A115+A116+A117+A118+A119+A120+
    A121+A122+A123+A124+A125+A126+A127+A128+A129+A130+A131+A132+A133+A134+
    A135+A136+A137+A138+A139+A140+A141+A142+A143+A144+A146+A147+A149+A152+
    A153+A154+A155+A156+A157+A158+A159+A160+A161+A162+A163+A164+A165+A166+
    A167+A168+A169+A170+A171+A172+A173+A175+A176+A177+A178+A179+A180+A181+
    A182+A183+A184+A185+A186+A187+A188+A189+A190+A191+A192+A193+A194+A195+
    A196+A198+A199+A200+A201+A202+A203+A205+A206+A207+A208+A209+A210+A211)%>%
  mutate(YA002=A213+A214)%>%
  mutate(YA003=A215+A216+A217+A218+A219+A220+A221+A222)%>%
  mutate(YA004=A224+A225+A229+A234)%>%
  mutate(YA005=0)%>%
  mutate(YA006=A243+A244+A245+A246+A247)%>%
  mutate(YA007=A239)%>%
  mutate(YA008=0)%>%
  mutate(YA009=B002+B004+B005+B007)%>%
  mutate(YA010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
    C014+C015+C016+C017+C018+C019)%>%
  mutate(YA011=C020+C021+C022+C023+C024)%>%

```

```

mutate(YA012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
      D014+D015+D016+D017+D018+D019+D021)%>%
mutate(YA013=D022+D023+D024+D025+D026)%>%
mutate(YA014=E001+E002+E003+E004+E005+E008)%>%
mutate(YA015=E015+E016)%>%
mutate(YA016=E020+E021+E022+E023)%>%
mutate(YA017=E032)%>%
mutate(YA018=F002+F004+F005+F006+F008)%>%
mutate(YA019=F010+F012+F013+F014+F015)%>%
mutate(YA020=G006)%>%
mutate(YA021=G009+G021+G024+G026+G027+G029+G030)%>%
mutate(YA022=H001+H002+H003+H004+H005+H006+H007+H008+H010+H011+H012+H013+H015+
      H017+H018+H019+H020+H021+H023+H024+H025+H026+H027+H028+H029+H030+H031+
      H032+H033+H034+H037+H038+H039+H040+H042+H043+H044+H045+H046+H047+H049+
      H050+H051+H052+H053+H054+H056+H057+H058+H059+H060+H061+H062+H063+H064+
      H065+H066+H067+H068+H069+H070+H071+H072+H075+H076+H078+H079+H082+H084+
      H085+H088+H089+H090+H092+H094+H095+H097+H098+H100+H102+H103+H104+H106+
      H107+H108+H109+H110+H111+H112+H113+H115+H116+H117)%>%
mutate(YA023=I001+I002+I003+I004+I005+I006+I011+I012+I017+I019+I020+I021+I022+
      I023+I024+I025+I026)%>%
mutate(YA024=J016+J017+J018+J020+J021+J022+J024+J025+J027+J028+J029+J030+J031+
      J033+J035+J036+J037+J062+J063)%>%
mutate(YA025=0)%>%
mutate(YA026=J002+J008+J015)%>%
mutate(YA027=J044+J045+J047+J048+J049+J050+J051+J052+J053+J054+J055+J058+J059+
      J060+J061)%>%
mutate(YA028=0)%>%
mutate(YA029=0)%>%
mutate(YA030=0)%>%
mutate(YA031=0)%>%
mutate(YA032=K006+K009+K010+K012+K014+K020+K023)%>%
mutate(YA033=K026+K028+K031+K032+K034+K035)%>%
mutate(YA034=K037+K038+K039+K040+K042+K044)%>%
mutate(YA035=L007+L015+L020+L023+L025+L027+L029)%>%
mutate(YA036=0)%>%
mutate(YA037=0)%>%
mutate(YA038=M014+M018)%>%
mutate(YA039=N001+N004)%>%
mutate(YA040=0)%>%
mutate(YA041=0)%>%
mutate(YA042=Q006)%>%
mutate(YA043=0)%>%
mutate(YA044=0)%>%
mutate(YA045=0)

```

Se guarda la tabla de autoconsumo:

```

agregado <- agregado %>%
  mutate(enc=2006) %>%
  mutate(folioviv=substr(folio,5,10)) %>%
  mutate(foliohog=substr(folio,11,11)) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog)) %>%
  mutate(foliohog=foliohog+1)
Autocon2006 <- agregado %>%
  select(enc, folioviv, foliohog, YA001, YA002, YA003, YA004, YA005, YA006, YA007, YA008, YA009,

```

```
YA010, YA011, YA012, YA013, YA014, YA015, YA016, YA017, YA018, YA019, YA020, YA021,
YA022, YA023, YA024, YA025, YA026, YA027, YA028, YA029, YA030, YA031, YA032, YA033,
YA034, YA035, YA036, YA037, YA038, YA039, YA040, YA041, YA042, YA043, YA044, YA045)
remove(agregado)
```

L. Tabla de autoconsumo de 2008

```
gasto <- read.dbf("Bases/2008/nomon.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona autoconsumo:

```
gasto <- gasto %>% filter(tipogasto=="1")
agregado <- gasto %>% group_by(folioviv, foliohog, clave) %>%
  summarise(gasto=sum(apo_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=c(folioviv, foliohog), values_from=gasto, names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)
```

[1]	"A001"	"A002"	"A003"	"A004"	"A005"	"A006"
[7]	"A007"	"A008"	"A009"	"A010"	"A011"	"A012"
[13]	"A013"	"A014"	"A015"	"A016"	"A017"	"A018"
[19]	"A019"	"A020"	"A021"	"A022"	"A023"	"A024"
[25]	"A025"	"A026"	"A027"	"A029"	"A030"	"A031"
[31]	"A033"	"A034"	"A035"	"A036"	"A037"	"A038"
[37]	"A039"	"A040"	"A041"	"A042"	"A045"	"A047"
[43]	"A048"	"A049"	"A050"	"A051"	"A052"	"A053"
[49]	"A054"	"A055"	"A056"	"A057"	"A058"	"A059"
[55]	"A060"	"A061"	"A062"	"A064"	"A065"	"A066"
[61]	"A067"	"A068"	"A069"	"A070"	"A071"	"A072"
[67]	"A073"	"A074"	"A075"	"A076"	"A077"	"A078"
[73]	"A080"	"A081"	"A082"	"A083"	"A084"	"A085"
[79]	"A086"	"A087"	"A088"	"A089"	"A090"	"A091"
[85]	"A092"	"A093"	"A094"	"A095"	"A096"	"A097"
[91]	"A098"	"A099"	"A100"	"A101"	"A102"	"A103"
[97]	"A104"	"A106"	"A107"	"A108"	"A109"	"A110"
[103]	"A111"	"A112"	"A113"	"A114"	"A115"	"A116"
[109]	"A117"	"A118"	"A119"	"A120"	"A121"	"A122"
[115]	"A123"	"A124"	"A125"	"A126"	"A127"	"A128"
[121]	"A129"	"A130"	"A131"	"A133"	"A134"	"A135"
[127]	"A136"	"A137"	"A138"	"A139"	"A140"	"A141"
[133]	"A142"	"A143"	"A144"	"A146"	"A148"	"A149"
[139]	"A151"	"A152"	"A153"	"A154"	"A155"	"A156"
[145]	"A157"	"A158"	"A159"	"A160"	"A161"	"A162"
[151]	"A163"	"A164"	"A165"	"A166"	"A167"	"A168"
[157]	"A169"	"A170"	"A171"	"A172"	"A173"	"A174"
[163]	"A175"	"A176"	"A177"	"A178"	"A179"	"A180"
[169]	"A181"	"A182"	"A183"	"A184"	"A185"	"A186"
[175]	"A187"	"A188"	"A189"	"A190"	"A191"	"A192"
[181]	"A193"	"A194"	"A195"	"A196"	"A197"	"A198"
[187]	"A199"	"A200"	"A201"	"A202"	"A203"	"A204"
[193]	"A205"	"A206"	"A207"	"A208"	"A209"	"A210"

[199]	"A212"	"A213"	"A214"	"A215"	"A216"	"A217"
[205]	"A218"	"A219"	"A220"	"A221"	"A222"	"A224"
[211]	"A228"	"A231"	"A237"	"A239"	"A243"	"A244"
[217]	"A245"	"A246"	"B002"	"B005"	"B007"	"C001"
[223]	"C002"	"C003"	"C004"	"C005"	"C006"	"C007"
[229]	"C008"	"C009"	"C010"	"C011"	"C012"	"C013"
[235]	"C014"	"C015"	"C016"	"C017"	"C018"	"C019"
[241]	"C021"	"C022"	"C023"	"C024"	"E013"	"E016"
[247]	"E018"	"E021"	"E022"	"E023"	"E032"	"F005"
[253]	"F008"	"F013"	"F014"	"F016"	"F017"	"foliohog"
[259]	"folioviv"	"G018"	"G019"	"G021"	"G022"	"H001"
[265]	"H004"	"H007"	"H008"	"H009"	"H012"	"H013"
[271]	"H014"	"H016"	"H017"	"H018"	"H020"	"H022"
[277]	"H023"	"H025"	"H026"	"H027"	"H028"	"H029"
[283]	"H030"	"H034"	"H035"	"H036"	"H037"	"H038"
[289]	"H039"	"H040"	"H041"	"H042"	"H043"	"H044"
[295]	"H045"	"H046"	"H047"	"H048"	"H049"	"H053"
[301]	"H054"	"H055"	"H056"	"H057"	"H058"	"H059"
[307]	"H060"	"H061"	"H062"	"H063"	"H064"	"H065"
[313]	"H066"	"H067"	"H068"	"H069"	"H070"	"H071"
[319]	"H072"	"H073"	"H074"	"H075"	"H076"	"H077"
[325]	"H078"	"H080"	"H081"	"H082"	"H083"	"H084"
[331]	"H086"	"H087"	"H088"	"H090"	"H091"	"H092"
[337]	"H093"	"H096"	"H098"	"H100"	"H102"	"H103"
[343]	"H104"	"H105"	"H106"	"H108"	"H109"	"H110"
[349]	"H111"	"H112"	"H114"	"H116"	"H117"	"H118"
[355]	"H120"	"H121"	"H122"	"H123"	"H124"	"H125"
[361]	"H126"	"H127"	"H129"	"H131"	"H133"	"H134"
[367]	"H136"	"I002"	"I003"	"I004"	"I005"	"I006"
[373]	"I009"	"I011"	"I012"	"I014"	"I016"	"I017"
[379]	"I018"	"I019"	"I020"	"I021"	"I022"	"I023"
[385]	"I024"	"I025"	"I026"	"J005"	"J044"	"J045"
[391]	"J048"	"J049"	"J050"	"J051"	"J052"	"J053"
[397]	"J054"	"J055"	"J056"	"J057"	"J060"	"J061"
[403]	"J062"	"J063"	"J064"	"K019"	"K024"	"K036"
[409]	"K038"	"K040"	"K042"	"K044"	"L023"	"L027"
[415]	"M004"	"M010"	"M012"	"M014"	"M016"	

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YA001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A018+A019+A020+A021+A022+A023+A024+A025+A026+A027+
    A029+A030+A031+A033+A034+A035+A036+A037+A038+A039+A040+A041+A042+A045+
    A047+A048+A049+A050+A051+A052+A053+A054+A055+A056+A057+A058+A059+A060+
    A061+A062+A064+A065+A066+A067+A068+A069+A070+A071+A072+A073+A074+A075+
    A076+A077+A078+A080+A081+A082+A083+A084+A085+A086+A087+A088+A089+A090+
    A091+A092+A093+A094+A095+A096+A097+A098+A099+A100+A101+A102+A103+A104+
    A106+A107+A108+A109+A110+A111+A112+A113+A114+A115+A116+A117+A118+A119+
    A120+A121+A122+A123+A124+A125+A126+A127+A128+A129+A130+A131+A133+A134+
    A135+A136+A137+A138+A139+A140+A141+A142+A143+A144+A146+A148+A149+A151+
    A152+A153+A154+A155+A156+A157+A158+A159+A160+A161+A162+A163+A164+A165+
    A166+A167+A168+A169+A170+A171+A172+A173+A174+A175+A176+A177+A178+A179+
    A180+A181+A182+A183+A184+A185+A186+A187+A188+A189+A190+A191+A192+A193+
    A194+A195+A196+A197+A198+A199+A200+A201+A202+A203+A204+A205+A206+A207+

```

```

A208+A209+A210)%>%
mutate(YA002=A213+A214)%>%
mutate(YA003=A215+A216+A217+A218+A219+A220+A221+A222)%>%
mutate(YA004=A224+A228+A231+A237)%>%
mutate(YA005=A212)%>%
mutate(YA006=A243+A244+A245+A246)%>%
mutate(YA007=A239)%>%
mutate(YA008=0)%>%
mutate(YA009=B002+B005+B007)%>%
mutate(YA010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
C014+C015+C016+C017+C018+C019)%>%
mutate(YA011=C021+C022+C023+C024)%>%
mutate(YA012=0)%>%
mutate(YA013=0)%>%
mutate(YA014=E013)%>%
mutate(YA015=E016+E018)%>%
mutate(YA016=E021+E022+E023)%>%
mutate(YA017=E032)%>%
mutate(YA018=F005+F008)%>%
mutate(YA019=F013+F014+F016+F017)%>%
mutate(YA020=0)%>%
mutate(YA021=G018+G019+G021+G022)%>%
mutate(YA022=H001+H004+H007+H008+H009+H012+H013+H014+H016+H017+H018+H020+H022+
H023+H025+H026+H027+H028+H029+H030+H034+H035+H036+H037+H038+H039+H040+
H041+H042+H043+H044+H045+H046+H047+H048+H049+H053+H054+H055+H056+H057+
H058+H059+H060+H061+H062+H063+H064+H065+H066+H067+H068+H069+H070+H071+
H072+H073+H074+H075+H076+H077+H078+H080+H081+H082+H083+H084+H086+H087+
H088+H090+H091+H092+H093+H096+H098+H100+H102+H103+H104+H105+H106+H108+
H109+H110+H111+H112+H114+H116+H117+H118+H120+H121+H122+H123+H124+H125+
H126+H127+H129+H131+H133+H134+H136)%>%
mutate(YA023=I002+I003+I004+I005+I006+I009+I011+I012+I014+I016+I017+I018+I019+
I020+I021+I022+I023+I024+I025+I026)%>%
mutate(YA024=J062+J063+J064)%>%
mutate(YA025=0)%>%
mutate(YA026=J005)%>%
mutate(YA027=J044+J045+J048+J049+J050+J051+J052+J053+J054+J055+J056+J057+J060+
J061)%>%
mutate(YA028=0)%>%
mutate(YA029=0)%>%
mutate(YA030=0)%>%
mutate(YA031=0)%>%
mutate(YA032=K019+K024)%>%
mutate(YA033=K036)%>%
mutate(YA034=K038+K040+K042+K044)%>%
mutate(YA035=L023+L027)%>%
mutate(YA036=M004)%>%
mutate(YA037=M010)%>%
mutate(YA038=M012+M014+M016)%>%
mutate(YA039=0)%>%
mutate(YA040=0)%>%
mutate(YA041=0)%>%
mutate(YA042=0)%>%
mutate(YA043=0)%>%
mutate(YA044=0)%>%
mutate(YA045=0)

```


Se guarda la tabla de autoconsumo:

```
agregado <- agregado %>%
  mutate(enc=2008) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog)) %>%
  mutate(foliohog=foliohog+1)
Autocon2008 <- agregado %>%
  select(enc, folioviv, foliohog, YA001, YA002, YA003, YA004, YA005, YA006, YA007, YA008, YA009,
        YA010, YA011, YA012, YA013, YA014, YA015, YA016, YA017, YA018, YA019, YA020, YA021,
        YA022, YA023, YA024, YA025, YA026, YA027, YA028, YA029, YA030, YA031, YA032, YA033,
        YA034, YA035, YA036, YA037, YA038, YA039, YA040, YA041, YA042, YA043, YA044, YA045)
remove(agregado)
```

M. Tabla de autoconsumo de 2010

```
gasto <- read.dbf("Bases/2010/nomone.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona autoconsumo:

```
gasto <- gasto %>% filter(tipogasto=="1")
agregado <- gasto %>% group_by(folioviv, foliohog, clave) %>%
  summarise(gasto=sum(apo_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=c(folioviv, foliohog), values_from=gasto, names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)
```

[1]	"A001"	"A002"	"A003"	"A004"	"A005"	"A006"
[7]	"A007"	"A008"	"A009"	"A010"	"A011"	"A012"
[13]	"A013"	"A014"	"A015"	"A016"	"A017"	"A018"
[19]	"A019"	"A020"	"A021"	"A022"	"A023"	"A024"
[25]	"A025"	"A027"	"A029"	"A030"	"A031"	"A032"
[31]	"A034"	"A035"	"A036"	"A037"	"A038"	"A039"
[37]	"A040"	"A041"	"A042"	"A043"	"A044"	"A045"
[43]	"A047"	"A048"	"A049"	"A050"	"A051"	"A052"
[49]	"A053"	"A054"	"A055"	"A056"	"A057"	"A058"
[55]	"A059"	"A060"	"A061"	"A062"	"A063"	"A064"
[61]	"A065"	"A066"	"A067"	"A068"	"A069"	"A070"
[67]	"A072"	"A073"	"A074"	"A075"	"A076"	"A077"
[73]	"A078"	"A079"	"A080"	"A081"	"A082"	"A083"
[79]	"A084"	"A085"	"A086"	"A087"	"A088"	"A089"
[85]	"A090"	"A091"	"A092"	"A093"	"A094"	"A095"
[91]	"A096"	"A097"	"A098"	"A099"	"A101"	"A102"
[97]	"A103"	"A104"	"A105"	"A106"	"A107"	"A108"
[103]	"A109"	"A110"	"A111"	"A112"	"A113"	"A114"
[109]	"A115"	"A116"	"A117"	"A118"	"A119"	"A120"
[115]	"A121"	"A122"	"A123"	"A124"	"A125"	"A126"
[121]	"A127"	"A128"	"A129"	"A130"	"A131"	"A132"
[127]	"A133"	"A134"	"A135"	"A136"	"A137"	"A138"
[133]	"A139"	"A140"	"A141"	"A142"	"A143"	"A144"
[139]	"A146"	"A148"	"A149"	"A151"	"A152"	"A153"

[145]	"A154"	"A155"	"A156"	"A157"	"A158"	"A159"
[151]	"A160"	"A161"	"A162"	"A163"	"A164"	"A165"
[157]	"A166"	"A167"	"A168"	"A169"	"A170"	"A171"
[163]	"A172"	"A173"	"A175"	"A176"	"A177"	"A178"
[169]	"A179"	"A180"	"A181"	"A182"	"A183"	"A185"
[175]	"A186"	"A187"	"A188"	"A190"	"A191"	"A192"
[181]	"A193"	"A194"	"A196"	"A199"	"A200"	"A201"
[187]	"A202"	"A203"	"A204"	"A205"	"A206"	"A207"
[193]	"A208"	"A209"	"A210"	"A211"	"A212"	"A213"
[199]	"A215"	"A216"	"A217"	"A218"	"A219"	"A220"
[205]	"A221"	"A222"	"A224"	"A233"	"A237"	"A239"
[211]	"A243"	"A244"	"A245"	"A246"	"B004"	"B005"
[217]	"B007"	"C001"	"C002"	"C003"	"C004"	"C005"
[223]	"C006"	"C007"	"C008"	"C009"	"C010"	"C011"
[229]	"C012"	"C013"	"C014"	"C015"	"C016"	"C017"
[235]	"C018"	"C019"	"C021"	"C022"	"C023"	"C024"
[241]	"D001"	"D002"	"D003"	"D004"	"D005"	"D006"
[247]	"D007"	"D008"	"D009"	"D010"	"D011"	"D012"
[253]	"D013"	"D014"	"D015"	"D016"	"D017"	"D018"
[259]	"D019"	"D021"	"D022"	"D023"	"D024"	"D025"
[265]	"D026"	"E001"	"E002"	"E003"	"E004"	"E005"
[271]	"E015"	"E017"	"E023"	"E024"	"E026"	"E027"
[277]	"E034"	"F003"	"F004"	"F007"	"F010"	"F011"
[283]	"F013"	"F014"	"foliohog"	"folioviv"	"G001"	"G005"
[289]	"G010"	"G012"	"G013"	"G015"	"G016"	"H001"
[295]	"H002"	"H003"	"H004"	"H007"	"H008"	"H009"
[301]	"H012"	"H013"	"H014"	"H015"	"H016"	"H017"
[307]	"H019"	"H020"	"H021"	"H022"	"H023"	"H027"
[313]	"H028"	"H029"	"H030"	"H034"	"H035"	"H036"
[319]	"H039"	"H040"	"H041"	"H042"	"H043"	"H044"
[325]	"H045"	"H046"	"H048"	"H049"	"H050"	"H053"
[331]	"H056"	"H057"	"H058"	"H059"	"H060"	"H061"
[337]	"H062"	"H063"	"H065"	"H066"	"H067"	"H068"
[343]	"H069"	"H070"	"H072"	"H073"	"H074"	"H075"
[349]	"H076"	"H077"	"H078"	"H081"	"H083"	"H084"
[355]	"H086"	"H090"	"H093"	"H096"	"H097"	"H098"
[361]	"H099"	"H100"	"H102"	"H104"	"H105"	"H106"
[367]	"H108"	"H109"	"H110"	"H111"	"H112"	"H114"
[373]	"H115"	"H116"	"H117"	"H118"	"H120"	"H121"
[379]	"H122"	"H123"	"H124"	"H125"	"H126"	"H127"
[385]	"H131"	"H134"	"H135"	"H136"	"I001"	"I002"
[391]	"I003"	"I004"	"I005"	"I009"	"I010"	"I011"
[397]	"I012"	"I016"	"I017"	"I019"	"I021"	"I024"
[403]	"I025"	"J007"	"J016"	"J017"	"J018"	"J020"
[409]	"J021"	"J023"	"J024"	"J025"	"J026"	"J033"
[415]	"J035"	"J036"	"J044"	"J045"	"J050"	"J053"
[421]	"J054"	"J055"	"J056"	"J060"	"J061"	"J062"
[427]	"J063"	"J065"	"K001"	"K010"	"K012"	"K013"
[433]	"K019"	"K020"	"K024"	"K027"	"K029"	"K031"
[439]	"K032"	"K036"	"K037"	"K038"	"K039"	"K041"
[445]	"K042"	"K043"	"L005"	"L020"	"L023"	"L027"
[451]	"L029"	"M001"	"M012"	"M014"	"M017"	"M018"
[457]	"N001"	"N005"	"N010"			

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YA001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A018+A019+A020+A021+A022+A023+A024+A025+A027+A029+
    A030+A031+A032+A034+A035+A036+A037+A038+A039+A040+A041+A042+A043+A044+
    A045+A047+A048+A049+A050+A051+A052+A053+A054+A055+A056+A057+A058+A059+
    A060+A061+A062+A063+A064+A065+A066+A067+A068+A069+A070+A072+A073+A074+
    A075+A076+A077+A078+A079+A080+A081+A082+A083+A084+A085+A086+A087+A088+
    A089+A090+A091+A092+A093+A094+A095+A096+A097+A098+A099+A101+A102+A103+
    A104+A105+A106+A107+A108+A109+A110+A111+A112+A113+A114+A115+A116+A117+
    A118+A119+A120+A121+A122+A123+A124+A125+A126+A127+A128+A129+A130+A131+
    A132+A133+A134+A135+A136+A137+A138+A139+A140+A141+A142+A143+A144+A146+
    A148+A149+A151+A152+A153+A154+A155+A156+A157+A158+A159+A160+A161+A162+
    A163+A164+A165+A166+A167+A168+A169+A170+A171+A172+A173+A175+A176+A177+
    A178+A179+A180+A181+A182+A183+A185+A186+A187+A188+A190+A191+A192+A193+
    A194+A196+A199+A200+A201+A202+A203+A204+A205+A206+A207+A208+A209+A210+
    A211)%>%
  mutate(YA002=A213)%>%
  mutate(YA003=A215+A216+A217+A218+A219+A220+A221+A222)%>%
  mutate(YA004=A224+A233+A237)%>%
  mutate(YA005=A212)%>%
  mutate(YA006=A243+A244+A245+A246)%>%
  mutate(YA007=A239)%>%
  mutate(YA008=0)%>%
  mutate(YA009=B004+B005+B007)%>%
  mutate(YA010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
    C014+C015+C016+C017+C018+C019)%>%
  mutate(YA011=C021+C022+C023+C024)%>%
  mutate(YA012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
    D014+D015+D016+D017+D018+D019+D021)%>%
  mutate(YA013=D022+D023+D024+D025+D026)%>%
  mutate(YA014=E001+E002+E003+E004+E005)%>%
  mutate(YA015=E015+E017)%>%
  mutate(YA016=E023+E024+E026)%>%
  mutate(YA017=E027+E034)%>%
  mutate(YA018=F003+F004)%>%
  mutate(YA019=F007+F010+F011+F013+F014)%>%
  mutate(YA020=G001)%>%
  mutate(YA021=G005+G010+G012+G013+G015+G016)%>%
  mutate(YA022=H001+H002+H003+H004+H007+H008+H009+H012+H013+H014+H015+H016+H017+
    H019+H020+H021+H022+H023+H027+H028+H029+H030+H034+H035+H036+H039+H040+
    H041+H042+H043+H044+H045+H046+H048+H049+H050+H053+H056+H057+H058+H059+
    H060+H061+H062+H063+H065+H066+H067+H068+H069+H070+H072+H073+H074+H075+
    H076+H077+H078+H081+H083+H084+H086+H090+H093+H096+H097+H098+H099+H100+
    H102+H104+H105+H106+H108+H109+H110+H111+H112+H114+H115+H116+H117+H118+
    H120+H121+H122+H123+H124+H125+H126+H127+H131+H134+H135+H136)%>%
  mutate(YA023=I001+I002+I003+I004+I005+I009+I010+I011+I012+I016+I017+I019+I021+
    I024+I025)%>%
  mutate(YA024=J016+J017+J018+J020+J021+J023+J024+J025+J026+J033+J035+J036+J062+
    J063)%>%
  mutate(YA025=0)%>%
  mutate(YA026=J007)%>%
  mutate(YA027=J044+J045+J050+J053+J054+J055+J056+J060+J061)%>%

```

```
mutate(YA028=J065)%>%
mutate(YA029=0)%>%
mutate(YA030=0)%>%
mutate(YA031=0)%>%
mutate(YA032=K001+K010+K012+K013+K019+K020+K024)%>%
mutate(YA033=K027+K029+K031+K032+K036+K037)%>%
mutate(YA034=K038+K039+K041+K042+K043)%>%
mutate(YA035=L005+L020+L023+L027+L029)%>%
mutate(YA036=M001)%>%
mutate(YA037=0)%>%
mutate(YA038=M012+M014+M017+M018)%>%
mutate(YA039=N001+N005+N010)%>%
mutate(YA040=0)%>%
mutate(YA041=0)%>%
mutate(YA042=0)%>%
mutate(YA043=0)%>%
mutate(YA044=0)%>%
mutate(YA045=0)
```

Se guarda la tabla de autoconsumo:

```
agregado <- agregado %>%
  mutate(enc=2010) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog)) %>%
  mutate(foliohog=foliohog+1)
Autocon2010 <- agregado %>%
  select(enc, folioviv, foliohog, YA001, YA002, YA003, YA004, YA005, YA006, YA007, YA008, YA009,
         YA010, YA011, YA012, YA013, YA014, YA015, YA016, YA017, YA018, YA019, YA020, YA021,
         YA022, YA023, YA024, YA025, YA026, YA027, YA028, YA029, YA030, YA031, YA032, YA033,
         YA034, YA035, YA036, YA037, YA038, YA039, YA040, YA041, YA042, YA043, YA044, YA045)
remove(agregado)
```

N. Tabla de autoconsumo de 2012

```
gasto <- read.dbf("Bases/2012/gastohogar.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona autoconsumo:

```
gasto <- gasto %>% filter(tipo_gasto=="G3")
agregado <- gasto %>% group_by(folioviv, foliohog, clave) %>%
  summarise(gasto=sum(gas_nm_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=c(folioviv, foliohog), values_from=gasto, names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)

[1] "A001" "A002" "A003" "A004" "A005" "A006"
[7] "A007" "A008" "A009" "A010" "A011" "A012"
[13] "A013" "A014" "A015" "A017" "A018" "A019"
[19] "A020" "A021" "A022" "A023" "A024" "A025"
[25] "A029" "A031" "A034" "A036" "A038" "A039"
```

[31]	"A040"	"A041"	"A042"	"A045"	"A047"	"A048"
[37]	"A049"	"A050"	"A051"	"A052"	"A053"	"A055"
[43]	"A056"	"A057"	"A058"	"A059"	"A060"	"A061"
[49]	"A062"	"A064"	"A065"	"A066"	"A067"	"A068"
[55]	"A070"	"A072"	"A073"	"A074"	"A075"	"A076"
[61]	"A077"	"A078"	"A080"	"A081"	"A082"	"A083"
[67]	"A084"	"A085"	"A086"	"A087"	"A088"	"A089"
[73]	"A090"	"A091"	"A092"	"A093"	"A095"	"A096"
[79]	"A097"	"A098"	"A099"	"A102"	"A104"	"A106"
[85]	"A107"	"A108"	"A109"	"A110"	"A111"	"A112"
[91]	"A113"	"A114"	"A115"	"A116"	"A117"	"A118"
[97]	"A119"	"A120"	"A121"	"A122"	"A124"	"A125"
[103]	"A126"	"A127"	"A128"	"A129"	"A130"	"A131"
[109]	"A132"	"A133"	"A134"	"A135"	"A137"	"A139"
[115]	"A140"	"A141"	"A142"	"A144"	"A146"	"A152"
[121]	"A154"	"A155"	"A156"	"A157"	"A158"	"A159"
[127]	"A160"	"A161"	"A162"	"A163"	"A164"	"A165"
[133]	"A166"	"A167"	"A168"	"A169"	"A170"	"A173"
[139]	"A175"	"A176"	"A177"	"A179"	"A180"	"A181"
[145]	"A182"	"A183"	"A184"	"A186"	"A187"	"A188"
[151]	"A189"	"A190"	"A191"	"A192"	"A194"	"A196"
[157]	"A198"	"A199"	"A200"	"A201"	"A202"	"A205"
[163]	"A207"	"A208"	"A209"	"A210"	"A212"	"A213"
[169]	"A215"	"A216"	"A217"	"A218"	"A219"	"A220"
[175]	"A221"	"A222"	"A224"	"A228"	"A233"	"A239"
[181]	"A241"	"A243"	"A244"	"A245"	"A246"	"B004"
[187]	"B005"	"B007"	"C001"	"C002"	"C003"	"C004"
[193]	"C005"	"C006"	"C007"	"C008"	"C009"	"C010"
[199]	"C011"	"C012"	"C013"	"C014"	"C015"	"C016"
[205]	"C018"	"C019"	"C020"	"C021"	"C022"	"C023"
[211]	"C024"	"D001"	"D002"	"D003"	"D004"	"D005"
[217]	"D006"	"D007"	"D008"	"D009"	"D010"	"D011"
[223]	"D012"	"D013"	"D014"	"D015"	"D016"	"D017"
[229]	"D021"	"D022"	"D023"	"D024"	"D025"	"D026"
[235]	"E001"	"E002"	"E003"	"E005"	"E017"	"E023"
[241]	"F003"	"F006"	"F007"	"F011"	"F013"	"foliohog"
[247]	"folioviv"	"G012"	"G013"	"G014"	"G015"	"H001"
[253]	"H004"	"H008"	"H009"	"H018"	"H022"	"H023"
[259]	"H026"	"H028"	"H029"	"H030"	"H031"	"H034"
[265]	"H035"	"H036"	"H037"	"H038"	"H039"	"H040"
[271]	"H041"	"H042"	"H046"	"H048"	"H054"	"H056"
[277]	"H057"	"H058"	"H060"	"H062"	"H064"	"H067"
[283]	"H068"	"H069"	"H070"	"H071"	"H072"	"H073"
[289]	"H074"	"H076"	"H077"	"H078"	"H081"	"H083"
[295]	"H086"	"H088"	"H089"	"H090"	"H092"	"H096"
[301]	"H098"	"H100"	"H102"	"H104"	"H105"	"H108"
[307]	"H110"	"H114"	"H115"	"H117"	"H120"	"H123"
[313]	"H124"	"H125"	"H126"	"H127"	"H136"	"I003"
[319]	"I004"	"I008"	"I009"	"I017"	"I019"	"I020"
[325]	"I021"	"I023"	"I024"	"I025"	"J018"	"J043"
[331]	"J044"	"J045"	"J048"	"J050"	"J053"	"J055"
[337]	"J059"	"J060"	"J061"	"J062"	"J063"	"K025"
[343]	"K029"	"K031"	"K032"	"K036"	"K037"	"K038"
[349]	"K039"	"K041"	"K043"	"L020"	"L023"	"L026"
[355]	"L027"	"M017"	"M018"	"N001"	"N003"	"Q006"

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YA001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A017+A018+A019+A020+A021+A022+A023+A024+A025+A029+A031+A034+
    A036+A038+A039+A040+A041+A042+A045+A047+A048+A049+A050+A051+A052+A053+
    A055+A056+A057+A058+A059+A060+A061+A062+A064+A065+A066+A067+A068+A070+
    A072+A073+A074+A075+A076+A077+A078+A080+A081+A082+A083+A084+A085+A086+
    A087+A088+A089+A090+A091+A092+A093+A095+A096+A097+A098+A099+A102+A104+
    A106+A107+A108+A109+A110+A111+A112+A113+A114+A115+A116+A117+A118+A119+
    A120+A121+A122+A124+A125+A126+A127+A128+A129+A130+A131+A132+A133+A134+
    A135+A137+A139+A140+A141+A142+A144+A146+A152+A154+A155+A156+A157+A158+
    A159+A160+A161+A162+A163+A164+A165+A166+A167+A168+A169+A170+A173+A175+
    A176+A177+A179+A180+A181+A182+A183+A184+A186+A187+A188+A189+A190+A191+
    A192+A194+A196+A198+A199+A200+A201+A202+A205+A207+A208+A209+A210)%>%
  mutate(YA002=A213)%>%
  mutate(YA003=A215+A216+A217+A218+A219+A220+A221+A222)%>%
  mutate(YA004=A224+A228+A233)%>%
  mutate(YA005=A212)%>%
  mutate(YA006=A243+A244+A245+A246)%>%
  mutate(YA007=A239+A241)%>%
  mutate(YA008=0)%>%
  mutate(YA009=B004+B005+B007)%>%
  mutate(YA010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
    C014+C015+C016+C018+C019)%>%
  mutate(YA011=C020+C021+C022+C023+C024)%>%
  mutate(YA012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
    D014+D015+D016+D017+D021)%>%
  mutate(YA013=D022+D023+D024+D025+D026)%>%
  mutate(YA014=E001+E002+E003+E005)%>%
  mutate(YA015=E017)%>%
  mutate(YA016=E023)%>%
  mutate(YA017=0)%>%
  mutate(YA018=F003+F006)%>%
  mutate(YA019=F007+F011+F013)%>%
  mutate(YA020=0)%>%
  mutate(YA021=G012+G013+G014+G015)%>%
  mutate(YA022=H001+H004+H008+H009+H018+H022+H023+H026+H028+H029+H030+H031+H034+
    H035+H036+H037+H038+H039+H040+H041+H042+H046+H048+H054+H056+H057+H058+
    H060+H062+H064+H067+H068+H069+H070+H071+H072+H073+H074+H076+H077+H078+
    H081+H083+H086+H088+H089+H090+H092+H096+H098+H100+H102+H104+H105+H108+
    H110+H114+H115+H117+H120+H123+H124+H125+H126+H127+H136)%>%
  mutate(YA023=I003+I004+I008+I009+I017+I019+I020+I021+I023+I024+I025)%>%
  mutate(YA024=J018+J062+J063)%>%
  mutate(YA025=J043)%>%
  mutate(YA026=0)%>%
  mutate(YA027=J044+J045+J048+J050+J053+J055+J059+J060+J061)%>%
  mutate(YA028=0)%>%
  mutate(YA029=0)%>%
  mutate(YA030=0)%>%
  mutate(YA031=0)%>%
  mutate(YA032=K025)%>%
  mutate(YA033=K029+K031+K032+K036+K037)%>%
  mutate(YA034=K038+K039+K041+K043)%>%

```

```
mutate(YA035=L020+L023+L026+L027)%>%
mutate(YA036=0)%>%
mutate(YA037=0)%>%
mutate(YA038=M017+M018)%>%
mutate(YA039=N001+N003)%>%
mutate(YA040=0)%>%
mutate(YA041=0)%>%
mutate(YA042=Q006)%>%
mutate(YA043=0)%>%
mutate(YA044=0)%>%
mutate(YA045=0)
```

Se guarda la tabla de autoconsumo:

```
agregado <- agregado %>%
  mutate(enc=2012) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog)) %>%
  mutate(foliohog=foliohog+1)
Autocon2012 <- agregado %>%
  select(enc, folioviv, foliohog, YA001, YA002, YA003, YA004, YA005, YA006, YA007, YA008, YA009,
        YA010, YA011, YA012, YA013, YA014, YA015, YA016, YA017, YA018, YA019, YA020, YA021,
        YA022, YA023, YA024, YA025, YA026, YA027, YA028, YA029, YA030, YA031, YA032, YA033,
        YA034, YA035, YA036, YA037, YA038, YA039, YA040, YA041, YA042, YA043, YA044, YA045)
remove(agregado)
```

O. Tabla de autoconsumo de 2014

```
gasto <- read.dbf("Bases/2014/gastohogar.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona autoconsumo:

```
gasto <- gasto %>% filter(tipo_gasto=="G3")
agregado <- gasto %>% group_by(folioviv, foliohog, clave) %>%
  summarise(gasto=sum(gas_nm_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=c(folioviv, foliohog), values_from=gasto, names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)

[1] "A001" "A002" "A003" "A004" "A005" "A006"
[7] "A007" "A008" "A009" "A010" "A011" "A012"
[13] "A013" "A014" "A015" "A016" "A017" "A018"
[19] "A019" "A021" "A022" "A023" "A024" "A025"
[25] "A027" "A028" "A029" "A030" "A031" "A034"
[31] "A035" "A036" "A037" "A038" "A039" "A040"
[37] "A042" "A044" "A045" "A047" "A048" "A049"
[43] "A050" "A051" "A052" "A053" "A054" "A055"
[49] "A056" "A057" "A058" "A059" "A060" "A061"
[55] "A062" "A065" "A066" "A067" "A068" "A070"
[61] "A072" "A073" "A074" "A075" "A076" "A077"
[67] "A078" "A080" "A081" "A082" "A083" "A084"
```

[73]	"A085"	"A086"	"A087"	"A088"	"A089"	"A090"
[79]	"A091"	"A092"	"A093"	"A095"	"A096"	"A097"
[85]	"A098"	"A099"	"A101"	"A102"	"A103"	"A104"
[91]	"A105"	"A106"	"A107"	"A108"	"A109"	"A110"
[97]	"A111"	"A112"	"A113"	"A114"	"A115"	"A116"
[103]	"A117"	"A118"	"A119"	"A120"	"A121"	"A122"
[109]	"A123"	"A124"	"A125"	"A126"	"A127"	"A128"
[115]	"A129"	"A130"	"A131"	"A133"	"A134"	"A135"
[121]	"A136"	"A137"	"A138"	"A139"	"A140"	"A141"
[127]	"A142"	"A143"	"A144"	"A145"	"A146"	"A147"
[133]	"A148"	"A149"	"A150"	"A151"	"A152"	"A153"
[139]	"A154"	"A155"	"A156"	"A157"	"A158"	"A159"
[145]	"A160"	"A161"	"A162"	"A163"	"A164"	"A165"
[151]	"A166"	"A167"	"A168"	"A169"	"A170"	"A171"
[157]	"A173"	"A174"	"A175"	"A176"	"A177"	"A178"
[163]	"A179"	"A180"	"A181"	"A182"	"A183"	"A184"
[169]	"A186"	"A187"	"A188"	"A190"	"A191"	"A192"
[175]	"A194"	"A198"	"A199"	"A200"	"A201"	"A202"
[181]	"A203"	"A205"	"A206"	"A207"	"A208"	"A209"
[187]	"A210"	"A212"	"A213"	"A215"	"A216"	"A217"
[193]	"A218"	"A219"	"A220"	"A221"	"A222"	"A224"
[199]	"A239"	"A243"	"A244"	"A245"	"A246"	"B004"
[205]	"B005"	"B007"	"C001"	"C002"	"C003"	"C004"
[211]	"C005"	"C006"	"C007"	"C008"	"C009"	"C010"
[217]	"C011"	"C012"	"C013"	"C014"	"C015"	"C016"
[223]	"C017"	"C018"	"C019"	"C021"	"C023"	"D001"
[229]	"D002"	"D003"	"D004"	"D005"	"D006"	"D007"
[235]	"D008"	"D009"	"D010"	"D011"	"D012"	"D013"
[241]	"D014"	"D015"	"D016"	"D017"	"D018"	"D021"
[247]	"D022"	"D024"	"D025"	"D026"	"E001"	"E002"
[253]	"E003"	"E004"	"E005"	"E016"	"E017"	"E020"
[259]	"E025"	"E033"	"F003"	"F004"	"F005"	"F006"
[265]	"F007"	"F011"	"F012"	"F014"	"foliohog"	"folioviv"
[271]	"G009"	"G012"	"G013"	"G015"	"G016"	"H001"
[277]	"H002"	"H003"	"H004"	"H009"	"H013"	"H014"
[283]	"H015"	"H016"	"H017"	"H019"	"H020"	"H021"
[289]	"H023"	"H026"	"H027"	"H028"	"H030"	"H033"
[295]	"H034"	"H036"	"H040"	"H041"	"H042"	"H043"
[301]	"H047"	"H048"	"H049"	"H055"	"H056"	"H057"
[307]	"H058"	"H060"	"H062"	"H063"	"H064"	"H065"
[313]	"H066"	"H067"	"H068"	"H069"	"H070"	"H071"
[319]	"H072"	"H073"	"H074"	"H075"	"H076"	"H077"
[325]	"H078"	"H080"	"H082"	"H083"	"H084"	"H090"
[331]	"H092"	"H096"	"H102"	"H104"	"H106"	"H108"
[337]	"H110"	"H112"	"H114"	"H116"	"H117"	"H118"
[343]	"H121"	"H122"	"H123"	"H124"	"H125"	"H126"
[349]	"H127"	"H134"	"H136"	"I001"	"I002"	"I004"
[355]	"I005"	"I006"	"I008"	"I009"	"I011"	"I012"
[361]	"I016"	"I024"	"I025"	"J004"	"J016"	"J018"
[367]	"J020"	"J021"	"J024"	"J025"	"J029"	"J035"
[373]	"J037"	"J044"	"J045"	"J048"	"J049"	"J050"
[379]	"J051"	"J052"	"J053"	"J060"	"J061"	"J062"
[385]	"J063"	"K010"	"K012"	"K021"	"K027"	"K029"
[391]	"K038"	"K039"	"K040"	"K041"	"K045"	"L005"

[397]	"L027"	"M001"	"M006"	"M014"	"M017"	"M018"
[403]	"N003"					

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YA001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A018+A019+A021+A022+A023+A024+A025+A027+A028+A029+
    A030+A031+A034+A035+A036+A037+A038+A039+A040+A042+A044+A045+A047+A048+
    A049+A050+A051+A052+A053+A054+A055+A056+A057+A058+A059+A060+A061+A062+
    A065+A066+A067+A068+A070+A072+A073+A074+A075+A076+A077+A078+A080+A081+
    A082+A083+A084+A085+A086+A087+A088+A089+A090+A091+A092+A093+A095+A096+
    A097+A098+A099+A101+A102+A103+A104+A105+A106+A107+A108+A109+A110+A111+
    A112+A113+A114+A115+A116+A117+A118+A119+A120+A121+A122+A123+A124+A125+
    A126+A127+A128+A129+A130+A131+A133+A134+A135+A136+A137+A138+A139+A140+
    A141+A142+A143+A144+A145+A146+A147+A148+A149+A150+A151+A152+A153+A154+
    A155+A156+A157+A158+A159+A160+A161+A162+A163+A164+A165+A166+A167+A168+
    A169+A170+A171+A173+A174+A175+A176+A177+A178+A179+A180+A181+A182+A183+
    A184+A186+A187+A188+A190+A191+A192+A194+A198+A199+A200+A201+A202+A203+
    A205+A206+A207+A208+A209+A210)%>%
  mutate(YA002=A213)%>%
  mutate(YA003=A215+A216+A217+A218+A219+A220+A221+A222)%>%
  mutate(YA004=A224)%>%
  mutate(YA005=A212)%>%
  mutate(YA006=A243+A244+A245+A246)%>%
  mutate(YA007=A239)%>%
  mutate(YA008=0)%>%
  mutate(YA009=B004+B005+B007)%>%
  mutate(YA010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
    C014+C015+C016+C017+C018+C019)%>%
  mutate(YA011=C021+C023)%>%
  mutate(YA012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
    D014+D015+D016+D017+D018+D021)%>%
  mutate(YA013=D022+D024+D025+D026)%>%
  mutate(YA014=E001+E002+E003+E004+E005)%>%
  mutate(YA015=E016+E017+E020)%>%
  mutate(YA016=E025)%>%
  mutate(YA017=E033)%>%
  mutate(YA018=F003+F004+F005+F006)%>%
  mutate(YA019=F007+F011+F012+F014)%>%
  mutate(YA020=0)%>%
  mutate(YA021=G009+G012+G013+G015+G016)%>%
  mutate(YA022=H001+H002+H003+H004+H009+H013+H014+H015+H016+H017+H019+H020+H021+
    H023+H026+H027+H028+H030+H033+H034+H036+H040+H041+H042+H043+H047+H048+
    H049+H055+H056+H057+H058+H060+H062+H063+H064+H065+H066+H067+H068+H069+
    H070+H071+H072+H073+H074+H075+H076+H077+H078+H080+H082+H083+H084+H090+
    H092+H096+H102+H104+H106+H108+H110+H112+H114+H116+H117+H118+H121+H122+
    H123+H124+H125+H126+H127+H134+H136)%>%
  mutate(YA023=I001+I002+I004+I005+I006+I008+I009+I011+I012+I016+I024+I025)%>%
  mutate(YA024=J016+J018+J020+J021+J024+J025+J029+J035+J037+J062+J063)%>%
  mutate(YA025=0)%>%
  mutate(YA026=J004)%>%
  mutate(YA027=J044+J045+J048+J049+J050+J051+J052+J053+J060+J061)%>%
  mutate(YA028=0)%>%
  mutate(YA029=0)%>%

```

```
mutate(YA030=0)%>%
mutate(YA031=0)%>%
mutate(YA032=K010+K012+K021)%>%
mutate(YA033=K027+K029)%>%
mutate(YA034=K038+K039+K040+K041+K045)%>%
mutate(YA035=L005+L027)%>%
mutate(YA036=M001+M006)%>%
mutate(YA037=0)%>%
mutate(YA038=M014+M017+M018)%>%
mutate(YA039=N003)%>%
mutate(YA040=0)%>%
mutate(YA041=0)%>%
mutate(YA042=0)%>%
mutate(YA043=0)%>%
mutate(YA044=0)%>%
mutate(YA045=0)
```

Se guarda la tabla de autoconsumo:

```
agregado <- agregado %>%
  mutate(enc=2014) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog))
Autocon2014 <- agregado %>%
  select(enc, folioviv, foliohog, YA001, YA002, YA003, YA004, YA005, YA006, YA007, YA008, YA009,
        YA010, YA011, YA012, YA013, YA014, YA015, YA016, YA017, YA018, YA019, YA020, YA021,
        YA022, YA023, YA024, YA025, YA026, YA027, YA028, YA029, YA030, YA031, YA032, YA033,
        YA034, YA035, YA036, YA037, YA038, YA039, YA040, YA041, YA042, YA043, YA044, YA045)
remove(agregado)
```

P. Tabla de autoconsumo de 2016

```
gasto <- read.dbf("Bases/2016/gastoshogar.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona autoconsumo:

```
gasto <- gasto %>% filter(tipo_gasto=="G3")
agregado <- gasto %>% group_by(folioviv, foliohog, clave) %>%
  summarise(gasto=sum(gas_nm_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=c(folioviv, foliohog), values_from=gasto, names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)
```

[1]	"A001"	"A002"	"A003"	"A004"	"A005"	"A006"
[7]	"A007"	"A008"	"A009"	"A010"	"A011"	"A012"
[13]	"A013"	"A014"	"A015"	"A016"	"A017"	"A018"
[19]	"A019"	"A020"	"A021"	"A022"	"A023"	"A024"
[25]	"A025"	"A027"	"A028"	"A029"	"A030"	"A031"
[31]	"A033"	"A034"	"A035"	"A036"	"A037"	"A038"
[37]	"A039"	"A040"	"A041"	"A042"	"A043"	"A044"
[43]	"A045"	"A046"	"A047"	"A048"	"A049"	"A050"

[49]	"A051"	"A052"	"A053"	"A054"	"A055"	"A056"
[55]	"A057"	"A058"	"A059"	"A060"	"A061"	"A062"
[61]	"A063"	"A064"	"A065"	"A066"	"A067"	"A068"
[67]	"A070"	"A071"	"A072"	"A073"	"A074"	"A075"
[73]	"A076"	"A077"	"A078"	"A079"	"A080"	"A081"
[79]	"A082"	"A083"	"A084"	"A085"	"A086"	"A087"
[85]	"A088"	"A089"	"A090"	"A091"	"A092"	"A093"
[91]	"A094"	"A095"	"A096"	"A097"	"A098"	"A099"
[97]	"A101"	"A102"	"A103"	"A104"	"A106"	"A107"
[103]	"A108"	"A109"	"A110"	"A111"	"A112"	"A113"
[109]	"A114"	"A115"	"A116"	"A117"	"A118"	"A119"
[115]	"A120"	"A121"	"A122"	"A123"	"A124"	"A125"
[121]	"A126"	"A127"	"A128"	"A129"	"A130"	"A131"
[127]	"A132"	"A133"	"A134"	"A135"	"A136"	"A137"
[133]	"A138"	"A139"	"A140"	"A141"	"A142"	"A143"
[139]	"A144"	"A145"	"A146"	"A147"	"A148"	"A149"
[145]	"A151"	"A152"	"A153"	"A154"	"A155"	"A156"
[151]	"A157"	"A158"	"A159"	"A160"	"A161"	"A162"
[157]	"A163"	"A164"	"A165"	"A166"	"A167"	"A168"
[163]	"A169"	"A170"	"A172"	"A173"	"A174"	"A175"
[169]	"A176"	"A177"	"A178"	"A179"	"A180"	"A181"
[175]	"A182"	"A183"	"A184"	"A185"	"A186"	"A187"
[181]	"A188"	"A189"	"A190"	"A191"	"A192"	"A193"
[187]	"A194"	"A195"	"A196"	"A198"	"A199"	"A200"
[193]	"A201"	"A202"	"A203"	"A205"	"A206"	"A207"
[199]	"A208"	"A209"	"A210"	"A211"	"A212"	"A213"
[205]	"A215"	"A216"	"A217"	"A218"	"A219"	"A220"
[211]	"A221"	"A222"	"A224"	"A225"	"A227"	"A228"
[217]	"A237"	"A239"	"A243"	"A244"	"A245"	"A246"
[223]	"B004"	"B005"	"B006"	"B007"	"C001"	"C002"
[229]	"C003"	"C004"	"C005"	"C006"	"C007"	"C008"
[235]	"C009"	"C010"	"C011"	"C012"	"C013"	"C014"
[241]	"C015"	"C016"	"C017"	"C018"	"C019"	"C021"
[247]	"C022"	"C023"	"C024"	"D001"	"D002"	"D003"
[253]	"D004"	"D005"	"D006"	"D007"	"D008"	"D009"
[259]	"D010"	"D011"	"D012"	"D013"	"D014"	"D015"
[265]	"D016"	"D017"	"D018"	"D019"	"D021"	"D022"
[271]	"D023"	"D024"	"D025"	"D026"	"E001"	"E002"
[277]	"E003"	"E004"	"E005"	"E007"	"E009"	"E016"
[283]	"E017"	"E023"	"E025"	"E026"	"E029"	"E033"
[289]	"E034"	"F003"	"F005"	"F006"	"F007"	"F008"
[295]	"F010"	"F011"	"F013"	"F014"	"foliohog"	"folioviv"
[301]	"G005"	"G009"	"G012"	"G013"	"G015"	"H001"
[307]	"H002"	"H003"	"H004"	"H005"	"H006"	"H008"
[313]	"H009"	"H013"	"H014"	"H015"	"H016"	"H017"
[319]	"H018"	"H019"	"H020"	"H021"	"H022"	"H023"
[325]	"H026"	"H027"	"H028"	"H029"	"H030"	"H033"
[331]	"H034"	"H035"	"H036"	"H038"	"H040"	"H041"
[337]	"H042"	"H043"	"H044"	"H045"	"H046"	"H047"
[343]	"H048"	"H049"	"H050"	"H054"	"H055"	"H056"
[349]	"H057"	"H058"	"H059"	"H060"	"H061"	"H062"
[355]	"H064"	"H065"	"H066"	"H067"	"H068"	"H069"
[361]	"H070"	"H071"	"H072"	"H073"	"H074"	"H075"
[367]	"H076"	"H077"	"H078"	"H081"	"H082"	"H083"
[373]	"H084"	"H086"	"H087"	"H088"	"H090"	"H092"

[379]	"H093"	"H094"	"H096"	"H098"	"H099"	"H100"
[385]	"H102"	"H103"	"H104"	"H105"	"H106"	"H108"
[391]	"H109"	"H110"	"H111"	"H112"	"H113"	"H114"
[397]	"H115"	"H116"	"H117"	"H118"	"H119"	"H120"
[403]	"H121"	"H122"	"H123"	"H124"	"H125"	"H126"
[409]	"H127"	"H128"	"H129"	"H130"	"H132"	"H134"
[415]	"H136"	"I002"	"I003"	"I004"	"I005"	"I006"
[421]	"I009"	"I010"	"I011"	"I016"	"I017"	"I018"
[427]	"I019"	"I020"	"I021"	"I022"	"I023"	"I024"
[433]	"I025"	"I026"	"J013"	"J016"	"J017"	"J020"
[439]	"J021"	"J024"	"J025"	"J026"	"J027"	"J028"
[445]	"J029"	"J030"	"J031"	"J032"	"J033"	"J035"
[451]	"J037"	"J040"	"J044"	"J045"	"J047"	"J048"
[457]	"J049"	"J050"	"J051"	"J052"	"J053"	"J054"
[463]	"J055"	"J059"	"J060"	"J061"	"J063"	"J064"
[469]	"J065"	"K001"	"K004"	"K007"	"K009"	"K010"
[475]	"K017"	"K024"	"K025"	"K026"	"K027"	"K028"
[481]	"K029"	"K030"	"K031"	"K032"	"K033"	"K036"
[487]	"K037"	"K038"	"K039"	"K040"	"K041"	"K045"
[493]	"L001"	"L005"	"L013"	"L016"	"L023"	"L027"
[499]	"L028"	"M001"	"M005"	"M006"	"M007"	"M008"
[505]	"M011"	"M012"	"M014"	"M016"	"M017"	"M018"
[511]	"N001"	"N003"	"N005"	"N010"	"Q006"	

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YA001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A018+A019+A020+A021+A022+A023+A024+A025+A027+A028+
    A029+A030+A031+A033+A034+A035+A036+A037+A038+A039+A040+A041+A042+A043+
    A044+A045+A046+A047+A048+A049+A050+A051+A052+A053+A054+A055+A056+A057+
    A058+A059+A060+A061+A062+A063+A064+A065+A066+A067+A068+A070+A071+A072+
    A073+A074+A075+A076+A077+A078+A079+A080+A081+A082+A083+A084+A085+A086+
    A087+A088+A089+A090+A091+A092+A093+A094+A095+A096+A097+A098+A099+A101+
    A102+A103+A104+A106+A107+A108+A109+A110+A111+A112+A113+A114+A115+A116+
    A117+A118+A119+A120+A121+A122+A123+A124+A125+A126+A127+A128+A129+A130+
    A131+A132+A133+A134+A135+A136+A137+A138+A139+A140+A141+A142+A143+A144+
    A145+A146+A147+A148+A149+A151+A152+A153+A154+A155+A156+A157+A158+A159+
    A160+A161+A162+A163+A164+A165+A166+A167+A168+A169+A170+A172+A173+A174+
    A175+A176+A177+A178+A179+A180+A181+A182+A183+A184+A185+A186+A187+A188+
    A189+A190+A191+A192+A193+A194+A195+A196+A198+A199+A200+A201+A202+A203+
    A205+A206+A207+A208+A209+A210+A211)%>%
  mutate(YA002=A213)%>%
  mutate(YA003=A215+A216+A217+A218+A219+A220+A221+A222)%>%
  mutate(YA004=A224+A225+A227+A228+A237)%>%
  mutate(YA005=A212)%>%
  mutate(YA006=A243+A244+A245+A246)%>%
  mutate(YA007=A239)%>%
  mutate(YA008=0)%>%
  mutate(YA009=B004+B005+B006+B007)%>%
  mutate(YA010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
    C014+C015+C016+C017+C018+C019)%>%
  mutate(YA011=C021+C022+C023+C024)%>%
  mutate(YA012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
    D014+D015+D016+D017+D018+D019+D021)%>%

```

```

mutate(YA013=D022+D023+D024+D025+D026)%>%
mutate(YA014=E001+E002+E003+E004+E005+E007+E009)%>%
mutate(YA015=E016+E017)%>%
mutate(YA016=E023+E025+E026)%>%
mutate(YA017=E029+E033+E034)%>%
mutate(YA018=F003+F005+F006)%>%
mutate(YA019=F007+F008+F010+F011+F013+F014)%>%
mutate(YA020=0)%>%
mutate(YA021=G005+G009+G012+G013+G015)%>%
mutate(YA022=H001+H002+H003+H004+H005+H006+H008+H009+H013+H014+H015+H016+H017+
      H018+H019+H020+H021+H022+H023+H026+H027+H028+H029+H030+H033+H034+H035+
      H036+H038+H040+H041+H042+H043+H044+H045+H046+H047+H048+H049+H050+H054+
      H055+H056+H057+H058+H059+H060+H061+H062+H064+H065+H066+H067+H068+H069+
      H070+H071+H072+H073+H074+H075+H076+H077+H078+H081+H082+H083+H084+H086+
      H087+H088+H090+H092+H093+H094+H096+H098+H099+H100+H102+H103+H104+H105+
      H106+H108+H109+H110+H111+H112+H113+H114+H115+H116+H117+H118+H119+H120+
      H121+H122+H123+H124+H125+H126+H127+H128+H129+H130+H132+H134+H136)%>%
mutate(YA023=I002+I003+I004+I005+I006+I009+I010+I011+I016+I017+I018+I019+I020+
      I021+I022+I023+I024+I025+I026)%>%
mutate(YA024=J016+J017+J020+J021+J024+J025+J026+J027+J028+J029+J030+J031+J032+
      J033+J035+J037+J063+J064)%>%
mutate(YA025=J040)%>%
mutate(YA026=J013)%>%
mutate(YA027=J044+J045+J047+J048+J049+J050+J051+J052+J053+J054+J055+J059+J060+
      J061)%>%
mutate(YA028=J065)%>%
mutate(YA029=0)%>%
mutate(YA030=0)%>%
mutate(YA031=0)%>%
mutate(YA032=K001+K004+K007+K009+K010+K017+K024+K025)%>%
mutate(YA033=K026+K027+K028+K029+K030+K031+K032+K033+K036+K037)%>%
mutate(YA034=K038+K039+K040+K041+K045)%>%
mutate(YA035=L001+L005+L013+L016+L023+L027+L028)%>%
mutate(YA036=M001+M005+M006)%>%
mutate(YA037=M007+M008+M011)%>%
mutate(YA038=M012+M014+M016+M017+M018)%>%
mutate(YA039=N001+N003+N005+N010)%>%
mutate(YA040=0)%>%
mutate(YA041=0)%>%
mutate(YA042=Q006)%>%
mutate(YA043=0)%>%
mutate(YA044=0)%>%
mutate(YA045=0)

```

Se guarda la tabla de autoconsumo:

```

agregado <- agregado %>%
  mutate(enc=2016) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog))
Autocon2016 <- agregado %>%
  select(enc, folioviv, foliohog, YA001, YA002, YA003, YA004, YA005, YA006, YA007, YA008, YA009,
        YA010, YA011, YA012, YA013, YA014, YA015, YA016, YA017, YA018, YA019, YA020, YA021,
        YA022, YA023, YA024, YA025, YA026, YA027, YA028, YA029, YA030, YA031, YA032, YA033,
        YA034, YA035, YA036, YA037, YA038, YA039, YA040, YA041, YA042, YA043, YA044, YA045)
remove(agregado)

```

Q. Tabla de autoconsumo de 2018

```
gasto <- read.dbf("Bases/2018/gastoshogar.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona autoconsumo:

```
gasto <- gasto %>% filter(tipo_gasto=="G3")
agregado <- gasto %>% group_by(folioviv,foliohog,clave) %>%
  summarise(gasto=sum(gas_nm_tri),.groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=c(folioviv,foliohog),values_from=gasto,names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)
```

[1]	"A001"	"A002"	"A003"	"A004"	"A005"	"A006"
[7]	"A007"	"A008"	"A009"	"A010"	"A011"	"A012"
[13]	"A013"	"A014"	"A015"	"A016"	"A017"	"A018"
[19]	"A019"	"A021"	"A022"	"A023"	"A024"	"A025"
[25]	"A026"	"A027"	"A029"	"A030"	"A031"	"A033"
[31]	"A034"	"A035"	"A036"	"A037"	"A038"	"A039"
[37]	"A040"	"A041"	"A042"	"A043"	"A044"	"A045"
[43]	"A046"	"A047"	"A048"	"A049"	"A050"	"A051"
[49]	"A052"	"A053"	"A054"	"A055"	"A056"	"A057"
[55]	"A058"	"A059"	"A060"	"A061"	"A062"	"A065"
[61]	"A066"	"A067"	"A068"	"A069"	"A070"	"A071"
[67]	"A072"	"A073"	"A074"	"A075"	"A076"	"A077"
[73]	"A078"	"A079"	"A080"	"A081"	"A082"	"A083"
[79]	"A084"	"A085"	"A086"	"A087"	"A088"	"A089"
[85]	"A090"	"A091"	"A092"	"A093"	"A094"	"A095"
[91]	"A096"	"A097"	"A098"	"A099"	"A101"	"A102"
[97]	"A103"	"A104"	"A105"	"A106"	"A107"	"A108"
[103]	"A109"	"A110"	"A111"	"A112"	"A113"	"A114"
[109]	"A115"	"A116"	"A117"	"A118"	"A119"	"A120"
[115]	"A121"	"A122"	"A123"	"A124"	"A125"	"A126"
[121]	"A127"	"A128"	"A129"	"A130"	"A131"	"A132"
[127]	"A133"	"A134"	"A135"	"A136"	"A137"	"A138"
[133]	"A139"	"A140"	"A141"	"A142"	"A143"	"A144"
[139]	"A145"	"A146"	"A147"	"A148"	"A149"	"A150"
[145]	"A151"	"A152"	"A153"	"A154"	"A155"	"A156"
[151]	"A157"	"A158"	"A159"	"A160"	"A161"	"A162"
[157]	"A163"	"A164"	"A165"	"A166"	"A167"	"A168"
[163]	"A169"	"A170"	"A171"	"A172"	"A173"	"A174"
[169]	"A175"	"A176"	"A177"	"A178"	"A179"	"A180"
[175]	"A181"	"A182"	"A183"	"A184"	"A185"	"A186"
[181]	"A187"	"A188"	"A189"	"A190"	"A191"	"A192"
[187]	"A193"	"A194"	"A195"	"A196"	"A198"	"A199"
[193]	"A200"	"A201"	"A202"	"A203"	"A205"	"A206"
[199]	"A207"	"A208"	"A209"	"A210"	"A211"	"A212"
[205]	"A213"	"A214"	"A215"	"A216"	"A217"	"A218"
[211]	"A219"	"A220"	"A221"	"A222"	"A224"	"A227"
[217]	"A228"	"A229"	"A233"	"A234"	"A239"	"A243"
[223]	"A244"	"A245"	"A246"	"B004"	"B005"	"B006"

[229]	"B007"	"C001"	"C002"	"C003"	"C004"	"C005"
[235]	"C006"	"C007"	"C008"	"C009"	"C010"	"C011"
[241]	"C012"	"C013"	"C014"	"C015"	"C016"	"C017"
[247]	"C018"	"C019"	"C020"	"C021"	"C022"	"C023"
[253]	"C024"	"D001"	"D002"	"D003"	"D004"	"D005"
[259]	"D006"	"D007"	"D008"	"D009"	"D010"	"D011"
[265]	"D012"	"D013"	"D014"	"D015"	"D016"	"D017"
[271]	"D018"	"D019"	"D021"	"D022"	"D023"	"D024"
[277]	"D025"	"D026"	"E001"	"E002"	"E003"	"E004"
[283]	"E005"	"E006"	"E013"	"E014"	"E017"	"E020"
[289]	"E023"	"E026"	"E027"	"F002"	"F003"	"F004"
[295]	"F005"	"F006"	"F007"	"F010"	"F011"	"F012"
[301]	"F013"	"F014"	"foliohog"	"folioviv"	"G003"	"G004"
[307]	"G009"	"G010"	"G012"	"G013"	"G014"	"G015"
[313]	"G016"	"H001"	"H002"	"H003"	"H004"	"H007"
[319]	"H008"	"H009"	"H013"	"H014"	"H015"	"H016"
[325]	"H017"	"H018"	"H020"	"H022"	"H023"	"H026"
[331]	"H027"	"H028"	"H029"	"H030"	"H031"	"H033"
[337]	"H034"	"H035"	"H036"	"H037"	"H038"	"H039"
[343]	"H040"	"H041"	"H042"	"H043"	"H044"	"H045"
[349]	"H046"	"H048"	"H049"	"H050"	"H053"	"H054"
[355]	"H055"	"H056"	"H057"	"H058"	"H060"	"H061"
[361]	"H062"	"H064"	"H065"	"H066"	"H067"	"H068"
[367]	"H069"	"H070"	"H071"	"H072"	"H073"	"H074"
[373]	"H075"	"H076"	"H077"	"H078"	"H079"	"H081"
[379]	"H082"	"H083"	"H084"	"H086"	"H090"	"H091"
[385]	"H092"	"H094"	"H096"	"H098"	"H099"	"H100"
[391]	"H102"	"H104"	"H105"	"H106"	"H108"	"H109"
[397]	"H110"	"H111"	"H112"	"H114"	"H115"	"H116"
[403]	"H117"	"H118"	"H120"	"H121"	"H122"	"H123"
[409]	"H124"	"H125"	"H126"	"H127"	"H128"	"H130"
[415]	"H131"	"H132"	"H133"	"H134"	"H136"	"I001"
[421]	"I002"	"I003"	"I004"	"I006"	"I007"	"I009"
[427]	"I011"	"I012"	"I014"	"I016"	"I017"	"I018"
[433]	"I019"	"I020"	"I021"	"I022"	"I023"	"I024"
[439]	"I025"	"I026"	"J007"	"J008"	"J014"	"J016"
[445]	"J018"	"J020"	"J021"	"J025"	"J029"	"J030"
[451]	"J031"	"J032"	"J033"	"J034"	"J035"	"J036"
[457]	"J041"	"J044"	"J045"	"J046"	"J048"	"J049"
[463]	"J050"	"J051"	"J052"	"J053"	"J054"	"J055"
[469]	"J056"	"J057"	"J059"	"J060"	"J061"	"J062"
[475]	"J063"	"J069"	"K001"	"K005"	"K007"	"K010"
[481]	"K012"	"K015"	"K016"	"K018"	"K019"	"K025"
[487]	"K027"	"K029"	"K031"	"K032"	"K033"	"K035"
[493]	"K036"	"K037"	"K038"	"K039"	"K040"	"K041"
[499]	"K042"	"K043"	"L005"	"L006"	"L010"	"L016"
[505]	"L020"	"L023"	"L024"	"L027"	"M001"	"M003"
[511]	"M005"	"M006"	"M007"	"M010"	"M014"	"M017"
[517]	"M018"	"N001"	"N002"	"N003"	"N004"	"N015"
[523]	"Q006"					

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YA001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+

```



```

A014+A015+A016+A017+A018+A019+A021+A022+A023+A024+A025+A026+A027+A029+
A030+A031+A033+A034+A035+A036+A037+A038+A039+A040+A041+A042+A043+A044+
A045+A046+A047+A048+A049+A050+A051+A052+A053+A054+A055+A056+A057+A058+
A059+A060+A061+A062+A065+A066+A067+A068+A069+A070+A071+A072+A073+A074+
A075+A076+A077+A078+A079+A080+A081+A082+A083+A084+A085+A086+A087+A088+
A089+A090+A091+A092+A093+A094+A095+A096+A097+A098+A099+A101+A102+A103+
A104+A105+A106+A107+A108+A109+A110+A111+A112+A113+A114+A115+A116+A117+
A118+A119+A120+A121+A122+A123+A124+A125+A126+A127+A128+A129+A130+A131+
A132+A133+A134+A135+A136+A137+A138+A139+A140+A141+A142+A143+A144+A145+
A146+A147+A148+A149+A150+A151+A152+A153+A154+A155+A156+A157+A158+A159+
A160+A161+A162+A163+A164+A165+A166+A167+A168+A169+A170+A171+A172+A173+
A174+A175+A176+A177+A178+A179+A180+A181+A182+A183+A184+A185+A186+A187+
A188+A189+A190+A191+A192+A193+A194+A195+A196+A198+A199+A200+A201+A202+
A203+A205+A206+A207+A208+A209+A210+A211)%>%
mutate(YA002=A213+A214)%>%
mutate(YA003=A215+A216+A217+A218+A219+A220+A221+A222)%>%
mutate(YA004=A224+A227+A228+A229+A233+A234)%>%
mutate(YA005=A212)%>%
mutate(YA006=A243+A244+A245+A246)%>%
mutate(YA007=A239)%>%
mutate(YA008=0)%>%
mutate(YA009=B004+B005+B006+B007)%>%
mutate(YA010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
C014+C015+C016+C017+C018+C019)%>%
mutate(YA011=C020+C021+C022+C023+C024)%>%
mutate(YA012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
D014+D015+D016+D017+D018+D019+D021)%>%
mutate(YA013=D022+D023+D024+D025+D026)%>%
mutate(YA014=E001+E002+E003+E004+E005+E006+E013)%>%
mutate(YA015=E014+E017+E020)%>%
mutate(YA016=E023+E026)%>%
mutate(YA017=E027)%>%
mutate(YA018=F002+F003+F004+F005+F006)%>%
mutate(YA019=F007+F010+F011+F012+F013+F014)%>%
mutate(YA020=G003+G004)%>%
mutate(YA021=G009+G010+G012+G013+G014+G015+G016)%>%
mutate(YA022=H001+H002+H003+H004+H007+H008+H009+H013+H014+H015+H016+H017+H018+
H020+H022+H023+H026+H027+H028+H029+H030+H031+H033+H034+H035+H036+H037+
H038+H039+H040+H041+H042+H043+H044+H045+H046+H048+H049+H050+H053+H054+
H055+H056+H057+H058+H060+H061+H062+H064+H065+H066+H067+H068+H069+H070+
H071+H072+H073+H074+H075+H076+H077+H078+H079+H081+H082+H083+H084+H086+
H090+H091+H092+H094+H096+H098+H099+H100+H102+H104+H105+H106+H108+H109+
H110+H111+H112+H114+H115+H116+H117+H118+H120+H121+H122+H123+H124+H125+
H126+H127+H128+H130+H131+H132+H133+H134+H136)%>%
mutate(YA023=I001+I002+I003+I004+I006+I007+I009+I011+I012+I014+I016+I017+I018+
I019+I020+I021+I022+I023+I024+I025+I026)%>%
mutate(YA024=J016+J018+J020+J021+J025+J029+J030+J031+J032+J033+J034+J035+J036+
J062+J063)%>%
mutate(YA025=J041)%>%
mutate(YA026=J007+J008+J014)%>%
mutate(YA027=J044+J045+J046+J048+J049+J050+J051+J052+J053+J054+J055+J056+J057+
J059+J060+J061)%>%
mutate(YA028=0)%>%
mutate(YA029=J069)%>%
mutate(YA030=0)%>%

```

```
mutate(YA031=0)%>%
mutate(YA032=K001+K005+K007+K010+K012+K015+K016+K018+K019+K025)%>%
mutate(YA033=K027+K029+K031+K032+K033+K035+K036+K037)%>%
mutate(YA034=K038+K039+K040+K041+K042+K043)%>%
mutate(YA035=L005+L006+L010+L016+L020+L023+L024+L027)%>%
mutate(YA036=M001+M003+M005+M006)%>%
mutate(YA037=M007+M010)%>%
mutate(YA038=M014+M017+M018)%>%
mutate(YA039=N001+N002+N003+N004)%>%
mutate(YA040=N015)%>%
mutate(YA041=0)%>%
mutate(YA042=Q006)%>%
mutate(YA043=0)%>%
mutate(YA044=0)%>%
mutate(YA045=0)
```

Se guarda la tabla de autoconsumo:

```
agregado <- agregado %>%
  mutate(enc=2018) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog))
Autocon2018 <- agregado %>%
  select(enc, folioviv, foliohog, YA001, YA002, YA003, YA004, YA005, YA006, YA007, YA008, YA009,
        YA010, YA011, YA012, YA013, YA014, YA015, YA016, YA017, YA018, YA019, YA020, YA021,
        YA022, YA023, YA024, YA025, YA026, YA027, YA028, YA029, YA030, YA031, YA032, YA033,
        YA034, YA035, YA036, YA037, YA038, YA039, YA040, YA041, YA042, YA043, YA044, YA045)
remove(agregado)
```

R. Tabla de autoconsumo de 2020

```
gasto <- read.dbf("Bases/2020/gastoshogar.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona autoconsumo:

```
gasto <- gasto %>% filter(tipo_gasto=="G3")
agregado <- gasto %>% group_by(folioviv, foliohog, clave) %>%
  summarise(gasto=sum(gas_nm_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave)
agregado <- agregado %>%
  pivot_wider(id_cols=c(folioviv, foliohog), values_from=gasto, names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)
```

[1]	"A001"	"A002"	"A003"	"A004"	"A005"	"A006"
[7]	"A007"	"A008"	"A009"	"A010"	"A011"	"A012"
[13]	"A013"	"A014"	"A015"	"A016"	"A017"	"A018"
[19]	"A019"	"A020"	"A021"	"A022"	"A023"	"A024"
[25]	"A025"	"A026"	"A027"	"A028"	"A029"	"A030"
[31]	"A031"	"A032"	"A033"	"A034"	"A035"	"A036"
[37]	"A037"	"A038"	"A039"	"A040"	"A041"	"A042"
[43]	"A043"	"A044"	"A045"	"A046"	"A047"	"A048"
[49]	"A049"	"A050"	"A051"	"A052"	"A053"	"A054"

[55]	"A055"	"A056"	"A057"	"A058"	"A059"	"A060"
[61]	"A061"	"A062"	"A063"	"A064"	"A065"	"A066"
[67]	"A067"	"A068"	"A069"	"A070"	"A071"	"A072"
[73]	"A073"	"A074"	"A075"	"A076"	"A077"	"A078"
[79]	"A079"	"A080"	"A081"	"A082"	"A083"	"A084"
[85]	"A085"	"A086"	"A087"	"A088"	"A089"	"A090"
[91]	"A091"	"A092"	"A093"	"A094"	"A095"	"A096"
[97]	"A097"	"A098"	"A099"	"A100"	"A101"	"A102"
[103]	"A103"	"A104"	"A106"	"A107"	"A108"	"A109"
[109]	"A110"	"A111"	"A112"	"A113"	"A114"	"A115"
[115]	"A116"	"A117"	"A118"	"A119"	"A120"	"A121"
[121]	"A122"	"A123"	"A124"	"A125"	"A126"	"A127"
[127]	"A128"	"A129"	"A130"	"A131"	"A132"	"A133"
[133]	"A134"	"A135"	"A136"	"A137"	"A138"	"A139"
[139]	"A140"	"A141"	"A142"	"A143"	"A144"	"A145"
[145]	"A146"	"A147"	"A148"	"A149"	"A151"	"A152"
[151]	"A153"	"A154"	"A155"	"A156"	"A157"	"A158"
[157]	"A159"	"A160"	"A161"	"A162"	"A163"	"A164"
[163]	"A165"	"A166"	"A167"	"A168"	"A169"	"A170"
[169]	"A171"	"A172"	"A173"	"A174"	"A175"	"A176"
[175]	"A177"	"A178"	"A179"	"A180"	"A181"	"A182"
[181]	"A183"	"A184"	"A185"	"A186"	"A187"	"A188"
[187]	"A189"	"A190"	"A191"	"A192"	"A193"	"A194"
[193]	"A195"	"A196"	"A198"	"A199"	"A200"	"A201"
[199]	"A202"	"A203"	"A204"	"A205"	"A206"	"A207"
[205]	"A208"	"A209"	"A210"	"A211"	"A212"	"A213"
[211]	"A214"	"A215"	"A216"	"A217"	"A218"	"A219"
[217]	"A220"	"A221"	"A222"	"A224"	"A226"	"A228"
[223]	"A229"	"A237"	"A239"	"A243"	"A244"	"A245"
[229]	"A246"	"B002"	"B004"	"B005"	"B007"	"C001"
[235]	"C002"	"C003"	"C004"	"C005"	"C006"	"C007"
[241]	"C008"	"C009"	"C010"	"C011"	"C012"	"C013"
[247]	"C014"	"C015"	"C016"	"C017"	"C018"	"C019"
[253]	"C020"	"C021"	"C022"	"C023"	"C024"	"D001"
[259]	"D002"	"D003"	"D004"	"D005"	"D006"	"D007"
[265]	"D008"	"D009"	"D010"	"D011"	"D012"	"D013"
[271]	"D014"	"D015"	"D016"	"D017"	"D018"	"D021"
[277]	"D022"	"D023"	"D024"	"D025"	"D026"	"E001"
[283]	"E002"	"E003"	"E004"	"E005"	"E014"	"E016"
[289]	"E017"	"E020"	"E026"	"E032"	"F002"	"F003"
[295]	"F004"	"F006"	"F007"	"F010"	"F011"	"F012"
[301]	"F013"	"F014"	"foliohog"	"folioviv"	"G009"	"G010"
[307]	"G012"	"G013"	"G015"	"G016"	"H001"	"H002"
[313]	"H003"	"H004"	"H005"	"H006"	"H007"	"H008"
[319]	"H009"	"H010"	"H012"	"H013"	"H014"	"H015"
[325]	"H016"	"H017"	"H018"	"H019"	"H020"	"H021"
[331]	"H022"	"H023"	"H026"	"H027"	"H028"	"H029"
[337]	"H030"	"H032"	"H033"	"H034"	"H035"	"H036"
[343]	"H037"	"H038"	"H040"	"H041"	"H042"	"H043"
[349]	"H044"	"H045"	"H046"	"H047"	"H048"	"H049"
[355]	"H050"	"H051"	"H053"	"H054"	"H055"	"H056"
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[367]	"H063"	"H064"	"H065"	"H066"	"H067"	"H068"
[373]	"H069"	"H070"	"H071"	"H072"	"H073"	"H074"
[379]	"H075"	"H076"	"H077"	"H078"	"H080"	"H081"

[385]	"H082"	"H083"	"H084"	"H086"	"H088"	"H089"
[391]	"H090"	"H092"	"H093"	"H094"	"H096"	"H098"
[397]	"H099"	"H100"	"H102"	"H103"	"H104"	"H105"
[403]	"H106"	"H107"	"H108"	"H109"	"H110"	"H111"
[409]	"H112"	"H114"	"H115"	"H116"	"H117"	"H118"
[415]	"H119"	"H120"	"H121"	"H122"	"H123"	"H124"
[421]	"H125"	"H126"	"H127"	"H128"	"H129"	"H130"
[427]	"H131"	"H132"	"H133"	"H134"	"H136"	"I001"
[433]	"I002"	"I003"	"I004"	"I005"	"I006"	"I007"
[439]	"I008"	"I009"	"I011"	"I012"	"I014"	"I015"
[445]	"I016"	"I017"	"I018"	"I019"	"I020"	"I021"
[451]	"I022"	"I023"	"I024"	"I025"	"I026"	"J009"
[457]	"J016"	"J018"	"J019"	"J020"	"J025"	"J026"
[463]	"J027"	"J028"	"J029"	"J030"	"J032"	"J033"
[469]	"J035"	"J037"	"J043"	"J044"	"J045"	"J047"
[475]	"J048"	"J049"	"J050"	"J051"	"J052"	"J053"
[481]	"J054"	"J055"	"J056"	"J057"	"J059"	"J060"
[487]	"J061"	"J062"	"J063"	"J064"	"J065"	"J069"
[493]	"K001"	"K004"	"K006"	"K007"	"K008"	"K009"
[499]	"K010"	"K011"	"K012"	"K015"	"K017"	"K019"
[505]	"K020"	"K022"	"K024"	"K025"	"K027"	"K028"
[511]	"K029"	"K030"	"K031"	"K032"	"K033"	"K034"
[517]	"K036"	"K037"	"K038"	"K039"	"K040"	"K041"
[523]	"K043"	"K044"	"K045"	"L007"	"L008"	"L010"
[529]	"L014"	"L016"	"L023"	"L025"	"L027"	"L029"
[535]	"M001"	"M003"	"M005"	"M006"	"M008"	"M010"
[541]	"M011"	"M012"	"M013"	"M014"	"M016"	"M017"
[547]	"M018"	"N001"	"N003"	"N004"	"N010"	"N015"
[553]	"Q006"					

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YA001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A018+A019+A020+A021+A022+A023+A024+A025+A026+A027+
    A028+A029+A030+A031+A032+A033+A034+A035+A036+A037+A038+A039+A040+A041+
    A042+A043+A044+A045+A046+A047+A048+A049+A050+A051+A052+A053+A054+A055+
    A056+A057+A058+A059+A060+A061+A062+A063+A064+A065+A066+A067+A068+A069+
    A070+A071+A072+A073+A074+A075+A076+A077+A078+A079+A080+A081+A082+A083+
    A084+A085+A086+A087+A088+A089+A090+A091+A092+A093+A094+A095+A096+A097+
    A098+A099+A100+A101+A102+A103+A104+A106+A107+A108+A109+A110+A111+A112+
    A113+A114+A115+A116+A117+A118+A119+A120+A121+A122+A123+A124+A125+A126+
    A127+A128+A129+A130+A131+A132+A133+A134+A135+A136+A137+A138+A139+A140+
    A141+A142+A143+A144+A145+A146+A147+A148+A149+A151+A152+A153+A154+A155+
    A156+A157+A158+A159+A160+A161+A162+A163+A164+A165+A166+A167+A168+A169+
    A170+A171+A172+A173+A174+A175+A176+A177+A178+A179+A180+A181+A182+A183+
    A184+A185+A186+A187+A188+A189+A190+A191+A192+A193+A194+A195+A196+A198+
    A199+A200+A201+A202+A203+A204+A205+A206+A207+A208+A209+A210+A211)%>%
  mutate(YA002=A213+A214)%>%
  mutate(YA003=A215+A216+A217+A218+A219+A220+A221+A222)%>%
  mutate(YA004=A224+A226+A228+A229+A237)%>%
  mutate(YA005=A212)%>%
  mutate(YA006=A243+A244+A245+A246)%>%
  mutate(YA007=A239)%>%
  mutate(YA008=0)%>%

```

```

mutate(YA009=B002+B004+B005+B007)%>%
mutate(YA010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
        C014+C015+C016+C017+C018+C019)%>%
mutate(YA011=C020+C021+C022+C023+C024)%>%
mutate(YA012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
        D014+D015+D016+D017+D018+D021)%>%
mutate(YA013=D022+D023+D024+D025+D026)%>%
mutate(YA014=E001+E002+E003+E004+E005)%>%
mutate(YA015=E014+E016+E017+E020)%>%
mutate(YA016=E026)%>%
mutate(YA017=E032)%>%
mutate(YA018=F002+F003+F004+F006)%>%
mutate(YA019=F007+F010+F011+F012+F013+F014)%>%
mutate(YA020=0)%>%
mutate(YA021=G009+G010+G012+G013+G015+G016)%>%
mutate(YA022=H001+H002+H003+H004+H005+H006+H007+H008+H009+H010+H012+H013+H014+
        H015+H016+H017+H018+H019+H020+H021+H022+H023+H026+H027+H028+H029+H030+
        H032+H033+H034+H035+H036+H037+H038+H040+H041+H042+H043+H044+H045+H046+
        H047+H048+H049+H050+H051+H053+H054+H055+H056+H057+H058+H059+H060+H061+
        H062+H063+H064+H065+H066+H067+H068+H069+H070+H071+H072+H073+H074+H075+
        H076+H077+H078+H080+H081+H082+H083+H084+H086+H088+H089+H090+H092+H093+
        H094+H096+H098+H099+H100+H102+H103+H104+H105+H106+H107+H108+H109+H110+
        H111+H112+H114+H115+H116+H117+H118+H119+H120+H121+H122+H123+H124+H125+
        H126+H127+H128+H129+H130+H131+H132+H133+H134+H136)%>%
mutate(YA023=I001+I002+I003+I004+I005+I006+I007+I008+I009+I011+I012+I014+I015+
        I016+I017+I018+I019+I020+I021+I022+I023+I024+I025+I026)%>%
mutate(YA024=J016+J018+J019+J020+J025+J026+J027+J028+J029+J030+J032+J033+J035+
        J037+J062+J063+J064)%>%
mutate(YA025=J043)%>%
mutate(YA026=J009)%>%
mutate(YA027=J044+J045+J047+J048+J049+J050+J051+J052+J053+J054+J055+J056+J057+
        J059+J060+J061)%>%
mutate(YA028=J065)%>%
mutate(YA029=J069)%>%
mutate(YA030=0)%>%
mutate(YA031=0)%>%
mutate(YA032=K001+K004+K006+K007+K008+K009+K010+K011+K012+K015+K017+K019+K020+
        K022+K024+K025)%>%
mutate(YA033=K027+K028+K029+K030+K031+K032+K033+K034+K036+K037)%>%
mutate(YA034=K038+K039+K040+K041+K043+K044+K045)%>%
mutate(YA035=L007+L008+L010+L014+L016+L023+L025+L027+L029)%>%
mutate(YA036=M001+M003+M005+M006)%>%
mutate(YA037=M008+M010+M011)%>%
mutate(YA038=M012+M013+M014+M016+M017+M018)%>%
mutate(YA039=N001+N003+N004+N010)%>%
mutate(YA040=N015)%>%
mutate(YA041=0)%>%
mutate(YA042=Q006)%>%
mutate(YA043=0)%>%
mutate(YA044=0)%>%
mutate(YA045=0)

```

Se guarda la tabla de autoconsumo:

```
agregado <- agregado %>%
  mutate(enc=2020) %>%
  mutate(folioviv=as.numeric(folioviv)) %>%
  mutate(foliohog=as.numeric(foliohog))
Autocon2020 <- agregado %>%
  select(enc, folioviv, foliohog, YA001, YA002, YA003, YA004, YA005, YA006, YA007, YA008, YA009,
        YA010, YA011, YA012, YA013, YA014, YA015, YA016, YA017, YA018, YA019, YA020, YA021,
        YA022, YA023, YA024, YA025, YA026, YA027, YA028, YA029, YA030, YA031, YA032, YA033,
        YA034, YA035, YA036, YA037, YA038, YA039, YA040, YA041, YA042, YA043, YA044, YA045)
remove(agregado)
```

Se genera el cuadro de control. De acuerdo con la definición de la última construcción del INEGI, se han excluido para el cuadro de control las claves de gasto Q001 a Q016 y K038 a K045, es decir, se excluyen las claves Y034 (mantenimiento de la vivienda), clave Y041-Y044 (financieras), y las claves Y045 (regalos en especie) y Y046 (balance negativo del negocio).

Cuadro 19
Autoconsumo: cuadro de control

enc	Hogares	Autoconsumo
1984	4 498 771	66 415 332
1989	4 174 861	1 148 682 817
1992	4 843 566	2 190 893 116
1994	4 816 486	2 410 438 492
1996	3 908 311	2 916 685 302
1998	3 686 915	4 253 985 342
2000	3 912 508	5 363 093 544
2002	3 854 610	5 747 671 094
2004	3 336 769	5 479 655 417
2005	3 490 270	5 720 896 277
2006	4 308 747	7 554 863 320
2008	3 885 050	8 603 938 773
2010	3 225 106	7 810 714 165
2012	4 320 393	10 518 693 400
2014	3 869 946	8 176 445 172
2016	4 041 708	9 985 958 615
2018	4 289 969	11 921 919 886
2020	4 739 479	13 705 012 470

Fuente: Elaboración propia.

VII. Base estimación del alquiler homologada de la ENIGH

A. Tabla de alquiler imputado de 1984

```
gasto <- read.dbf("Bases/1984/nomon.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona estimación del alquiler y se cambia a nuevos pesos:

```
gasto <- gasto %>% filter(tipo_gas=="4")
gasto <- gasto %>% mutate(estim_tri=gas_tri/1000)
```

Se guarda la tabla de estimación del alquiler:

```
gasto <- gasto %>% mutate(enc=1984)
gasto <- gasto %>% mutate(folioviv=substr(folio,5,11))
gasto <- gasto %>% mutate(folioviv=as.numeric(folioviv))
gasto <- gasto %>% mutate(foliohog=1)
Alquiler1984 <- gasto %>% select(enc,folioviv,foliohog,estim_tri)
remove(gasto)
```

B. Tabla de alquiler imputado de 1989

```
gasto <- read.dbf("Bases/1989/nomon.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona estimación del alquiler y se cambia a nuevos pesos:

```
gasto <- gasto %>% filter(tipo_gas=="4")
gasto <- gasto %>% mutate(estim_tri=gas_tri/1000)
```

Se guarda la tabla de estimación del alquiler:

```
gasto <- gasto %>% mutate(enc=1989)
gasto <- gasto %>% mutate(folioviv=substr(folio,5,11))
```

```
gasto <- gasto %>% mutate(folioviv=as.numeric(folioviv))
gasto <- gasto %>% mutate(foliohog=1)
Alquiler1989 <- gasto %>% select(enc,folioviv,foliohog,estim_tri)
remove(gasto)
```

C. Tabla de alquiler imputado de 1992

```
gasto <- read.dbf("Bases/1992/nomon.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona estimación del alquiler y se cambia a nuevos pesos:

```
gasto <- gasto %>% filter(tipo_gas=="0")
gasto <- gasto %>% mutate(estim_tri=gas_tri/1000)
```

Se guarda la tabla de estimación del alquiler:

```
gasto <- gasto %>% mutate(enc=1992)
gasto <- gasto %>% mutate(folioviv=substr(folio,5,10))
gasto <- gasto %>% mutate(foliohog=substr(folio,11,11))
gasto <- gasto %>% mutate(folioviv=as.numeric(folioviv))
gasto <- gasto %>% mutate(foliohog=as.numeric(foliohog))
gasto <- gasto %>% mutate(foliohog=foliohog+1)
Alquiler1992 <- gasto %>% select(enc,folioviv,foliohog,estim_tri)
remove(gasto)
```

D. Tabla de alquiler imputado de 1994

```
gasto <- read.dbf("Bases/1994/nomon.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona estimación del alquiler:

```
gasto <- gasto %>% filter(tipo_gas=="0")
```

Se guarda la tabla de estimación del alquiler:

```
gasto <- gasto %>% mutate(enc=1994)
gasto <- gasto %>% mutate(folioviv=substr(folio,5,10))
gasto <- gasto %>% mutate(foliohog=substr(folio,11,11))
gasto <- gasto %>% mutate(folioviv=as.numeric(folioviv))
gasto <- gasto %>% mutate(foliohog=as.numeric(foliohog))
gasto <- gasto %>% mutate(foliohog=foliohog+1)
Alquiler1994 <- gasto %>% select(enc,folioviv,foliohog,estim_tri=gas_tri)
remove(gasto)
```

E. Tabla de alquiler imputado de 1996

```
gasto <- read.dbf("Bases/1996/nomon.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona estimación del alquiler:

```
gasto <- gasto %>% filter(tipo_gas=="0")
```

Se guarda la tabla de estimación del alquiler:

```
gasto <- gasto %>% mutate(enc=1996)
gasto <- gasto %>% mutate(folioviv=substr(folio,5,10))
```

```
gasto <- gasto %>% mutate(foliohog=substr(folio,11,11))
gasto <- gasto %>% mutate(folioviv=as.numeric(folioviv))
gasto <- gasto %>% mutate(foliohog=as.numeric(foliohog))
gasto <- gasto %>% mutate(foliohog=foliohog+1)
Alquiler1996 <- gasto %>% select(enc,folioviv,foliohog,estim_tri=gas_tri)
remove(gasto)
```

F. Tabla de alquiler imputado de 1998

```
gasto <- read.dbf("Bases/1998/nomon.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona estimación del alquiler:

```
gasto <- gasto %>% filter(tipo_gas=="0")
```

Se guarda la tabla de estimación del alquiler:

```
gasto <- gasto %>% mutate(enc=1998)
gasto <- gasto %>% mutate(folioviv=substr(folio,5,10))
gasto <- gasto %>% mutate(foliohog=substr(folio,11,11))
gasto <- gasto %>% mutate(folioviv=as.numeric(folioviv))
gasto <- gasto %>% mutate(foliohog=as.numeric(foliohog))
gasto <- gasto %>% mutate(foliohog=foliohog+1)
Alquiler1998 <- gasto %>% select(enc,folioviv,foliohog,estim_tri=gas_tri)
remove(gasto)
```

G. Tabla de alquiler imputado de 2000

```
gasto <- read.dbf("Bases/2000/nomon.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona estimación del alquiler:

```
gasto <- gasto %>%
  filter(tipo_gas=="0"&(clave=="G001" | clave=="G007" | clave=="G010" | clave=="G015"))
```

Se guarda la tabla de estimación del alquiler:

```
gasto <- gasto %>% mutate(enc=2000)
gasto <- gasto %>% mutate(folioviv=substr(folio,5,11))
gasto <- gasto %>% mutate(foliohog=substr(folio,12,12))
gasto <- gasto %>% mutate(folioviv=as.numeric(folioviv))
gasto <- gasto %>% mutate(foliohog=as.numeric(foliohog))
gasto <- gasto %>% mutate(foliohog=foliohog+1)
Alquiler2000 <- gasto %>% select(enc,folioviv,foliohog,estim_tri=gas_tri)
remove(gasto)
```

Tabla de alquiler imputado de 2002

```
gasto <- read.dbf("Bases/2002/nomon.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona estimación del alquiler:

```
gasto <- gasto %>%
  filter(tipo_gas=="0"&(clave=="G007" | clave=="G017" | clave=="G022" | clave=="G032"))
```

Se guarda la tabla de estimación del alquiler:

```
gasto <- gasto %>% mutate(enc=2002)
gasto <- gasto %>% mutate(folioviv=substr(folio,5,10))
gasto <- gasto %>% mutate(foliohog=substr(folio,11,11))
gasto <- gasto %>% mutate(folioviv=as.numeric(folioviv))
gasto <- gasto %>% mutate(foliohog=as.numeric(foliohog))
gasto <- gasto %>% mutate(foliohog=foliohog+1)
Alquiler2002 <- gasto %>% select(enc,folioviv,foliohog,estim_tri=gas_tri)
remove(gasto)
```

H. Tabla de alquiler imputado de 2004

```
gasto <- read.dbf("Bases/2004/nomon.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona estimación del alquiler:

```
gasto <- gasto %>%
  filter(tipo_gas=="0"&(clave=="G012" | clave=="G014" | clave=="G016" | clave=="G018"))
```

Se guarda la tabla de estimación del alquiler:

```
gasto <- gasto %>% mutate(enc=2004)
gasto <- gasto %>% mutate(folioviv=substr(folio,5,10))
gasto <- gasto %>% mutate(foliohog=substr(folio,11,11))
gasto <- gasto %>% mutate(folioviv=as.numeric(folioviv))
gasto <- gasto %>% mutate(foliohog=as.numeric(foliohog))
gasto <- gasto %>% mutate(foliohog=foliohog+1)
Alquiler2004 <- gasto %>% select(enc,folioviv,foliohog,estim_tri=gas_tri)
remove(gasto)
```

I. Tabla de alquiler imputado de 2005

```
gasto <- read.dbf("Bases/2005/nomon.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona estimación del alquiler:

```
gasto <- gasto %>%
  filter(tipo_gas=="0"&(clave=="G012" | clave=="G014" | clave=="G016" | clave=="G018"))
```

Se guarda la tabla de estimación del alquiler:

```
gasto <- gasto %>% mutate(enc=2005)
gasto <- gasto %>% mutate(folioviv=substr(folio,5,10))
gasto <- gasto %>% mutate(foliohog=substr(folio,11,11))
gasto <- gasto %>% mutate(folioviv=as.numeric(folioviv))
gasto <- gasto %>% mutate(foliohog=as.numeric(foliohog))
gasto <- gasto %>% mutate(foliohog=foliohog+1)
Alquiler2005 <- gasto %>% select(enc,folioviv,foliohog,estim_tri=gas_tri)
remove(gasto)
```

J. Tabla de alquiler imputado de 2006

```
gasto <- read.dbf("Bases/2006/nomon.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona estimación del alquiler:

```
gasto <- gasto %>%
  filter(tipo_gas=="0"&(clave=="G013" | clave=="G015" | clave=="G017" | clave=="G019"))
```

Se guarda la tabla de estimación del alquiler:

```
gasto <- gasto %>% mutate(enc=2006)
gasto <- gasto %>% mutate(folioviv=substr(folio,5,10))
gasto <- gasto %>% mutate(foliohog=substr(folio,11,11))
gasto <- gasto %>% mutate(folioviv=as.numeric(folioviv))
gasto <- gasto %>% mutate(foliohog=as.numeric(foliohog))
gasto <- gasto %>% mutate(foliohog=foliohog+1)
Alquiler2006 <- gasto %>% select(enc,folioviv,foliohog,estim_tri=gas_tri)
remove(gasto)
```

K. Tabla de alquiler imputado de 2008

```
gasto <- read.dbf("Bases/2008/hogares.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona estimación del alquiler:

```
gasto <- gasto %>% filter(estim32tri>0)
```

Se guarda la tabla de estimación del alquiler:

```
gasto <- gasto %>% mutate(enc=2008)
gasto <- gasto %>% mutate(folioviv=as.numeric(folioviv))
gasto <- gasto %>% mutate(foliohog=as.numeric(foliohog))
gasto <- gasto %>% mutate(foliohog=foliohog+1)
Alquiler2008 <- gasto %>% select(enc,folioviv,foliohog,estim_tri=estim32tri)
remove(gasto)
```

L. Tabla de alquiler imputado de 2010

```
gasto <- read.dbf("Bases/2010/hogares.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona estimación del alquiler:

```
gasto <- gasto %>% filter(estim_tri>0)
```

Se guarda la tabla de estimación del alquiler:

```
gasto <- gasto %>% mutate(enc=2010)
gasto <- gasto %>% mutate(folioviv=as.numeric(folioviv))
gasto <- gasto %>% mutate(foliohog=as.numeric(foliohog))
gasto <- gasto %>% mutate(foliohog=foliohog+1)
Alquiler2010 <- gasto %>% select(enc,folioviv,foliohog,estim_tri)
remove(gasto)
```

M. Tabla de alquiler imputado de 2012

```
gasto <- read.dbf("Bases/2012/gastohogar.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona estimación del alquiler:

```
gasto <- gasto %>% filter(tipo_gasto=="G7")
```

Se guarda la tabla de estimación del alquiler:

```
gasto <- gasto %>% mutate(enc=2012)
gasto <- gasto %>% mutate(folioviv=as.numeric(folioviv))
gasto <- gasto %>% mutate(foliohog=as.numeric(foliohog))
gasto <- gasto %>% mutate(foliohog=foliohog+1)
Alquiler2012 <- gasto %>% select(enc,folioviv,foliohog,estim_tri=gas_nm_tri)
remove(gasto)
```

N. Tabla de alquiler imputado de 2014

```
gasto <- read.dbf("Bases/2014/gastohogar.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona estimación del alquiler:

```
gasto <- gasto %>% filter(tipo_gasto=="G7")
```

Se guarda la tabla de estimación del alquiler:

```
gasto <- gasto %>% mutate(enc=2014)
gasto <- gasto %>% mutate(folioviv=as.numeric(folioviv))
gasto <- gasto %>% mutate(foliohog=as.numeric(foliohog))
Alquiler2014 <- gasto %>% select(enc,folioviv,foliohog,estim_tri=gas_nm_tri)
remove(gasto)
```

O. Tabla de alquiler imputado de 2016

```
gasto <- read.dbf("Bases/2016/gastoshogar.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona estimación del alquiler:

```
gasto <- gasto %>% filter(tipo_gasto=="G7")
```

Se guarda la tabla de estimación del alquiler:

```
gasto <- gasto %>% mutate(enc=2016)
gasto <- gasto %>% mutate(folioviv=as.numeric(folioviv))
gasto <- gasto %>% mutate(foliohog=as.numeric(foliohog))
Alquiler2016 <- gasto %>% select(enc,folioviv,foliohog,estim_tri=gas_nm_tri)
remove(gasto)
```

P. Tabla de alquiler imputado de 2018

```
gasto <- read.dbf("Bases/2018/gastoshogar.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona estimación del alquiler:

```
gasto <- gasto %>% filter(tipo_gasto=="G7")
```

Se guarda la tabla de estimación del alquiler:

```
gasto <- gasto %>% mutate(enc=2018)
gasto <- gasto %>% mutate(folioviv=as.numeric(folioviv))
```

```
gasto <- gasto %>% mutate(foliohog=as.numeric(foliohog))
Alquiler2018 <- gasto %>% select(enc,folioviv,foliohog,estim_tri=gas_nm_tri)
remove(gasto)
```

Q. Tabla de alquiler imputado de 2020

```
gasto <- read.dbf("Bases/2020/gastoshogar.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona estimación del alquiler:

```
gasto <- gasto %>% filter(tipo_gasto=="G7")
```

Se guarda la tabla de estimación del alquiler:

```
gasto <- gasto %>% mutate(enc=2020)
gasto <- gasto %>% mutate(folioviv=as.numeric(folioviv))
gasto <- gasto %>% mutate(foliohog=as.numeric(foliohog))
Alquiler2020 <- gasto %>% select(enc,folioviv,foliohog,estim_tri=gas_nm_tri)
remove(gasto)
```

Se genera el cuadro de control.

Cuadro 20
Alquiler imputado: cuadro de control

enc	Hogares	PagoAlquiler
1984	12 152 925	279 421 159
1989	13 325 778	7 819 081 183
1992	16 115 627	20 612 681 210
1994	16 957 684	27 584 020 507
1996	17 799 239	32 577 292 500
1998	19 035 625	44 561 992 602
2000	20 195 017	71 834 498 032
2002	21 003 340	75 819 974 654
2004	21 465 027	89 179 966 006
2005	21 551 078	92 403 070 776
2006	22 976 173	104 171 370 035
2008	23 421 389	112 245 943 993
2010	24 848 977	136 635 938 146
2012	26 356 266	145 006 771 233
2014	27 063 836	158 263 131 547
2016	28 091 301	175 588 713 657
2018	29 010 993	195 882 657 274
2020	29 892 621	234 819 318 581

Fuente: Elaboración propia.

VIII. Base de apoyos homologada de la ENIGH

Si bien los apoyos en especie no se incluirán en la definición del Ingreso disponible, se ha construido una base de datos con el propósito de conocer qué tipo de apoyos se brindan, así como su trayectoria en el tiempo (véase cuadro AM.21 del anexo metodológico). Por otro lado, se ha conformado la base Nuevas transferencias, en donde se han incluido las nuevas transferencias que el gobierno federal ha comenzado a otorgar y el instituto no consideró en la construcción de variables: Sembrando vida, Tandas para el bienestar, Agromercados sociales y sustentables, Precios de garantía, Crédito ganadero a la palabra, Programa nacional de fertilizantes, Programa de desarrollo rural, y otros programas sociales.

Algunos de estos apoyos son percepciones de capital, por ejemplo, Tandas para el bienestar (también conocido como Microcréditos para el bienestar), o Crédito ganadero a la palabra; no obstante, otros deben ser considerados como transferencias gubernamentales, por ejemplo, Sembrando vida, Programa nacional de fertilizantes y Programa de desarrollo rural. Además, existe un tercer grupo que consiste en dar incentivos y apoyos para la comercialización, por ejemplo, el programa de Agromercados sociales y sustentables y el de Precios de garantía. En el primer caso se otorga un monto de dinero para incentivar la producción de productos agropecuarios y pesqueros; en el segundo se garantiza un precio al productor, que le permite enfrentar fluctuaciones a la baja del precio de venta de su producto, en este caso se registra la diferencia entre el precio de mercado y el precio de garantía. En ambos casos se trata de ingresos de los pequeños negocios.

A. Tabla de apoyos de 1984

```
gasto <- read.dbf("Bases/1984/nomon.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona apoyos y se cambia a nuevos pesos:

```
gasto <- gasto %>% filter(tipo_gas=="3")
gasto <- gasto %>% mutate(gas_tri=gas_tri/1000)
agregado <- gasto %>%
  group_by(folio,clave) %>% summarise(gas_tri=sum(gas_tri),.groups="drop")
remove(gasto)
```

```
agregado <- agregado %>% arrange(clave) %>%
  pivot_wider(id_cols=folio,values_from=gas_tri,names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)
```

```
[1] "A001" "A002" "A003" "A004" "A006" "A007" "A008" "A009" "A010"
[10] "A011" "A012" "A013" "A014" "A015" "A016" "A017" "A019" "A020"
[19] "A021" "A022" "A023" "A026" "A027" "A028" "A029" "A030" "A031"
[28] "A032" "A033" "A034" "A036" "A037" "A038" "A039" "A040" "A042"
[37] "A043" "A044" "A046" "A047" "A048" "A049" "A050" "A052" "A053"
[46] "A054" "A055" "A056" "A057" "A059" "A060" "A061" "A063" "A064"
[55] "A065" "A066" "A071" "A074" "A077" "A079" "A080" "A081" "A082"
[64] "A084" "A086" "A087" "A088" "A089" "A090" "A091" "A092" "A093"
[73] "A094" "A095" "A096" "A097" "A098" "A099" "A100" "A101" "A102"
[82] "A103" "A104" "A106" "A108" "A109" "A110" "A111" "A114" "A116"
[91] "A117" "A118" "A119" "A121" "A122" "A123" "A124" "A125" "A126"
[100] "A127" "A128" "A130" "A131" "A132" "A135" "A137" "A139" "A140"
[109] "A143" "A144" "A147" "A148" "A149" "A150" "A151" "A152" "A154"
[118] "A155" "A158" "A161" "A162" "A166" "A167" "A168" "A169" "A170"
[127] "A171" "A172" "A175" "A176" "A177" "A178" "A179" "A181" "A182"
[136] "A184" "A185" "A187" "A188" "A189" "A190" "A191" "A192" "A193"
[145] "A196" "A197" "A198" "A199" "A200" "A201" "A202" "A203" "B002"
[154] "B004" "B006" "C001" "C002" "C003" "C004" "C005" "C006" "C007"
[163] "C008" "C009" "C010" "C011" "C012" "C013" "C014" "C015" "C016"
[172] "C018" "C019" "C020" "C021" "C022" "D001" "D002" "D003" "D004"
[181] "D005" "D006" "D007" "D008" "D009" "D010" "D011" "D012" "D013"
[190] "D014" "D015" "D017" "D018" "D019" "D020" "D021" "D022" "E003"
[199] "E004" "E005" "E006" "E007" "E008" "E010" "E011" "E012" "E014"
[208] "E015" "E016" "E017" "E018" "E019" "E020" "E021" "E024" "E025"
[217] "F001" "F002" "F003" "F006" "F007" "F009" "folio" "G003" "G004"
[226] "G005" "G006" "G008" "G012" "G014" "G015" "G018" "G019" "G020"
[235] "G022" "G023" "G024" "G025" "G026" "H001" "H002" "H003" "H004"
[244] "H005" "H006" "H007" "H008" "H009" "H010" "H011" "H012" "H013"
[253] "H014" "H015" "H016" "H017" "H018" "H019" "H020" "H021" "H022"
[262] "H023" "H024" "H025" "H026" "H027" "H028" "H029" "H030" "H031"
[271] "H032" "H033" "H034" "H035" "H036" "H037" "H038" "H039" "H040"
[280] "H041" "H042" "H043" "H044" "I001" "I002" "I003" "I004" "I005"
[289] "I007" "I008" "I009" "I010" "I011" "I012" "I013" "I014" "I015"
[298] "I016" "I017" "I019" "I021" "I022" "J001" "J002" "J003" "J004"
[307] "J005" "J006" "J007" "J008" "J009" "J010" "J011" "J012" "J013"
[316] "J014" "J015" "J016" "J017" "J018" "J019" "J021" "J022" "J023"
[325] "J024" "J025" "J026" "J028" "J029" "J031" "J032" "J037" "K001"
[334] "K003" "K006" "K008" "K009" "K010" "K012" "K014" "K015" "K017"
[343] "K018" "K019" "K020" "K021" "K022" "K023" "K024" "K026" "K028"
[352] "K029" "K030" "K031" "L001" "L002" "L003" "L004" "L005" "L006"
[361] "L007" "L009" "L011" "L012" "L015" "L016" "L017" "L018" "L020"
[370] "M001" "M002" "M003" "M004" "M005" "M006" "M011" "M012" "M013"
[379] "M014" "M015" "N001" "N002" "N003" "N004" "N005" "N006" "N007"
[388] "N008" "N009" "N012" "N013" "N015" "N020"
```

Construcción propuesta:

```
agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YT001=A001+A002+A003+A004+A006+A007+A008+A009+A010+A011+A012+A013+A014+
```

```

A015+A016+A017+A019+A020+A021+A022+A023+A026+A027+A028+A029+A030+A031+
A032+A033+A034+A036+A037+A038+A039+A040+A042+A043+A044+A046+A047+A048+
A049+A050+A052+A053+A054+A055+A056+A057+A059+A060+A061+A063+A064+A065+
A066+A071+A074+A077+A079+A080+A081+A082+A084+A086+A087+A088+A089+A090+
A091+A092+A093+A094+A095+A096+A097+A098+A099+A100+A101+A102+A103+A104+
A106+A108+A109+A110+A111+A114+A116+A117+A118+A119+A121+A122+A123+A124+
A125+A126+A127+A128+A130+A131+A132+A135+A137+A139+A140+A143+A144+A147+
A148+A149+A150+A151+A152+A154+A155+A158+A161+A162+A166+A167+A168+A169+
A170+A171+A172+A175+A176+A177+A178+A179+A181+A182)%>%
mutate(YT002=A184)%>%
mutate(YT003=A185+A187+A188+A189)%>%
mutate(YT004=A199+A200+A201+A202)%>%
mutate(YT005=0)%>%
mutate(YT006=A199+A200+A201+A202)%>%
mutate(YT007=A203)%>%
mutate(YT008=0)%>%
mutate(YT009=B002+B004+B006)%>%
mutate(YT010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
C014+C015+C016+C018+C019)%>%
mutate(YT011=C020+C021+C022)%>%
mutate(YT012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
D014+D015+D017)%>%
mutate(YT013=D018+D019+D020+D021+D022)%>%
mutate(YT014=E003+E004+E005+E006+E007+E008)%>%
mutate(YT015=E010+E011+E012)%>%
mutate(YT016=E014+E015+E016+E017)%>%
mutate(YT017=E018+E019+E020+E021+E024+E025)%>%
mutate(YT018=F001+F002+F003)%>%
mutate(YT019=F006+F007+F009)%>%
mutate(YT020=G005)%>%
mutate(YT021=G003+G004+G006+G008+G012+G014+G015+G018+G019+G020+G022+G023+G024+
G025+G026)%>%
mutate(YT022=H001+H002+H003+H004+H005+H006+H007+H008+H009+H010+H011+H012+H013+
H014+H015+H016+H017+H018+H019+H020+H021+H022+H023+H024+H025+H026+H027+
H028+H029+H030+H031+H032+H033+H034+H035+H036+H037+H038+H039+H040+H041+
H042+H043+H044)%>%
mutate(YT023=I001+I002+I003+I004+I005+I007+I008+I009+I010+I011+I012+I013+I014+
I015+I016+I017+I019+I021+I022)%>%
mutate(YT024=J001+J002+J003+J004+J005+J006+J007+J008)%>%
mutate(YT025=J009+J010+J011+J012+J013+J014)%>%
mutate(YT026=J015+J016+J017+J018+J019+J021+J022+J023+J024+J025+J026)%>%
mutate(YT027=J028+J029+J031)%>%
mutate(YT028=J032)%>%
mutate(YT029=0)%>%
mutate(YT030=J037)%>%
mutate(YT031=0)%>%
mutate(YT032=K001+K003+K006+K008+K009+K010+K012+K014+K015+K017+K018+K019)%>%
mutate(YT033=K020+K021+K022+K023+K024+K026+K028+K029)%>%
mutate(YT034=K030+K031)%>%
mutate(YT035=L001+L002+L003+L004+L005+L006+L007+L009+L011+L012+L015+L016+L017+
L018+L020)%>%
mutate(YT036=M001+M002+M003+M004+M005)%>%
mutate(YT037=M006)%>%
mutate(YT038=M011+M012+M013+M014+M015)%>%
mutate(YT039=N001+N002+N003+N004+N005+N007+N008+N012)%>%

```

```
mutate(YT040=N006+N009+N020)%>%
mutate(YT041=N013)%>%
mutate(YT042=N015)%>%
mutate(YT043=0)%>%
mutate(YT044=0)%>%
mutate(YT045=0)
```

Se guarda la tabla de apoyos:

```
agregado <- agregado %>% mutate(enc=1984)
agregado <- agregado %>% mutate(folioviv=substr(folio,5,11))
agregado <- agregado %>% mutate(folioviv=as.numeric(folioviv))
agregado <- agregado %>% mutate(foliohog=1)
Apoyos1984 <- agregado %>%
  select(enc, folioviv, foliohog, YT001, YT002, YT003, YT004, YT005, YT006, YT007, YT008, YT009,
    YT010, YT011, YT012, YT013, YT014, YT015, YT016, YT017, YT018, YT019, YT020, YT021,
    YT022, YT023, YT024, YT025, YT026, YT027, YT028, YT029, YT030, YT031, YT032, YT033,
    YT034, YT035, YT036, YT037, YT038, YT039, YT040, YT041, YT042, YT043, YT044, YT045)
remove(agregado)
```

B. Tabla de apoyos de 1989

```
gasto <- read.dbf("Bases/1989/nomon.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona apoyos y se cambia a nuevos pesos:

```
gasto <- gasto %>% filter(tipo_gas=="3")
gasto <- gasto %>% mutate(gas_tri=gas_tri/1000)
agregado <- gasto %>%
  group_by(folio, clave) %>% summarise(gas_tri=sum(gas_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave) %>%
  pivot_wider(id_cols=folio, values_from=gas_tri, names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)
```

```
[1] "A001" "A002" "A003" "A004" "A005" "A006" "A007" "A008" "A009"
[10] "A010" "A011" "A012" "A013" "A014" "A015" "A016" "A017" "A019"
[19] "A020" "A021" "A022" "A023" "A024" "A025" "A026" "A027" "A028"
[28] "A029" "A030" "A031" "A032" "A033" "A034" "A035" "A036" "A037"
[37] "A038" "A039" "A040" "A041" "A042" "A043" "A044" "A046" "A047"
[46] "A048" "A049" "A050" "A051" "A052" "A053" "A054" "A055" "A056"
[55] "A057" "A058" "A059" "A060" "A061" "A062" "A063" "A064" "A066"
[64] "A067" "A068" "A070" "A071" "A072" "A073" "A074" "A075" "A076"
[73] "A077" "A079" "A080" "A081" "A082" "A083" "A084" "A085" "A086"
[82] "A087" "A088" "A089" "A090" "A091" "A092" "A093" "A094" "A095"
[91] "A096" "A097" "A098" "A099" "A100" "A101" "A102" "A103" "A104"
[100] "A106" "A107" "A108" "A109" "A110" "A111" "A112" "A113" "A114"
[109] "A115" "A116" "A117" "A118" "A119" "A120" "A121" "A122" "A123"
[118] "A124" "A125" "A126" "A127" "A128" "A129" "A130" "A131" "A132"
[127] "A134" "A135" "A136" "A138" "A139" "A140" "A141" "A142" "A143"
[136] "A144" "A145" "A146" "A147" "A148" "A149" "A152" "A153" "A154"
[145] "A155" "A156" "A157" "A158" "A160" "A161" "A162" "A163" "A166"
[154] "A168" "A169" "A170" "A171" "A172" "A173" "A174" "A175" "A176"
```

[163]	"A177"	"A178"	"A179"	"A180"	"A181"	"A182"	"A183"	"A184"	"A185"
[172]	"A186"	"A187"	"A188"	"A189"	"A190"	"A191"	"A192"	"A193"	"A194"
[181]	"A195"	"A196"	"A197"	"A198"	"A199"	"A200"	"A201"	"A202"	"A203"
[190]	"B001"	"B002"	"B003"	"B004"	"B005"	"B006"	"B007"	"C001"	"C002"
[199]	"C003"	"C004"	"C005"	"C006"	"C007"	"C008"	"C009"	"C010"	"C011"
[208]	"C012"	"C013"	"C014"	"C015"	"C016"	"C017"	"C018"	"C019"	"C020"
[217]	"C021"	"C022"	"C023"	"C024"	"D001"	"D002"	"D003"	"D004"	"D005"
[226]	"D006"	"D007"	"D008"	"D009"	"D010"	"D011"	"D012"	"D013"	"D014"
[235]	"D015"	"D017"	"D018"	"D019"	"D020"	"D021"	"D022"	"E001"	"E002"
[244]	"E003"	"E004"	"E005"	"E006"	"E007"	"E008"	"E009"	"E010"	"E011"
[253]	"E012"	"E013"	"E014"	"E015"	"E016"	"E018"	"E019"	"E020"	"E021"
[262]	"E022"	"E023"	"E024"	"E025"	"F001"	"F002"	"F005"	"F006"	"F007"
[271]	"F010"	"folio"	"G002"	"G003"	"G004"	"G005"	"G006"	"G008"	"G011"
[280]	"G012"	"G015"	"G016"	"G017"	"G018"	"G019"	"G021"	"G022"	"G023"
[289]	"G024"	"G025"	"G026"	"G028"	"G029"	"H001"	"H002"	"H003"	"H004"
[298]	"H005"	"H006"	"H007"	"H008"	"H009"	"H010"	"H011"	"H012"	"H013"
[307]	"H014"	"H015"	"H016"	"H017"	"H018"	"H019"	"H020"	"H021"	"H022"
[316]	"H023"	"H024"	"H025"	"H026"	"H027"	"H028"	"H029"	"H030"	"H031"
[325]	"H032"	"H033"	"H034"	"H035"	"H036"	"H037"	"H038"	"H039"	"H040"
[334]	"H041"	"H042"	"H043"	"H044"	"H045"	"I001"	"I002"	"I003"	"I004"
[343]	"I005"	"I006"	"I007"	"I008"	"I009"	"I010"	"I011"	"I012"	"I013"
[352]	"I014"	"I015"	"I016"	"I017"	"I018"	"I019"	"I020"	"I021"	"J001"
[361]	"J002"	"J003"	"J004"	"J005"	"J006"	"J007"	"J008"	"J009"	"J010"
[370]	"J011"	"J012"	"J013"	"J014"	"J015"	"J016"	"J017"	"J018"	"J019"
[379]	"J020"	"J021"	"J022"	"J023"	"J024"	"J026"	"J027"	"J028"	"J029"
[388]	"J030"	"J031"	"J032"	"J033"	"J035"	"J036"	"J037"	"J038"	"K001"
[397]	"K002"	"K003"	"K004"	"K005"	"K006"	"K007"	"K008"	"K009"	"K010"
[406]	"K011"	"K012"	"K014"	"K015"	"K016"	"K017"	"K018"	"K019"	"K020"
[415]	"K021"	"K022"	"K023"	"K024"	"K025"	"K026"	"K027"	"K028"	"K029"
[424]	"K030"	"K031"	"L001"	"L002"	"L003"	"L004"	"L005"	"L006"	"L007"
[433]	"L008"	"L009"	"L010"	"L012"	"L013"	"L014"	"L016"	"L017"	"L018"
[442]	"L019"	"L020"	"L021"	"L022"	"M001"	"M002"	"M003"	"M004"	"M005"
[451]	"M006"	"M007"	"M009"	"M011"	"M012"	"M013"	"M014"	"M015"	"N001"
[460]	"N002"	"N003"	"N004"	"N005"	"N007"	"N009"	"N010"	"N011"	"N012"
[469]	"N013"	"N014"	"N015"	"N018"	"N019"	"N020"			

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YT001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A019+A020+A021+A022+A023+A024+A025+A026+A027+A028+
    A029+A030+A031+A032+A033+A034+A035+A036+A037+A038+A039+A040+A041+A042+
    A043+A044+A046+A047+A048+A049+A050+A051+A052+A053+A054+A055+A056+A057+
    A058+A059+A060+A061+A062+A063+A064+A066+A067+A068+A070+A071+A072+A073+
    A074+A075+A076+A077+A079+A080+A081+A082+A083+A084+A085+A086+A087+A088+
    A089+A090+A091+A092+A093+A094+A095+A096+A097+A098+A099+A100+A101+A102+
    A103+A104+A106+A107+A108+A109+A110+A111+A112+A113+A114+A115+A116+A117+
    A118+A119+A120+A121+A122+A123+A124+A125+A126+A127+A128+A129+A130+A131+
    A132+A134+A135+A136+A138+A139+A140+A141+A142+A143+A144+A145+A146+A147+
    A148+A149+A152+A153+A154+A155+A156+A157+A158+A160+A161+A162+A163+A166+
    A168+A169+A170+A171+A172+A173+A174+A175+A176+A177+A178+A179+A180+A181+A182
  )%>%
  mutate(YT002=A183+A184)%>%
  mutate(YT003=A185+A186+A187+A188+A189)%>%
  mutate(YT004=A190+A191+A192+A193+A194+A195+A196+A197+A198)%>%

```

```

mutate(YT005=0)%>%
mutate(YT006=A199+A200+A201+A202)%>%
mutate(YT007=A203)%>%
mutate(YT008=0)%>%
mutate(YT009=B001+B002+B003+B004+B005+B006+B007)%>%
mutate(YT010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
      C014+C015+C016+C017+C018+C019)%>%
mutate(YT011=C020+C021+C022+C023+C024)%>%
mutate(YT012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
      D014+D015+D017)%>%
mutate(YT013=D018+D019+D020+D021+D022)%>%
mutate(YT014=E001+E002+E003+E004+E005+E006+E007+E008+E009)%>%
mutate(YT015=E010+E011+E012+E013)%>%
mutate(YT016=E014+E015+E016)%>%
mutate(YT017=E018+E019+E020+E021+E022+E023+E024+E025)%>%
mutate(YT018=F001+F002+F005)%>%
mutate(YT019=F006+F007+F010)%>%
mutate(YT020=G002+G005+G015)%>%
mutate(YT021=G003+G004+G006+G008+G011+G012+G016+G017+G018+G019+G021+G022+G023+
      G024+G025+G026+G028+G029)%>%
mutate(YT022=H001+H002+H003+H004+H005+H006+H007+H008+H009+H010+H011+H012+H013+
      H014+H015+H016+H017+H018+H019+H020+H021+H022+H023+H024+H025+H026+H027+
      H028+H029+H030+H031+H032+H033+H034+H035+H036+H037+H038+H039+H040+H041+
      H042+H043+H044+H045)%>%
mutate(YT023=I001+I002+I003+I004+I005+I006+I007+I008+I009+I010+I011+I012+I013+
      I014+I015+I016+I017+I018+I019+I020+I021)%>%
mutate(YT024=J001+J002+J003+J004+J005+J006+J007+J008)%>%
mutate(YT025=J009+J010+J011+J012+J013+J014)%>%
mutate(YT026=J015+J016+J017+J018+J019+J020+J021+J022+J023+J024+J026+J027)%>%
mutate(YT027=J028+J029+J030+J031)%>%
mutate(YT028=J032+J033+J035+J036)%>%
mutate(YT029=0)%>%
mutate(YT030=J037+J038)%>%
mutate(YT031=0)%>%
mutate(YT032=K001+K002+K003+K004+K005+K006+K007+K008+K009+K010+K011+K012+K014+
      K015+K016+K017+K018+K019)%>%
mutate(YT033=K020+K021+K022+K023+K024+K025+K026+K027+K028+K029)%>%
mutate(YT034=K030+K031)%>%
mutate(YT035=L001+L002+L003+L004+L005+L006+L007+L008+L009+L010+L012+L013+L014+
      L016+L017+L018+L019+L020+L021+L022)%>%
mutate(YT036=M001+M002+M003+M004+M005)%>%
mutate(YT037=M006+M007+M009)%>%
mutate(YT038=M011+M012+M013+M014+M015)%>%
mutate(YT039=N001+N002+N003+N004+N005+N007+N012)%>%
mutate(YT040=N009+N018+N019+N020)%>%
mutate(YT041=N013+N014)%>%
mutate(YT042=N015)%>%
mutate(YT043=N010+N011)%>%
mutate(YT044=0)%>%
mutate(YT045=0)

```

Se guarda la tabla de apoyos:

```
agregado <- agregado %>% mutate(enc=1989)
agregado <- agregado %>% mutate(folioviv=substr(folio,5,11))
agregado <- agregado %>% mutate(folioviv=as.numeric(folioviv))
agregado <- agregado %>% mutate(foliohog=1)
Apoyos1989 <- agregado %>%
  select(enc, folioviv, foliohog, YT001, YT002, YT003, YT004, YT005, YT006, YT007, YT008, YT009,
         YT010, YT011, YT012, YT013, YT014, YT015, YT016, YT017, YT018, YT019, YT020, YT021,
         YT022, YT023, YT024, YT025, YT026, YT027, YT028, YT029, YT030, YT031, YT032, YT033,
         YT034, YT035, YT036, YT037, YT038, YT039, YT040, YT041, YT042, YT043, YT044, YT045)
remove(agregado)
```

C. Tabla de apoyos de 1992

```
gasto <- read.dbf("Bases/1992/nomon.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona apoyos y se cambia a nuevos pesos:

```
gasto <- gasto %>% filter(tipo_gas=="3")
gasto <- gasto %>% mutate(gas_tri=gas_tri/1000)
agregado <- gasto %>%
  group_by(folio, clave) %>% summarise(gas_tri=sum(gas_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave) %>%
  pivot_wider(id_cols=folio, values_from=gas_tri, names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)

[1] "A001" "A002" "A003" "A004" "A005" "A006" "A007" "A008" "A009"
[10] "A010" "A011" "A012" "A013" "A014" "A015" "A016" "A017" "A019"
[19] "A020" "A021" "A022" "A023" "A024" "A025" "A026" "A027" "A028"
[28] "A029" "A030" "A031" "A032" "A033" "A034" "A035" "A036" "A037"
[37] "A038" "A039" "A040" "A041" "A042" "A043" "A044" "A046" "A047"
[46] "A048" "A049" "A050" "A051" "A052" "A053" "A054" "A055" "A056"
[55] "A057" "A058" "A059" "A060" "A061" "A062" "A063" "A064" "A065"
[64] "A066" "A067" "A068" "A069" "A070" "A071" "A072" "A073" "A074"
[73] "A075" "A076" "A077" "A078" "A079" "A080" "A081" "A082" "A084"
[82] "A086" "A087" "A088" "A089" "A090" "A091" "A092" "A093" "A094"
[91] "A095" "A096" "A097" "A098" "A099" "A100" "A101" "A102" "A103"
[100] "A104" "A106" "A107" "A108" "A109" "A110" "A111" "A112" "A113"
[109] "A114" "A115" "A116" "A117" "A118" "A119" "A121" "A122" "A123"
[118] "A124" "A125" "A126" "A127" "A128" "A129" "A130" "A131" "A132"
[127] "A134" "A135" "A136" "A137" "A138" "A139" "A140" "A141" "A143"
[136] "A144" "A145" "A146" "A147" "A148" "A149" "A150" "A152" "A153"
[145] "A154" "A155" "A156" "A158" "A159" "A161" "A162" "A163" "A164"
[154] "A166" "A168" "A169" "A170" "A171" "A172" "A173" "A174" "A175"
[163] "A176" "A177" "A178" "A179" "A180" "A181" "A182" "A183" "A185"
[172] "A186" "A187" "A188" "A189" "A190" "A191" "A192" "A193" "A194"
[181] "A195" "A196" "A197" "A199" "A200" "A201" "A202" "A203" "B002"
[190] "B003" "B004" "B005" "B006" "B007" "C001" "C002" "C003" "C004"
[199] "C005" "C006" "C007" "C008" "C009" "C010" "C011" "C012" "C013"
[208] "C014" "C015" "C016" "C017" "C018" "C019" "C020" "C021" "C022"
[217] "C024" "D001" "D002" "D003" "D004" "D005" "D006" "D007" "D008"
```


[226]	"D009"	"D010"	"D011"	"D012"	"D013"	"D014"	"D015"	"D017"	"D018"
[235]	"D019"	"D020"	"D021"	"D022"	"E001"	"E002"	"E003"	"E004"	"E005"
[244]	"E006"	"E007"	"E008"	"E009"	"E010"	"E011"	"E012"	"E013"	"E014"
[253]	"E015"	"E016"	"E018"	"E019"	"E020"	"E021"	"E022"	"E023"	"E024"
[262]	"E025"	"F001"	"F002"	"F003"	"F006"	"F007"	"F010"	"folio"	"G002"
[271]	"G003"	"G005"	"G006"	"G008"	"G011"	"G012"	"G013"	"G015"	"G016"
[280]	"G018"	"G019"	"G020"	"G022"	"G023"	"G024"	"G025"	"G026"	"G028"
[289]	"G029"	"H001"	"H002"	"H003"	"H004"	"H005"	"H006"	"H007"	"H008"
[298]	"H009"	"H010"	"H011"	"H012"	"H013"	"H014"	"H015"	"H016"	"H017"
[307]	"H018"	"H019"	"H020"	"H021"	"H022"	"H023"	"H024"	"H025"	"H026"
[316]	"H027"	"H028"	"H029"	"H030"	"H031"	"H032"	"H033"	"H034"	"H035"
[325]	"H036"	"H037"	"H038"	"H039"	"H040"	"H041"	"H042"	"H043"	"H044"
[334]	"H045"	"H046"	"H047"	"H048"	"H049"	"H050"	"H051"	"H052"	"H053"
[343]	"H054"	"H055"	"H056"	"H057"	"H058"	"H059"	"H060"	"H061"	"H062"
[352]	"H063"	"I001"	"I002"	"I003"	"I004"	"I005"	"I006"	"I007"	"I008"
[361]	"I009"	"I010"	"I011"	"I012"	"I013"	"I014"	"I015"	"I016"	"I017"
[370]	"I018"	"I019"	"I020"	"I021"	"I022"	"I023"	"J001"	"J002"	"J003"
[379]	"J004"	"J005"	"J006"	"J007"	"J008"	"J009"	"J010"	"J011"	"J012"
[388]	"J013"	"J014"	"J015"	"J016"	"J017"	"J018"	"J019"	"J021"	"J022"
[397]	"J023"	"J024"	"J025"	"J026"	"J027"	"J028"	"J029"	"J030"	"J031"
[406]	"J032"	"J033"	"J034"	"J035"	"J036"	"J037"	"J038"	"J039"	"J040"
[415]	"J041"	"J042"	"K001"	"K002"	"K003"	"K004"	"K005"	"K006"	"K007"
[424]	"K008"	"K009"	"K010"	"K011"	"K012"	"K014"	"K016"	"K017"	"K018"
[433]	"K019"	"K020"	"K021"	"K022"	"K023"	"K024"	"K025"	"K026"	"K027"
[442]	"K028"	"K029"	"K030"	"K031"	"L001"	"L002"	"L003"	"L004"	"L005"
[451]	"L006"	"L007"	"L009"	"L010"	"L011"	"L012"	"L014"	"L015"	"L016"
[460]	"L018"	"L019"	"L020"	"L021"	"L022"	"L023"	"L024"	"M001"	"M002"
[469]	"M003"	"M004"	"M005"	"M006"	"M007"	"M009"	"M010"	"M012"	"M013"
[478]	"M014"	"M015"	"M016"	"N001"	"N002"	"N003"	"N004"	"N005"	"N006"
[487]	"N008"	"N010"	"N014"	"N015"	"Q003"	"Q005"	"Q008"	"Q010"	"Q011"

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YT001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A019+A020+A021+A022+A023+A024+A025+A026+A027+A028+
    A029+A030+A031+A032+A033+A034+A035+A036+A037+A038+A039+A040+A041+A042+
    A043+A044+A046+A047+A048+A049+A050+A051+A052+A053+A054+A055+A056+A057+
    A058+A059+A060+A061+A062+A063+A064+A065+A066+A067+A068+A069+A070+A071+
    A072+A073+A074+A075+A076+A077+A078+A079+A080+A081+A082+A084+A086+A087+
    A088+A089+A090+A091+A092+A093+A094+A095+A096+A097+A098+A099+A100+A101+
    A102+A103+A104+A106+A107+A108+A109+A110+A111+A112+A113+A114+A115+A116+
    A117+A118+A119+A121+A122+A123+A124+A125+A126+A127+A128+A129+A130+A131+
    A132+A134+A135+A136+A137+A138+A139+A140+A141+A143+A144+A145+A146+A147+
    A148+A149+A150+A152+A153+A154+A155+A156+A158+A159+A161+A162+A163+A164+
    A166+A168+A169+A170+A171+A172+A173+A174+A175+A176+A177+A178+A179+A180+
    A181+A182)%>%
  mutate(YT002=A183)%>%
  mutate(YT003=A185+A186+A187+A188+A189)%>%
  mutate(YT004=A190+A191+A192+A193+A194+A195+A196+A197)%>%
  mutate(YT005=0)%>%
  mutate(YT006=A199+A200+A201+A202)%>%
  mutate(YT007=A203)%>%
  mutate(YT008=0)%>%
  mutate(YT009=B002+B003+B004+B005+B006+B007)%>%

```



```

mutate(YT010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
      C014+C015+C016+C017+C018+C019)%>%
mutate(YT011=C020+C021+C022+C024)%>%
mutate(YT012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
      D014+D015+D017)%>%
mutate(YT013=D018+D019+D020+D021+D022)%>%
mutate(YT014=E001+E002+E003+E004+E005+E006+E007+E008+E009)%>%
mutate(YT015=E010+E011+E012+E013)%>%
mutate(YT016=E014+E015+E016)%>%
mutate(YT017=E018+E019+E020+E021+E022+E023+E024+E025)%>%
mutate(YT018=F001+F002+F003)%>%
mutate(YT019=F006+F007+F010)%>%
mutate(YT020=G002+G005+G013+G015)%>%
mutate(YT021=G003+G006+G008+G011+G012+G016+G018+G019+G020+G022+G023+G024+G025+
      G026+G028+G029)%>%
mutate(YT022=H001+H002+H003+H004+H005+H006+H007+H008+H009+H010+H011+H012+H013+
      H014+H015+H016+H017+H018+H019+H020+H021+H022+H023+H024+H025+H026+H027+
      H028+H029+H030+H031+H032+H033+H034+H035+H036+H037+H038+H039+H040+H041+
      H042+H043+H044+H045+H046+H047+H048+H049+H050+H051+H052+H053+H054+H055+
      H056+H057+H058+H059+H060+H061+H062+H063)%>%
mutate(YT023=I001+I002+I003+I004+I005+I006+I007+I008+I009+I010+I011+I012+I013+
      I014+I015+I016+I017+I018+I019+I020+I021+I022+I023)%>%
mutate(YT024=J001+J002+J003+J004+J005+J006+J007+J008+J009)%>%
mutate(YT025=J010+J011+J012+J013+J014+J015)%>%
mutate(YT026=J016+J017+J018+J019+J021+J022+J023+J024+J025+J026+J027+J028)%>%
mutate(YT027=J029+J030+J031+J032+J033+J034+J035+J036)%>%
mutate(YT028=J037+J038+J039+J040+J041)%>%
mutate(YT029=0)%>%
mutate(YT030=J042)%>%
mutate(YT031=0)%>%
mutate(YT032=K001+K002+K003+K004+K005+K006+K007+K008+K009+K010+K011+K012+K014+
      K016+K017+K018+K019)%>%
mutate(YT033=K020+K021+K022+K023+K024+K025+K026+K027+K028+K029)%>%
mutate(YT034=K030+K031)%>%
mutate(YT035=L001+L002+L003+L004+L005+L006+L007+L009+L010+L011+L012+L014+L015+
      L016+L018+L019+L020+L021+L022+L023+L024)%>%
mutate(YT036=M001+M002+M003+M004+M005+M006)%>%
mutate(YT037=M007+M009+M010)%>%
mutate(YT038=M012+M013+M014+M015+M016)%>%
mutate(YT039=N001+N002+N003+N004+N005+N006+N010+Q011)%>%
mutate(YT040=N008+N014+N015)%>%
mutate(YT041=Q008+Q010)%>%
mutate(YT042=Q005)%>%
mutate(YT043=Q003)%>%
mutate(YT044=0)%>%
mutate(YT045=0)

```

Se guarda la tabla de apoyos:

```

agregado <- agregado %>% mutate(enc=1992)
agregado <- agregado %>% mutate(folioviv=substr(folio,5,10))
agregado <- agregado %>% mutate(foliohog=substr(folio,11,11))
agregado <- agregado %>% mutate(folioviv=as.numeric(folioviv))
agregado <- agregado %>% mutate(foliohog=as.numeric(foliohog))
agregado <- agregado %>% mutate(foliohog=foliohog+1)
Apoyos1992 <- agregado %>%

```

```
select(enc, folioviv, foliohog, YT001, YT002, YT003, YT004, YT005, YT006, YT007, YT008, YT009,
       YT010, YT011, YT012, YT013, YT014, YT015, YT016, YT017, YT018, YT019, YT020, YT021,
       YT022, YT023, YT024, YT025, YT026, YT027, YT028, YT029, YT030, YT031, YT032, YT033,
       YT034, YT035, YT036, YT037, YT038, YT039, YT040, YT041, YT042, YT043, YT044, YT045)
remove(agregado)
```

D. Tabla de apoyos de 1994

```
gasto <- read.dbf("Bases/1994/nomon.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona apoyos:

```
gasto <- gasto %>% filter(tipo_gas=="3")
agregado <- gasto %>%
  group_by(folio, clave) %>% summarise(gas_tri=sum(gas_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave) %>%
  pivot_wider(id_cols=folio, values_from=gas_tri, names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)
```

```
[1] "A001" "A002" "A003" "A004" "A005" "A006" "A007" "A008" "A009"
[10] "A010" "A011" "A012" "A013" "A014" "A015" "A016" "A017" "A018"
[19] "A019" "A020" "A021" "A022" "A023" "A024" "A025" "A026" "A027"
[28] "A028" "A029" "A030" "A031" "A032" "A033" "A034" "A035" "A036"
[37] "A037" "A038" "A039" "A040" "A041" "A042" "A043" "A044" "A045"
[46] "A047" "A048" "A049" "A050" "A051" "A052" "A053" "A054" "A055"
[55] "A056" "A057" "A058" "A060" "A061" "A062" "A063" "A064" "A065"
[64] "A066" "A067" "A068" "A069" "A070" "A071" "A072" "A073" "A074"
[73] "A075" "A076" "A077" "A078" "A079" "A080" "A081" "A082" "A083"
[82] "A085" "A087" "A088" "A089" "A090" "A091" "A092" "A093" "A094"
[91] "A095" "A096" "A097" "A098" "A099" "A100" "A101" "A102" "A103"
[100] "A104" "A105" "A106" "A108" "A109" "A110" "A111" "A112" "A113"
[109] "A114" "A116" "A117" "A118" "A119" "A120" "A121" "A122" "A123"
[118] "A124" "A125" "A126" "A127" "A128" "A129" "A130" "A131" "A132"
[127] "A133" "A134" "A135" "A136" "A137" "A138" "A139" "A140" "A141"
[136] "A142" "A143" "A144" "A145" "A146" "A147" "A148" "A149" "A150"
[145] "A151" "A152" "A154" "A156" "A157" "A158" "A159" "A161" "A162"
[154] "A163" "A164" "A166" "A170" "A171" "A172" "A175" "A177" "A178"
[163] "A179" "A180" "A181" "A182" "A183" "A184" "A185" "A187" "A188"
[172] "A190" "A191" "A192" "A193" "A194" "A195" "A196" "A197" "A199"
[181] "A200" "A202" "A203" "A204" "A205" "A206" "A207" "A208" "B001"
[190] "B002" "B004" "B005" "B006" "B007" "C001" "C002" "C003" "C004"
[199] "C005" "C006" "C007" "C008" "C009" "C010" "C011" "C012" "C013"
[208] "C014" "C015" "C016" "C017" "C018" "C019" "C020" "C021" "C022"
[217] "C023" "C024" "D001" "D002" "D003" "D004" "D005" "D006" "D007"
[226] "D008" "D009" "D010" "D011" "D012" "D013" "D014" "D015" "D016"
[235] "D017" "D018" "D020" "D021" "D022" "E001" "E002" "E003" "E004"
[244] "E005" "E006" "E007" "E008" "E010" "E011" "E012" "E013" "E014"
[253] "E015" "E016" "E018" "E019" "E020" "E022" "E023" "E024" "E025"
[262] "E026" "E027" "E028" "E029" "E030" "E031" "F001" "F002" "F003"
[271] "F006" "F007" "F009" "folio" "G002" "G003" "G004" "G005" "G006"
[280] "G008" "G009" "G011" "G012" "G014" "G017" "G019" "G020" "G021"
[289] "G022" "G023" "G024" "G026" "G027" "G028" "G029" "G030" "G031"
```

[298]	"G032"	"G033"	"H001"	"H002"	"H003"	"H004"	"H005"	"H006"	"H007"
[307]	"H008"	"H009"	"H010"	"H011"	"H012"	"H013"	"H014"	"H015"	"H016"
[316]	"H017"	"H018"	"H019"	"H020"	"H021"	"H022"	"H023"	"H024"	"H025"
[325]	"H026"	"H027"	"H029"	"H030"	"H031"	"H032"	"H033"	"H034"	"H035"
[334]	"H036"	"H037"	"H038"	"H039"	"H040"	"H041"	"H042"	"H043"	"H044"
[343]	"H045"	"H046"	"H047"	"H048"	"H049"	"H050"	"H051"	"H052"	"H053"
[352]	"H054"	"H055"	"H056"	"H057"	"H058"	"H059"	"H060"	"H061"	"H062"
[361]	"H063"	"H064"	"I001"	"I002"	"I003"	"I004"	"I005"	"I006"	"I007"
[370]	"I008"	"I009"	"I010"	"I011"	"I012"	"I014"	"I015"	"I016"	"I017"
[379]	"I018"	"I019"	"I020"	"I021"	"I022"	"I023"	"I024"	"I025"	"I026"
[388]	"J001"	"J002"	"J003"	"J004"	"J005"	"J006"	"J007"	"J008"	"J009"
[397]	"J010"	"J011"	"J012"	"J013"	"J014"	"J015"	"J016"	"J017"	"J018"
[406]	"J019"	"J020"	"J022"	"J023"	"J024"	"J025"	"J026"	"J027"	"J028"
[415]	"J029"	"J030"	"J031"	"J032"	"J033"	"J034"	"J035"	"J036"	"J037"
[424]	"J038"	"J040"	"J041"	"J042"	"K001"	"K002"	"K003"	"K005"	"K006"
[433]	"K007"	"K008"	"K009"	"K010"	"K011"	"K012"	"K016"	"K018"	"K019"
[442]	"K020"	"K021"	"K022"	"K023"	"K024"	"K025"	"K026"	"K027"	"K028"
[451]	"K030"	"K031"	"K032"	"K033"	"L001"	"L002"	"L003"	"L004"	"L005"
[460]	"L006"	"L009"	"L010"	"L011"	"L012"	"L014"	"L015"	"L017"	"L018"
[469]	"L019"	"L021"	"L022"	"L023"	"L024"	"L025"	"L027"	"M001"	"M002"
[478]	"M003"	"M004"	"M005"	"M006"	"M007"	"M008"	"M010"	"M011"	"M012"
[487]	"M013"	"M014"	"M016"	"M017"	"M018"	"N001"	"N002"	"N003"	"N004"
[496]	"N005"	"N006"	"N007"	"N008"	"N010"	"N012"	"N014"	"N015"	"N016"
[505]	"Q001"	"Q003"	"Q005"	"Q007"	"Q008"	"Q009"	"Q011"	"Q012"	

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YT001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A018+A019+A020+A021+A022+A023+A024+A025+A026+A027+
    A028+A029+A030+A031+A032+A033+A034+A035+A036+A037+A038+A039+A040+A041+
    A042+A043+A044+A045+A047+A048+A049+A050+A051+A052+A053+A054+A055+A056+
    A057+A058+A060+A061+A062+A063+A064+A065+A066+A067+A068+A069+A070+A071+
    A072+A073+A074+A075+A076+A077+A078+A079+A080+A081+A082+A083+A085+A087+
    A088+A089+A090+A091+A092+A093+A094+A095+A096+A097+A098+A099+A100+A101+
    A102+A103+A104+A105+A106+A108+A109+A110+A111+A112+A113+A114+A116+A117+
    A118+A119+A120+A121+A122+A123+A124+A125+A126+A127+A128+A129+A130+A131+
    A132+A133+A134+A135+A136+A137+A138+A139+A140+A141+A142+A143+A144+A145+
    A146+A147+A148+A149+A150+A151+A152+A154+A156+A157+A158+A159+A161+A162+
    A163+A164+A166+A170+A171+A172+A175+A177+A178+A179+A180+A181+A182+A183+
    A184+A185)%>%
  mutate(YT002=A187)%>%
  mutate(YT003=A188+A190+A191+A192+A193)%>%
  mutate(YT004=A194+A195+A196+A197+A199+A200+A202+A203)%>%
  mutate(YT005=0)%>%
  mutate(YT006=A204+A205+A206+A207)%>%
  mutate(YT007=A208)%>%
  mutate(YT008=0)%>%
  mutate(YT009=B001+B002+B004+B005+B006+B007)%>%
  mutate(YT010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
    C014+C015+C016+C017+C018+C019)%>%
  mutate(YT011=C020+C021+C022+C023+C024)%>%
  mutate(YT012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
    D014+D015+D016+D017)%>%
  mutate(YT013=D018+D020+D021+D022)%>%

```

```

mutate(YT014=E001+E002+E003+E004+E005+E006+E007+E008+E010+E011+E012)%>%
mutate(YT015=E013+E014+E015+E016)%>%
mutate(YT016=E018+E019+E020+E022)%>%
mutate(YT017=E023+E024+E025+E026+E027+E028+E029+E030+E031)%>%
mutate(YT018=F001+F002+F003)%>%
mutate(YT019=F006+F007+F009)%>%
mutate(YT020=G002+G005+G009+G019)%>%
mutate(YT021=G003+G004+G006+G008+G011+G012+G014+G017+G020+G021+G022+G023+G024+
      G026+G027+G028+G029+G030+G031+G032+G033)%>%
mutate(YT022=H001+H002+H003+H004+H005+H006+H007+H008+H009+H010+H011+H012+H013+
      H014+H015+H016+H017+H018+H019+H020+H021+H022+H023+H024+H025+H026+H027+
      H029+H030+H031+H032+H033+H034+H035+H036+H037+H038+H039+H040+H041+H042+
      H043+H044+H045+H046+H047+H048+H049+H050+H051+H052+H053+H054+H055+H056+
      H057+H058+H059+H060+H061+H062+H063+H064)%>%
mutate(YT023=I001+I002+I003+I004+I005+I006+I007+I008+I009+I010+I011+I012+I014+
      I015+I016+I017+I018+I019+I020+I021+I022+I023+I024+I025+I026)%>%
mutate(YT024=J001+J002+J003+J004+J005+J006+J007+J008+J009)%>%
mutate(YT025=J010+J011+J012+J013+J014+J015)%>%
mutate(YT026=J016+J017+J018+J019+J020+J022+J023+J024+J025+J026+J027+J028)%>%
mutate(YT027=J029+J030+J031+J032+J033+J034+J035+J036)%>%
mutate(YT028=J037+J038+J040+J041)%>%
mutate(YT029=0)%>%
mutate(YT030=J042)%>%
mutate(YT031=0)%>%
mutate(YT032=K001+K002+K003+K005+K006+K007+K008+K009+K010+K011+K012+K016+K018+K019)
%>%
mutate(YT033=K020+K021+K022+K023+K024+K025+K026+K027+K028)%>%
mutate(YT034=K030+K031+K032+K033)%>%
mutate(YT035=L001+L002+L003+L004+L005+L006+L009+L010+L011+L012+L014+L015+L017+
      L018+L019+L021+L022+L023+L024+L025+L027)%>%
mutate(YT036=M001+M002+M003+M004+M005+M006)%>%
mutate(YT037=M007+M008+M010+M011)%>%
mutate(YT038=M012+M013+M014+M016+M017+M018)%>%
mutate(YT039=N001+N002+N003+N004+N005+N006+N007+N010+Q011)%>%
mutate(YT040=N008+N012+N014+N015+N016+Q007)%>%
mutate(YT041=Q008+Q009+Q012)%>%
mutate(YT042=Q001+Q005)%>%
mutate(YT043=Q003)%>%
mutate(YT044=0)%>%
mutate(YT045=0)

```

Se guarda la tabla de apoyos:

```

agregado <- agregado %>% mutate(enc=1994)
agregado <- agregado %>% mutate(folioviv=substr(folio,5,10))
agregado <- agregado %>% mutate(foliohog=substr(folio,11,11))
agregado <- agregado %>% mutate(folioviv=as.numeric(folioviv))
agregado <- agregado %>% mutate(foliohog=as.numeric(foliohog))
agregado <- agregado %>% mutate(foliohog=foliohog+1)
Apoyos1994 <- agregado %>%
  select(enc, folioviv, foliohog, YT001, YT002, YT003, YT004, YT005, YT006, YT007, YT008, YT009,
        YT010, YT011, YT012, YT013, YT014, YT015, YT016, YT017, YT018, YT019, YT020, YT021,
        YT022, YT023, YT024, YT025, YT026, YT027, YT028, YT029, YT030, YT031, YT032, YT033,
        YT034, YT035, YT036, YT037, YT038, YT039, YT040, YT041, YT042, YT043, YT044, YT045)
remove(agregado)

```

E. Tabla de apoyos de 1996

```
gasto <- read.dbf("Bases/1996/nomon.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona apoyos:

```
gasto <- gasto %>% filter(tipo_gas=="3")
agregado <- gasto %>%
  group_by(folio,clave) %>% summarise(gas_tri=sum(gas_tri),.groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave) %>%
  pivot_wider(id_cols=folio,values_from=gas_tri,names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)
```

[1]	"A001"	"A002"	"A003"	"A004"	"A005"	"A006"	"A007"	"A008"	"A009"
[10]	"A010"	"A011"	"A012"	"A013"	"A014"	"A015"	"A016"	"A017"	"A019"
[19]	"A020"	"A021"	"A022"	"A023"	"A024"	"A025"	"A026"	"A027"	"A028"
[28]	"A029"	"A030"	"A031"	"A032"	"A033"	"A034"	"A035"	"A036"	"A037"
[37]	"A038"	"A039"	"A040"	"A041"	"A043"	"A044"	"A045"	"A047"	"A048"
[46]	"A049"	"A050"	"A051"	"A052"	"A053"	"A054"	"A055"	"A056"	"A057"
[55]	"A058"	"A059"	"A060"	"A061"	"A062"	"A063"	"A064"	"A065"	"A066"
[64]	"A067"	"A068"	"A069"	"A071"	"A072"	"A073"	"A074"	"A075"	"A076"
[73]	"A077"	"A078"	"A079"	"A080"	"A081"	"A082"	"A085"	"A087"	"A088"
[82]	"A089"	"A090"	"A091"	"A092"	"A093"	"A094"	"A095"	"A096"	"A097"
[91]	"A098"	"A099"	"A100"	"A101"	"A102"	"A103"	"A104"	"A105"	"A106"
[100]	"A107"	"A109"	"A110"	"A111"	"A112"	"A113"	"A114"	"A116"	"A117"
[109]	"A118"	"A119"	"A120"	"A121"	"A122"	"A123"	"A124"	"A125"	"A126"
[118]	"A127"	"A128"	"A129"	"A130"	"A131"	"A132"	"A134"	"A135"	"A137"
[127]	"A138"	"A139"	"A140"	"A141"	"A142"	"A143"	"A144"	"A147"	"A148"
[136]	"A149"	"A150"	"A151"	"A152"	"A155"	"A156"	"A157"	"A158"	"A159"
[145]	"A160"	"A163"	"A164"	"A165"	"A167"	"A168"	"A169"	"A170"	"A171"
[154]	"A172"	"A173"	"A174"	"A175"	"A176"	"A178"	"A179"	"A180"	"A181"
[163]	"A182"	"A183"	"A184"	"A185"	"A186"	"A187"	"A188"	"A189"	"A191"
[172]	"A192"	"A193"	"A194"	"A195"	"A196"	"A197"	"A198"	"A200"	"A201"
[181]	"A202"	"A203"	"A204"	"A205"	"A206"	"A207"	"A208"	"A209"	"A211"
[190]	"B001"	"B002"	"B003"	"B004"	"B005"	"B006"	"B007"	"C001"	"C002"
[199]	"C003"	"C004"	"C005"	"C006"	"C007"	"C008"	"C009"	"C010"	"C011"
[208]	"C012"	"C013"	"C014"	"C015"	"C016"	"C017"	"C018"	"C019"	"C020"
[217]	"C021"	"C022"	"C024"	"D001"	"D002"	"D003"	"D004"	"D005"	"D006"
[226]	"D007"	"D008"	"D009"	"D010"	"D011"	"D012"	"D013"	"D014"	"D015"
[235]	"D016"	"D017"	"D018"	"D019"	"D020"	"D021"	"D022"	"E001"	"E002"
[244]	"E003"	"E004"	"E005"	"E006"	"E007"	"E008"	"E009"	"E010"	"E012"
[253]	"E013"	"E014"	"E015"	"E016"	"E018"	"E021"	"E022"	"E023"	"E024"
[262]	"E025"	"E026"	"E027"	"E028"	"E029"	"E030"	"E032"	"E033"	"E034"
[271]	"F001"	"F002"	"F005"	"F006"	"F007"	"F009"	"F010"	"folio"	"G002"
[280]	"G003"	"G004"	"G005"	"G006"	"G008"	"G009"	"G011"	"G012"	"G016"
[289]	"G017"	"G019"	"G020"	"G021"	"G022"	"G023"	"G024"	"G026"	"G027"
[298]	"G028"	"G029"	"G030"	"G031"	"G032"	"G033"	"H001"	"H002"	"H003"
[307]	"H004"	"H005"	"H006"	"H007"	"H008"	"H009"	"H010"	"H011"	"H012"
[316]	"H013"	"H014"	"H015"	"H016"	"H017"	"H018"	"H019"	"H020"	"H021"
[325]	"H022"	"H023"	"H024"	"H025"	"H026"	"H027"	"H028"	"H029"	"H030"
[334]	"H031"	"H032"	"H033"	"H034"	"H035"	"H036"	"H037"	"H038"	"H039"
[343]	"H040"	"H041"	"H042"	"H043"	"H044"	"H045"	"H046"	"H047"	"H048"

```

[352] "H049" "H050" "H051" "H052" "H053" "H054" "H055" "H056" "H057"
[361] "H058" "H059" "H060" "H061" "H062" "H063" "H064" "I001" "I002"
[370] "I003" "I004" "I005" "I006" "I007" "I008" "I009" "I010" "I011"
[379] "I014" "I015" "I016" "I017" "I018" "I019" "I020" "I021" "I022"
[388] "I023" "I024" "I025" "I026" "J001" "J002" "J003" "J004" "J005"
[397] "J006" "J007" "J008" "J009" "J010" "J011" "J012" "J013" "J014"
[406] "J015" "J016" "J017" "J018" "J019" "J020" "J021" "J022" "J024"
[415] "J025" "J026" "J027" "J028" "J029" "J030" "J031" "J033" "J034"
[424] "J035" "J036" "J037" "J038" "J039" "J040" "J042" "J044" "K001"
[433] "K002" "K003" "K004" "K005" "K006" "K007" "K008" "K009" "K010"
[442] "K011" "K012" "K013" "K014" "K017" "K019" "K020" "K022" "K023"
[451] "K024" "K025" "K026" "K027" "K028" "K029" "K030" "K031" "K032"
[460] "K033" "K034" "L001" "L002" "L003" "L004" "L005" "L006" "L008"
[469] "L009" "L010" "L011" "L012" "L014" "L015" "L017" "L018" "L020"
[478] "L021" "L022" "L023" "L024" "L025" "L027" "M001" "M002" "M003"
[487] "M004" "M005" "M006" "M007" "M008" "M010" "M012" "M013" "M014"
[496] "M015" "M016" "M017" "M018" "N001" "N002" "N003" "N004" "N005"
[505] "N006" "N008" "N010" "N014" "N015" "N016" "Q005" "Q006" "Q007"
[514] "Q010" "Q012"

```

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YT001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A019+A020+A021+A022+A023+A024+A025+A026+A027+A028+
    A029+A030+A031+A032+A033+A034+A035+A036+A037+A038+A039+A040+A041+A043+
    A044+A045+A047+A048+A049+A050+A051+A052+A053+A054+A055+A056+A057+A058+
    A059+A060+A061+A062+A063+A064+A065+A066+A067+A068+A069+A071+A072+A073+
    A074+A075+A076+A077+A078+A079+A080+A081+A082+A085+A087+A088+A089+A090+
    A091+A092+A093+A094+A095+A096+A097+A098+A099+A100+A101+A102+A103+A104+
    A105+A106+A107+A109+A110+A111+A112+A113+A114+A116+A117+A118+A119+A120+
    A121+A122+A123+A124+A125+A126+A127+A128+A129+A130+A131+A132+A134+A135+
    A137+A138+A139+A140+A141+A142+A143+A144+A147+A148+A149+A150+A151+A152+
    A155+A156+A157+A158+A159+A160+A163+A164+A165+A167+A168+A169+A170+A171+
    A172+A173+A174+A175+A176+A178+A179+A180+A181+A182+A183+A184+A185+A186)%>%
  mutate(YT002=A187+A188)%>%
  mutate(YT003=A189+A191+A192+A193+A194)%>%
  mutate(YT004=A195+A196+A197+A198+A200+A201+A202+A203+A204)%>%
  mutate(YT005=0)%>%
  mutate(YT006=A205+A206+A207+A208)%>%
  mutate(YT007=A209+A211)%>%
  mutate(YT008=0)%>%
  mutate(YT009=B001+B002+B003+B004+B005+B006+B007)%>%
  mutate(YT010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
    C014+C015+C016+C017+C018+C019)%>%
  mutate(YT011=C020+C021+C022+C024)%>%
  mutate(YT012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
    D014+D015+D016+D017)%>%
  mutate(YT013=D018+D019+D020+D021+D022)%>%
  mutate(YT014=E001+E002+E003+E004+E005+E006+E007+E008+E009+E010+E012+E013)%>%
  mutate(YT015=E014+E015+E016+E018)%>%
  mutate(YT016=E021+E022+E023+E024+E025)%>%
  mutate(YT017=E026+E027+E028+E029+E030+E032+E033+E034)%>%
  mutate(YT018=F001+F002+F005)%>%
  mutate(YT019=F006+F007+F009+F010)%>%

```



```

mutate(YT020=G002+G005+G009+G016+G019)%>%
mutate(YT021=G003+G004+G006+G008+G011+G012+G017+G020+G021+G022+G023+G024+G026+
  G027+G028+G029+G030+G031+G032+G033)%>%
mutate(YT022=H001+H002+H003+H004+H005+H006+H007+H008+H009+H010+H011+H012+H013+
  H014+H015+H016+H017+H018+H019+H020+H021+H022+H023+H024+H025+H026+H027+
  H028+H029+H030+H031+H032+H033+H034+H035+H036+H037+H038+H039+H040+H041+
  H042+H043+H044+H045+H046+H047+H048+H049+H050+H051+H052+H053+H054+H055+
  H056+H057+H058+H059+H060+H061+H062+H063+H064)%>%
mutate(YT023=I001+I002+I003+I004+I005+I006+I007+I008+I009+I010+I011+I014+I015+
  I016+I017+I018+I019+I020+I021+I022+I023+I024+I025+I026)%>%
mutate(YT024=J001+J002+J003+J004+J005+J006+J007+J008+J009)%>%
mutate(YT025=J010+J011+J012+J013+J014+J015)%>%
mutate(YT026=J016+J017+J018+J019+J020+J021+J022+J024+J025+J026+J027+J028+J029+
  J030+J031)%>%
mutate(YT027=J033+J034+J035+J036+J037+J038)%>%
mutate(YT028=J039+J040+J042)%>%
mutate(YT029=0)%>%
mutate(YT030=J044)%>%
mutate(YT031=0)%>%
mutate(YT032=K001+K002+K003+K004+K005+K006+K007+K008+K009+K010+K011+K012+K013+
  K014+K017+K019+K020)%>%
mutate(YT033=K022+K023+K024+K025+K026+K027+K028+K029+K030)%>%
mutate(YT034=K031+K032+K033+K034)%>%
mutate(YT035=L001+L002+L003+L004+L005+L006+L008+L009+L010+L011+L012+L014+L015+
  L017+L018+L020+L021+L022+L023+L024+L025+L027)%>%
mutate(YT036=M001+M002+M003+M004+M005+M006)%>%
mutate(YT037=M007+M008+M010)%>%
mutate(YT038=M012+M013+M014+M015+M016+M017+M018)%>%
mutate(YT039=N001+N002+N003+N004+N005+N006+N010)%>%
mutate(YT040=N008+N014+N015+N016+Q006+Q007)%>%
mutate(YT041=Q012)%>%
mutate(YT042=Q005)%>%
mutate(YT043=0)%>%
mutate(YT044=Q010)%>%
mutate(YT045=0)

```

Se guarda la tabla de apoyos:

```

agregado <- agregado %>% mutate(enc=1996)
agregado <- agregado %>% mutate(folioviv=substr(folio,5,10))
agregado <- agregado %>% mutate(foliohog=substr(folio,11,11))
agregado <- agregado %>% mutate(folioviv=as.numeric(folioviv))
agregado <- agregado %>% mutate(foliohog=as.numeric(foliohog))
agregado <- agregado %>% mutate(foliohog=foliohog+1)
Apoyos1996 <- agregado %>%
  select(enc, folioviv, foliohog, YT001, YT002, YT003, YT004, YT005, YT006, YT007, YT008, YT009,
    YT010, YT011, YT012, YT013, YT014, YT015, YT016, YT017, YT018, YT019, YT020, YT021,
    YT022, YT023, YT024, YT025, YT026, YT027, YT028, YT029, YT030, YT031, YT032, YT033,
    YT034, YT035, YT036, YT037, YT038, YT039, YT040, YT041, YT042, YT043, YT044, YT045)
remove(agregado)

```

F. Tabla de apoyos de 1998

```

gasto <- read.dbf("Bases/1998/nomon.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))

```

Se selecciona apoyos:

```
gasto <- gasto %>% filter(tipo_gas=="3")
agregado <- gasto %>%
  group_by(folio,clave) %>% summarise(gasto=sum(gas_tri),.groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave) %>%
  pivot_wider(id_cols=folio,values_from=gasto,names_from=clave)
```

Lista de variables para considerar en la construcción:

ls(agregado)

[1]	"A001"	"A002"	"A003"	"A004"	"A005"	"A006"	"A007"	"A008"	"A009"
[10]	"A010"	"A011"	"A012"	"A013"	"A014"	"A015"	"A016"	"A017"	"A018"
[19]	"A019"	"A021"	"A022"	"A023"	"A024"	"A025"	"A026"	"A027"	"A028"
[28]	"A029"	"A030"	"A031"	"A032"	"A033"	"A034"	"A035"	"A036"	"A037"
[37]	"A038"	"A040"	"A041"	"A043"	"A044"	"A047"	"A049"	"A050"	"A051"
[46]	"A052"	"A053"	"A054"	"A055"	"A056"	"A057"	"A058"	"A059"	"A060"
[55]	"A061"	"A063"	"A064"	"A066"	"A067"	"A068"	"A069"	"A070"	"A071"
[64]	"A072"	"A073"	"A074"	"A075"	"A076"	"A077"	"A078"	"A080"	"A081"
[73]	"A082"	"A085"	"A087"	"A088"	"A089"	"A090"	"A091"	"A092"	"A093"
[82]	"A094"	"A095"	"A096"	"A097"	"A098"	"A099"	"A100"	"A101"	"A102"
[91]	"A103"	"A104"	"A105"	"A106"	"A107"	"A108"	"A109"	"A110"	"A111"
[100]	"A112"	"A113"	"A114"	"A115"	"A117"	"A118"	"A119"	"A120"	"A122"
[109]	"A123"	"A124"	"A125"	"A126"	"A127"	"A128"	"A129"	"A130"	"A131"
[118]	"A132"	"A134"	"A135"	"A136"	"A137"	"A138"	"A139"	"A140"	"A141"
[127]	"A142"	"A143"	"A144"	"A146"	"A147"	"A148"	"A150"	"A151"	"A152"
[136]	"A155"	"A156"	"A157"	"A158"	"A159"	"A160"	"A161"	"A162"	"A163"
[145]	"A164"	"A165"	"A167"	"A171"	"A172"	"A173"	"A174"	"A175"	"A176"
[154]	"A178"	"A179"	"A180"	"A181"	"A182"	"A183"	"A184"	"A185"	"A186"
[163]	"A189"	"A190"	"A191"	"A192"	"A193"	"A194"	"A195"	"A196"	"A197"
[172]	"A198"	"A201"	"A202"	"A204"	"A205"	"A206"	"A207"	"A208"	"A210"
[181]	"B002"	"B003"	"B004"	"B005"	"B006"	"B007"	"C001"	"C002"	"C003"
[190]	"C004"	"C005"	"C006"	"C007"	"C008"	"C009"	"C010"	"C011"	"C012"
[199]	"C013"	"C014"	"C015"	"C016"	"C017"	"C018"	"C019"	"C020"	"C021"
[208]	"C023"	"C024"	"D001"	"D002"	"D003"	"D004"	"D005"	"D006"	"D007"
[217]	"D008"	"D009"	"D010"	"D011"	"D012"	"D013"	"D014"	"D015"	"D017"
[226]	"D020"	"D021"	"D022"	"E001"	"E002"	"E003"	"E004"	"E005"	"E007"
[235]	"E008"	"E009"	"E010"	"E012"	"E013"	"E014"	"E015"	"E016"	"E017"
[244]	"E019"	"E020"	"E021"	"E022"	"E023"	"E024"	"E025"	"E026"	"E027"
[253]	"E028"	"E029"	"E030"	"E031"	"E032"	"E033"	"E034"	"F001"	"F002"
[262]	"F004"	"F005"	"F006"	"F007"	"F008"	"F011"	"folio"	"G002"	"G003"
[271]	"G004"	"G005"	"G006"	"G008"	"G011"	"G012"	"G017"	"G019"	"G020"
[280]	"G021"	"G022"	"G023"	"G026"	"G027"	"G028"	"G029"	"G030"	"G031"
[289]	"G032"	"G033"	"H001"	"H002"	"H003"	"H004"	"H005"	"H006"	"H007"
[298]	"H008"	"H009"	"H010"	"H011"	"H012"	"H013"	"H014"	"H015"	"H016"
[307]	"H017"	"H018"	"H019"	"H020"	"H021"	"H022"	"H023"	"H024"	"H025"
[316]	"H026"	"H027"	"H028"	"H029"	"H030"	"H031"	"H032"	"H033"	"H034"
[325]	"H035"	"H036"	"H037"	"H038"	"H039"	"H040"	"H041"	"H042"	"H043"
[334]	"H044"	"H045"	"H046"	"H047"	"H048"	"H049"	"H050"	"H051"	"H052"
[343]	"H053"	"H054"	"H055"	"H056"	"H057"	"H058"	"H059"	"H060"	"H061"
[352]	"H062"	"H063"	"H064"	"H065"	"I001"	"I002"	"I003"	"I004"	"I005"
[361]	"I006"	"I007"	"I008"	"I009"	"I010"	"I011"	"I012"	"I013"	"I014"
[370]	"I015"	"I016"	"I017"	"I018"	"I019"	"I020"	"I021"	"I022"	"I023"
[379]	"I024"	"I025"	"I026"	"J001"	"J002"	"J003"	"J004"	"J005"	"J006"
[388]	"J007"	"J008"	"J009"	"J010"	"J011"	"J012"	"J013"	"J014"	"J015"


```

[397] "J016" "J017" "J018" "J019" "J020" "J021" "J022" "J024" "J025"
[406] "J026" "J027" "J028" "J029" "J030" "J032" "J033" "J034" "J035"
[415] "J036" "J037" "J038" "J039" "J040" "J042" "J043" "J044" "K001"
[424] "K002" "K003" "K004" "K005" "K006" "K007" "K008" "K009" "K010"
[433] "K011" "K012" "K013" "K014" "K015" "K016" "K017" "K018" "K019"
[442] "K020" "K021" "K022" "K023" "K024" "K025" "K026" "K027" "K028"
[451] "K029" "K030" "K031" "K032" "K034" "K035" "K036" "K037" "L001"
[460] "L002" "L003" "L004" "L005" "L006" "L007" "L008" "L009" "L010"
[469] "L011" "L012" "L014" "L015" "L017" "L018" "L021" "L022" "L023"
[478] "L024" "L025" "L027" "M001" "M002" "M003" "M004" "M005" "M006"
[487] "M007" "M008" "M010" "M012" "M013" "M014" "M015" "M016" "M017"
[496] "M018" "N001" "N002" "N003" "N004" "N005" "N006" "N008" "N010"
[505] "N012" "N014" "N015" "N016" "Q005" "Q007" "Q008" "Q009" "Q012"

```

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YT001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A018+A019+A021+A022+A023+A024+A025+A026+A027+A028+
    A029+A030+A031+A032+A033+A034+A035+A036+A037+A038+A040+A041+A043+A044+
    A047+A049+A050+A051+A052+A053+A054+A055+A056+A057+A058+A059+A060+A061+
    A063+A064+A066+A067+A068+A069+A070+A071+A072+A073+A074+A075+A076+A077+
    A078+A080+A081+A082+A085+A087+A088+A089+A090+A091+A092+A093+A094+A095+
    A096+A097+A098+A099+A100+A101+A102+A103+A104+A105+A106+A107+A108+A109+
    A110+A111+A112+A113+A114+A115+A117+A118+A119+A120+A122+A123+A124+A125+
    A126+A127+A128+A129+A130+A131+A132+A134+A135+A136+A137+A138+A139+A140+
    A141+A142+A143+A144+A146+A147+A148+A150+A151+A152+A155+A156+A157+A158+
    A159+A160+A161+A162+A163+A164+A165+A167+A171+A172+A173+A174+A175+A176+
    A178+A179+A180+A181+A182+A183+A184+A185+A186)%>%
  mutate(YT002=0)%>%
  mutate(YT003=A189+A190+A191+A192+A193+A194)%>%
  mutate(YT004=A195+A196+A197+A198+A201+A202+A204)%>%
  mutate(YT005=0)%>%
  mutate(YT006=A205+A206+A207+A208)%>%
  mutate(YT007=A210)%>%
  mutate(YT008=0)%>%
  mutate(YT009=B002+B003+B004+B005+B006+B007)%>%
  mutate(YT010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
    C014+C015+C016+C017+C018+C019)%>%
  mutate(YT011=C020+C021+C023+C024)%>%
  mutate(YT012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
    D014+D015+D017)%>%
  mutate(YT013=D020+D021+D022)%>%
  mutate(YT014=E001+E002+E003+E004+E005+E007+E008+E009+E010+E012+E013)%>%
  mutate(YT015=E014+E015+E016+E017+E019+E020)%>%
  mutate(YT016=E021+E022+E023+E024+E025)%>%
  mutate(YT017=E026+E027+E028+E029+E030+E031+E032+E033+E034)%>%
  mutate(YT018=F001+F002+F004+F005+F006)%>%
  mutate(YT019=F007+F008+F011)%>%
  mutate(YT020=G002+G005+G019)%>%
  mutate(YT021=G003+G004+G006+G008+G011+G012+G017+G020+G021+G022+G023+G026+G027+
    G028+G029+G030+G031+G032+G033)%>%
  mutate(YT022=H001+H002+H003+H004+H005+H006+H007+H008+H009+H010+H011+H012+H013+
    H014+H015+H016+H017+H018+H019+H020+H021+H022+H023+H024+H025+H026+H027+
    H028+H029+H030+H031+H032+H033+H034+H035+H036+H037+H038+H039+H040+H041+

```

```

H042+H043+H044+H045+H046+H047+H048+H049+H050+H051+H052+H053+H054+H055+
H056+H057+H058+H059+H060+H061+H062+H063+H064+H065)%>%
mutate(YT023=I001+I002+I003+I004+I005+I006+I007+I008+I009+I010+I011+I012+I013+
I014+I015+I016+I017+I018+I019+I020+I021+I022+I023+I024+I025+I026)%>%
mutate(YT024=J001+J002+J003+J004+J005+J006+J007+J008+J009)%>%
mutate(YT025=J010+J011+J012+J013+J014+J015)%>%
mutate(YT026=J016+J017+J018+J019+J020+J021+J022+J024+J025+J026+J027+J028+J029+
J030+J032)%>%
mutate(YT027=J033+J034+J035+J036+J037+J038)%>%
mutate(YT028=J039+J040+J042+J043)%>%
mutate(YT029=0)%>%
mutate(YT030=J044)%>%
mutate(YT031=0)%>%
mutate(YT032=K001+K002+K003+K004+K005+K006+K007+K008+K009+K010+K011+K012+K013+
K014+K015+K016+K017+K018+K019+K020+K021+K022)%>%
mutate(YT033=K023+K024+K025+K026+K027+K028+K029+K030+K031+K032)%>%
mutate(YT034=K034+K035+K036+K037)%>%
mutate(YT035=L001+L002+L003+L004+L005+L006+L007+L008+L009+L010+L011+L012+L014+
L015+L017+L018+L021+L022+L023+L024+L025+L027)%>%
mutate(YT036=M001+M002+M003+M004+M005+M006)%>%
mutate(YT037=M007+M008+M010)%>%
mutate(YT038=M012+M013+M014+M015+M016+M017+M018)%>%
mutate(YT039=N001+N002+N003+N004+N005+N006+N010)%>%
mutate(YT040=N008+N012+N014+N015+N016+Q007)%>%
mutate(YT041=Q008+Q009+Q012)%>%
mutate(YT042=Q005)%>%
mutate(YT043=0)%>%
mutate(YT044=0)%>%
mutate(YT045=0)

```

Se guarda la tabla de apoyos:

```

agregado <- agregado %>% mutate(enc=1998)
agregado <- agregado %>% mutate(folioviv=substr(folio,5,10))
agregado <- agregado %>% mutate(foliohog=substr(folio,11,11))
agregado <- agregado %>% mutate(folioviv=as.numeric(folioviv))
agregado <- agregado %>% mutate(foliohog=as.numeric(foliohog))
agregado <- agregado %>% mutate(foliohog=foliohog+1)
Apoyos1998 <- agregado %>%
  select(enc, folioviv, foliohog, YT001, YT002, YT003, YT004, YT005, YT006, YT007, YT008, YT009,
    YT010, YT011, YT012, YT013, YT014, YT015, YT016, YT017, YT018, YT019, YT020, YT021,
    YT022, YT023, YT024, YT025, YT026, YT027, YT028, YT029, YT030, YT031, YT032, YT033,
    YT034, YT035, YT036, YT037, YT038, YT039, YT040, YT041, YT042, YT043, YT044, YT045)
remove(agregado)

```

G. Tabla de apoyos de 2000

```

gasto <- read.dbf("Bases/2000/nomon.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))

```

Se selecciona apoyos:

```

gasto <- gasto %>% filter(tipo_gas=="3")
agregado <- gasto %>%
  group_by(folio, clave) %>% summarise(gasto=sum(gas_tri), .groups="drop")
remove(gasto)

```

```
agregado <- agregado %>% arrange(clave) %>%
  pivot_wider(id_cols=c(folio),values_from=gasto,names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)
```

```
[1] "A001" "A002" "A003" "A004" "A005" "A006" "A007" "A008" "A009"
[10] "A010" "A011" "A012" "A013" "A014" "A015" "A016" "A017" "A019"
[19] "A020" "A021" "A022" "A023" "A024" "A026" "A027" "A028" "A029"
[28] "A030" "A031" "A032" "A033" "A034" "A035" "A036" "A037" "A038"
[37] "A039" "A040" "A041" "A042" "A043" "A044" "A045" "A047" "A049"
[46] "A050" "A051" "A052" "A053" "A054" "A055" "A056" "A057" "A058"
[55] "A059" "A060" "A061" "A062" "A064" "A066" "A067" "A068" "A069"
[64] "A071" "A072" "A073" "A074" "A075" "A076" "A077" "A078" "A080"
[73] "A081" "A082" "A084" "A085" "A087" "A088" "A089" "A090" "A091"
[82] "A092" "A093" "A094" "A095" "A096" "A097" "A098" "A099" "A100"
[91] "A101" "A102" "A103" "A104" "A105" "A106" "A107" "A109" "A110"
[100] "A111" "A112" "A113" "A114" "A115" "A116" "A117" "A119" "A120"
[109] "A122" "A123" "A124" "A125" "A126" "A127" "A128" "A129" "A130"
[118] "A131" "A132" "A133" "A134" "A135" "A136" "A137" "A138" "A139"
[127] "A140" "A141" "A142" "A143" "A144" "A147" "A148" "A149" "A150"
[136] "A151" "A152" "A154" "A155" "A157" "A159" "A160" "A161" "A163"
[145] "A164" "A165" "A168" "A170" "A171" "A172" "A173" "A175" "A176"
[154] "A178" "A179" "A180" "A182" "A183" "A184" "A185" "A186" "A187"
[163] "A188" "A189" "A191" "A192" "A193" "A194" "A195" "A196" "A197"
[172] "A198" "A200" "A201" "A202" "A203" "A205" "A206" "A207" "A208"
[181] "A209" "A211" "B001" "B002" "B004" "B005" "B006" "B007" "C001"
[190] "C002" "C003" "C004" "C005" "C006" "C007" "C008" "C009" "C010"
[199] "C011" "C012" "C013" "C014" "C015" "C016" "C017" "C018" "C019"
[208] "C020" "C021" "C022" "C024" "D001" "D002" "D003" "D004" "D005"
[217] "D006" "D007" "D008" "D009" "D010" "D011" "D012" "D013" "D014"
[226] "D015" "D017" "D018" "D019" "D020" "D021" "E001" "E002" "E003"
[235] "E004" "E005" "E007" "E008" "E009" "E010" "E012" "E013" "E014"
[244] "E015" "E016" "E017" "E018" "E019" "E021" "E022" "E023" "E024"
[253] "E026" "E027" "E028" "E029" "E030" "E032" "E033" "E034" "F001"
[262] "F002" "F003" "F004" "F005" "F006" "F007" "F008" "F011" "folio"
[271] "G002" "G003" "G004" "G005" "G006" "G008" "G009" "G011" "G012"
[280] "G017" "G019" "G020" "G021" "G022" "G023" "G024" "G026" "G027"
[289] "G028" "G029" "G030" "G032" "G033" "H001" "H002" "H003" "H004"
[298] "H005" "H006" "H007" "H008" "H009" "H010" "H011" "H012" "H013"
[307] "H014" "H015" "H016" "H017" "H018" "H019" "H020" "H021" "H022"
[316] "H023" "H024" "H025" "H026" "H027" "H028" "H029" "H030" "H031"
[325] "H032" "H033" "H034" "H035" "H036" "H037" "H038" "H039" "H040"
[334] "H041" "H042" "H043" "H044" "H045" "H046" "H047" "H048" "H049"
[343] "H050" "H051" "H052" "H053" "H055" "H056" "H057" "H058" "H059"
[352] "H060" "H061" "H062" "H063" "H064" "I001" "I002" "I003" "I004"
[361] "I005" "I006" "I007" "I008" "I009" "I010" "I011" "I012" "I014"
[370] "I015" "I016" "I017" "I018" "I019" "I020" "I021" "I022" "I023"
[379] "I024" "I025" "I026" "J001" "J002" "J003" "J004" "J005" "J006"
[388] "J007" "J008" "J009" "J010" "J011" "J012" "J013" "J014" "J015"
[397] "J016" "J017" "J018" "J019" "J020" "J021" "J022" "J023" "J024"
[406] "J025" "J026" "J027" "J028" "J029" "J033" "J034" "J035" "J036"
[415] "J037" "J038" "J039" "J040" "J041" "J042" "J043" "J044" "J045"
[424] "K001" "K002" "K003" "K004" "K005" "K006" "K008" "K009" "K010"
[433] "K011" "K012" "K013" "K014" "K015" "K017" "K018" "K019" "K020"
```

[442]	"K021"	"K022"	"K023"	"K024"	"K025"	"K026"	"K027"	"K028"	"K029"
[451]	"K030"	"K031"	"K032"	"K033"	"K034"	"K035"	"K036"	"K037"	"L001"
[460]	"L002"	"L003"	"L004"	"L005"	"L006"	"L007"	"L009"	"L010"	"L011"
[469]	"L012"	"L014"	"L015"	"L017"	"L018"	"L019"	"L021"	"L022"	"L023"
[478]	"L024"	"L025"	"L027"	"M001"	"M003"	"M004"	"M005"	"M006"	"M007"
[487]	"M008"	"M009"	"M010"	"M012"	"M013"	"M014"	"M015"	"M016"	"M017"
[496]	"M018"	"N001"	"N002"	"N003"	"N004"	"N005"	"N007"	"N008"	"N010"
[505]	"N014"	"N015"	"N016"	"Q005"	"Q008"	"Q009"	"Q010"	"Q012"	

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YT001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A019+A020+A021+A022+A023+A024+A026+A027+A028+A029+
    A030+A031+A032+A033+A034+A035+A036+A037+A038+A039+A040+A041+A042+A043+
    A044+A045+A047+A049+A050+A051+A052+A053+A054+A055+A056+A057+A058+A059+
    A060+A061+A062+A064+A066+A067+A068+A069+A071+A072+A073+A074+A075+A076+
    A077+A078+A080+A081+A082+A084+A085+A087+A088+A089+A090+A091+A092+A093+
    A094+A095+A096+A097+A098+A099+A100+A101+A102+A103+A104+A105+A106+A107+
    A109+A110+A111+A112+A113+A114+A115+A116+A117+A119+A120+A122+A123+A124+
    A125+A126+A127+A128+A129+A130+A131+A132+A133+A134+A135+A136+A137+A138+
    A139+A140+A141+A142+A143+A144+A147+A148+A149+A150+A151+A152+A154+A155+
    A157+A159+A160+A161+A163+A164+A165+A168+A170+A171+A172+A173+A175+A176+
    A178+A179+A180+A182+A183+A184+A185+A186)%>%
  mutate(YT002=A187+A188)%>%
  mutate(YT003=A189+A191+A192+A193+A194)%>%
  mutate(YT004=A195+A196+A197+A198+A200+A201+A202+A203)%>%
  mutate(YT005=A205)%>%
  mutate(YT006=A206+A207+A208+A209)%>%
  mutate(YT007=A211)%>%
  mutate(YT008=0)%>%
  mutate(YT009=B001+B002+B004+B005+B006+B007)%>%
  mutate(YT010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
    C014+C015+C016+C017+C018+C019)%>%
  mutate(YT011=C020+C021+C022+C024)%>%
  mutate(YT012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
    D014+D015+D017)%>%
  mutate(YT013=D018+D019+D020+D021)%>%
  mutate(YT014=E001+E002+E003+E004+E005+E007+E008+E009+E010+E012+E013)%>%
  mutate(YT015=E014+E015+E016+E017+E018+E019)%>%
  mutate(YT016=E021+E022+E023+E024)%>%
  mutate(YT017=E026+E027+E028+E029+E030+E032+E033+E034)%>%
  mutate(YT018=F001+F002+F003+F004+F005+F006)%>%
  mutate(YT019=F007+F008+F011)%>%
  mutate(YT020=G002+G005+G009+G019)%>%
  mutate(YT021=G003+G004+G006+G008+G011+G012+G017+G020+G021+G022+G023+G024+G026+
    G027+G028+G029+G030+G032+G033)%>%
  mutate(YT022=H001+H002+H003+H004+H005+H006+H007+H008+H009+H010+H011+H012+H013+
    H014+H015+H016+H017+H018+H019+H020+H021+H022+H023+H024+H025+H026+H027+
    H028+H029+H030+H031+H032+H033+H034+H035+H036+H037+H038+H039+H040+H041+
    H042+H043+H044+H045+H046+H047+H048+H049+H050+H051+H052+H053+H055+H056+
    H057+H058+H059+H060+H061+H062+H063+H064)%>%
  mutate(YT023=I001+I002+I003+I004+I005+I006+I007+I008+I009+I010+I011+I012+I014+
    I015+I016+I017+I018+I019+I020+I021+I022+I023+I024+I025+I026)%>%
  mutate(YT024=J001+J002+J003+J004+J005+J006+J007+J008+J009)%>%

```

```

mutate(YT025=J010+J011+J012+J013+J014+J015)%>%
mutate(YT026=J016+J017+J018+J019+J020+J021+J022+J023+J024+J025+J026+J027+J028+J029)
%>%
mutate(YT027=J033+J034+J035+J036+J037+J038)%>%
mutate(YT028=J039+J040+J041+J042+J043)%>%
mutate(YT029=0)%>%
mutate(YT030=J044+J045)%>%
mutate(YT031=0)%>%
mutate(YT032=K001+K002+K003+K004+K005+K006+K008+K009+K010+K011+K012+K013+K014+
      K015+K017+K018+K019+K020+K021+K022)%>%
mutate(YT033=K023+K024+K025+K026+K027+K028+K029+K030+K031+K032+K033)%>%
mutate(YT034=K034+K035+K036+K037)%>%
mutate(YT035=L001+L002+L003+L004+L005+L006+L007+L009+L010+L011+L012+L014+L015+
      L017+L018+L019+L021+L022+L023+L024+L025+L027)%>%
mutate(YT036=M001+M003+M004+M005+M006)%>%
mutate(YT037=M007+M008+M009+M010)%>%
mutate(YT038=M012+M013+M014+M015+M016+M017+M018)%>%
mutate(YT039=N001+N002+N003+N004+N005+N007+N010)%>%
mutate(YT040=N008+N014+N015+N016)%>%
mutate(YT041=Q008+Q009+Q012)%>%
mutate(YT042=Q005)%>%
mutate(YT043=0)%>%
mutate(YT044=Q010)%>%
mutate(YT045=0)

```

Se guarda la tabla de apoyos:

```

agregado <- agregado %>% mutate(enc=2000)
agregado <- agregado %>% mutate(folioviv=substr(folio,5,11))
agregado <- agregado %>% mutate(foliohog=substr(folio,12,12))
agregado <- agregado %>% mutate(folioviv=as.numeric(folioviv))
agregado <- agregado %>% mutate(foliohog=as.numeric(foliohog))
agregado <- agregado %>% mutate(foliohog=foliohog+1)
Apoyos2000 <- agregado %>%
  select(enc, folioviv, foliohog, YT001, YT002, YT003, YT004, YT005, YT006, YT007, YT008, YT009,
         YT010, YT011, YT012, YT013, YT014, YT015, YT016, YT017, YT018, YT019, YT020, YT021,
         YT022, YT023, YT024, YT025, YT026, YT027, YT028, YT029, YT030, YT031, YT032, YT033,
         YT034, YT035, YT036, YT037, YT038, YT039, YT040, YT041, YT042, YT043, YT044, YT045)
remove(agregado)

```

H. Tabla de apoyos de 2002

```

gasto <- read.dbf("Bases/2002/nomon.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))

```

Se selecciona apoyos:

```

gasto <- gasto %>% filter(tipo_gas=="3")
agregado <- gasto %>%
  group_by(folio, clave) %>% summarise(gasto=sum(gas_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave) %>%
  pivot_wider(id_cols=c(folio), values_from=gasto, names_from=clave)

```

Lista de variables para considerar en la construcción:

```
ls(agregado)
```

[1]	"A001"	"A002"	"A003"	"A004"	"A005"	"A006"	"A007"	"A008"	"A009"
[10]	"A010"	"A011"	"A012"	"A013"	"A014"	"A015"	"A016"	"A017"	"A018"
[19]	"A019"	"A020"	"A021"	"A022"	"A023"	"A024"	"A025"	"A026"	"A027"
[28]	"A028"	"A029"	"A031"	"A032"	"A033"	"A034"	"A035"	"A036"	"A037"
[37]	"A038"	"A039"	"A040"	"A041"	"A042"	"A043"	"A044"	"A045"	"A046"
[46]	"A047"	"A048"	"A049"	"A050"	"A051"	"A052"	"A053"	"A054"	"A055"
[55]	"A056"	"A057"	"A058"	"A059"	"A060"	"A061"	"A062"	"A063"	"A064"
[64]	"A065"	"A066"	"A067"	"A068"	"A069"	"A070"	"A071"	"A072"	"A073"
[73]	"A074"	"A075"	"A076"	"A077"	"A078"	"A079"	"A080"	"A081"	"A082"
[82]	"A083"	"A084"	"A085"	"A086"	"A087"	"A088"	"A089"	"A091"	"A092"
[91]	"A093"	"A094"	"A095"	"A096"	"A097"	"A098"	"A099"	"A100"	"A101"
[100]	"A102"	"A103"	"A104"	"A105"	"A106"	"A107"	"A108"	"A109"	"A110"
[109]	"A111"	"A112"	"A113"	"A114"	"A115"	"A116"	"A117"	"A118"	"A119"
[118]	"A120"	"A121"	"A122"	"A123"	"A124"	"A125"	"A126"	"A127"	"A128"
[127]	"A129"	"A130"	"A131"	"A132"	"A133"	"A134"	"A135"	"A136"	"A137"
[136]	"A138"	"A139"	"A140"	"A141"	"A142"	"A143"	"A144"	"A145"	"A147"
[145]	"A148"	"A149"	"A150"	"A151"	"A152"	"A153"	"A154"	"A155"	"A156"
[154]	"A157"	"A158"	"A159"	"A160"	"A161"	"A162"	"A163"	"A164"	"A165"
[163]	"A166"	"A167"	"A168"	"A169"	"A170"	"A171"	"A172"	"A173"	"A174"
[172]	"A176"	"A177"	"A178"	"A179"	"A180"	"A181"	"A182"	"A183"	"A184"
[181]	"A186"	"A187"	"A188"	"A189"	"A190"	"A191"	"A192"	"A193"	"A194"
[190]	"A195"	"A196"	"A197"	"A198"	"A199"	"A200"	"A201"	"A202"	"A203"
[199]	"A204"	"A205"	"A206"	"A207"	"A208"	"A209"	"A210"	"A212"	"A213"
[208]	"A214"	"A215"	"A216"	"A217"	"A218"	"A219"	"A220"	"A223"	"A224"
[217]	"A225"	"A226"	"A229"	"A230"	"A233"	"A234"	"A235"	"A236"	"A237"
[226]	"A238"	"A240"	"A241"	"A243"	"B001"	"B002"	"B003"	"B004"	"B005"
[235]	"B006"	"B007"	"C001"	"C002"	"C003"	"C004"	"C005"	"C006"	"C007"
[244]	"C008"	"C009"	"C010"	"C011"	"C012"	"C013"	"C014"	"C015"	"C016"
[253]	"C017"	"C018"	"C019"	"C020"	"C021"	"C022"	"C023"	"C024"	"D001"
[262]	"D002"	"D003"	"D004"	"D005"	"D006"	"D007"	"D008"	"D009"	"D010"
[271]	"D011"	"D012"	"D013"	"D014"	"D015"	"D016"	"D017"	"D019"	"D020"
[280]	"D021"	"D022"	"D023"	"D024"	"E001"	"E002"	"E003"	"E004"	"E005"
[289]	"E006"	"E007"	"E008"	"E009"	"E010"	"E012"	"E013"	"E014"	"E015"
[298]	"E016"	"E017"	"E018"	"E019"	"E021"	"E022"	"E023"	"E024"	"E025"
[307]	"E026"	"E027"	"E028"	"E029"	"E030"	"E032"	"E033"	"E034"	"E035"
[316]	"F001"	"F002"	"F003"	"F004"	"F005"	"F006"	"F008"	"F009"	"F010"
[325]	"F011"	"F012"	"F013"	"F014"	"F015"	"folio"	"G001"	"G002"	"G003"
[334]	"G004"	"G005"	"G008"	"G009"	"G010"	"G011"	"G012"	"G013"	"G014"
[343]	"G015"	"G018"	"G019"	"G020"	"G023"	"G027"	"G028"	"G029"	"G030"
[352]	"G033"	"G034"	"G035"	"G036"	"G037"	"G038"	"G041"	"G042"	"G043"
[361]	"G044"	"G046"	"G047"	"H001"	"H002"	"H003"	"H004"	"H005"	"H006"
[370]	"H007"	"H008"	"H009"	"H010"	"H011"	"H012"	"H013"	"H014"	"H015"
[379]	"H016"	"H017"	"H018"	"H019"	"H020"	"H021"	"H022"	"H023"	"H024"
[388]	"H025"	"H026"	"H027"	"H028"	"H029"	"H030"	"H032"	"H033"	"H034"
[397]	"H035"	"H036"	"H037"	"H038"	"H039"	"H040"	"H041"	"H042"	"H043"
[406]	"H044"	"H045"	"H046"	"H047"	"H048"	"H049"	"H050"	"H051"	"H052"
[415]	"H053"	"H054"	"H055"	"H057"	"H058"	"H059"	"H060"	"H061"	"H062"
[424]	"H063"	"H064"	"H065"	"H066"	"H067"	"H068"	"H069"	"H070"	"H071"
[433]	"H072"	"H073"	"H074"	"H075"	"H076"	"H077"	"H078"	"H079"	"H080"
[442]	"H081"	"H082"	"H083"	"H084"	"H085"	"H086"	"H087"	"H088"	"H089"
[451]	"H090"	"H091"	"H092"	"H093"	"H094"	"H095"	"H096"	"H097"	"H098"
[460]	"H099"	"H100"	"H102"	"H103"	"H104"	"H105"	"H106"	"H107"	"H108"
[469]	"H109"	"H110"	"H111"	"H112"	"H113"	"H114"	"H115"	"H116"	"H117"
[478]	"H118"	"H119"	"H120"	"H121"	"H122"	"H123"	"H124"	"H125"	"H126"
[487]	"H127"	"H128"	"H129"	"H130"	"H131"	"H133"	"H134"	"H135"	"H136"

[496]	"H137"	"H138"	"H139"	"H140"	"H141"	"H142"	"I001"	"I002"	"I003"
[505]	"I004"	"I005"	"I006"	"I007"	"I008"	"I009"	"I010"	"I011"	"I012"
[514]	"I014"	"I015"	"I016"	"I017"	"I018"	"I019"	"I020"	"I021"	"I022"
[523]	"I023"	"I024"	"I025"	"I026"	"J001"	"J002"	"J003"	"J004"	"J005"
[532]	"J006"	"J007"	"J008"	"J009"	"J010"	"J011"	"J012"	"J013"	"J014"
[541]	"J015"	"J016"	"J017"	"J018"	"J019"	"J020"	"J021"	"J022"	"J023"
[550]	"J024"	"J025"	"J026"	"J027"	"J028"	"J029"	"J030"	"J031"	"J032"
[559]	"J033"	"J034"	"J035"	"J036"	"J038"	"J039"	"J040"	"J041"	"J042"
[568]	"J043"	"J044"	"J046"	"J047"	"J048"	"J049"	"J050"	"J051"	"J052"
[577]	"J053"	"J054"	"J055"	"J056"	"J057"	"J058"	"J059"	"J060"	"J062"
[586]	"J063"	"J064"	"J065"	"J066"	"J067"	"J068"	"J069"	"J070"	"J071"
[595]	"J072"	"J073"	"J074"	"J075"	"J076"	"J077"	"K001"	"K002"	"K003"
[604]	"K004"	"K005"	"K006"	"K007"	"K008"	"K009"	"K010"	"K011"	"K012"
[613]	"K013"	"K014"	"K015"	"K017"	"K018"	"K019"	"K020"	"K021"	"K022"
[622]	"K023"	"K024"	"K025"	"K026"	"K027"	"K028"	"K029"	"K030"	"K031"
[631]	"K032"	"K033"	"K034"	"K035"	"K036"	"K037"	"K038"	"K039"	"K040"
[640]	"K041"	"K042"	"K043"	"K044"	"L001"	"L002"	"L003"	"L004"	"L005"
[649]	"L006"	"L007"	"L008"	"L009"	"L010"	"L011"	"L012"	"L014"	"L015"
[658]	"L016"	"L018"	"L019"	"L020"	"L021"	"L023"	"L024"	"L025"	"L026"
[667]	"L027"	"L028"	"L030"	"M001"	"M002"	"M003"	"M004"	"M005"	"M006"
[676]	"M007"	"M008"	"M009"	"M010"	"M011"	"M012"	"M013"	"M014"	"M015"
[685]	"M017"	"M018"	"N001"	"N002"	"N003"	"N004"	"N005"	"N006"	"N007"
[694]	"N008"	"N010"	"N013"	"N014"	"N015"	"N016"	"Q005"	"Q008"	"Q009"
[703]	"Q011"	"Q012"							

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YT001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A018+A019+A020+A021+A022+A023+A024+A025+A026+A027+
    A028+A029+A031+A032+A033+A034+A035+A036+A037+A038+A039+A040+A041+A042+
    A043+A044+A045+A046+A047+A048+A049+A050+A051+A052+A053+A054+A055+A056+
    A057+A058+A059+A060+A061+A062+A063+A064+A065+A066+A067+A068+A069+A070+
    A071+A072+A073+A074+A075+A076+A077+A078+A079+A080+A081+A082+A083+A084+
    A085+A086+A087+A088+A089+A091+A092+A093+A094+A095+A096+A097+A098+A099+
    A100+A101+A102+A103+A104+A105+A106+A107+A108+A109+A110+A111+A112+A113+
    A114+A115+A116+A117+A118+A119+A120+A121+A122+A123+A124+A125+A126+A127+
    A128+A129+A130+A131+A132+A133+A134+A135+A136+A137+A138+A139+A140+A141+
    A142+A143+A144+A145+A147+A148+A149+A150+A151+A152+A153+A154+A155+A156+
    A157+A158+A159+A160+A161+A162+A163+A164+A165+A166+A167+A168+A169+A170+
    A171+A172+A173+A174+A176+A177+A178+A179+A180+A181+A182+A183+A184+A186+
    A187+A188+A189+A190+A191+A192+A193+A194+A195+A196+A197+A198+A199+A200+
    A201+A202+A203+A204+A205+A206+A207+A208)%>%
  mutate(YT002=A210)%>%
  mutate(YT003=A212+A213+A214+A215+A216+A217+A218)%>%
  mutate(YT004=A219+A220+A223+A224+A225+A226+A229+A230+A233+A234)%>%
  mutate(YT005=A209)%>%
  mutate(YT006=A235+A236+A237+A238)%>%
  mutate(YT007=A240+A241)%>%
  mutate(YT008=A243)%>%
  mutate(YT009=B001+B002+B003+B004+B005+B006+B007)%>%
  mutate(YT010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
    C014+C015+C016+C017+C018+C019)%>%
  mutate(YT011=C020+C021+C022+C023+C024)%>%
  mutate(YT012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+

```

```

D014+D015+D016+D017+D019)%>%
mutate(YT013=D020+D021+D022+D023+D024)%>%
mutate(YT014=E001+E002+E003+E004+E005+E006+E007+E008+E009+E010+E012+E013)%>%
mutate(YT015=E014+E015+E016+E017+E018+E019)%>%
mutate(YT016=E021+E022+E023+E024+E025)%>%
mutate(YT017=E026+E027+E028+E029+E030+E032+E033+E034+E035)%>%
mutate(YT018=F001+F002+F003+F004+F005+F006+F008+F009)%>%
mutate(YT019=F010+F011+F012+F013+F014+F015)%>%
mutate(YT020=G001+G008+G012+G023+G027)%>%
mutate(YT021=G002+G003+G004+G005+G009+G010+G011+G013+G014+G015+G018+G019+G020+
G028+G029+G030+G033+G034+G035+G036+G037+G038+G041+G042+G043+G044+G046+G047
)%>%
mutate(YT022=H001+H002+H003+H004+H005+H006+H007+H008+H009+H010+H011+H012+H013+
H014+H015+H016+H017+H018+H019+H020+H021+H022+H023+H024+H025+H026+H027+
H028+H029+H030+H032+H033+H034+H035+H036+H037+H038+H039+H040+H041+H042+
H043+H044+H045+H046+H047+H048+H049+H050+H051+H052+H053+H054+H055+H057+
H058+H059+H060+H061+H062+H063+H064+H065+H066+H067+H068+H069+H070+H071+
H072+H073+H074+H075+H076+H077+H078+H079+H080+H081+H082+H083+H084+H085+
H086+H087+H088+H089+H090+H091+H092+H093+H094+H095+H096+H097+H098+H099+
H100+H102+H103+H104+H105+H106+H107+H108+H109+H110+H111+H112+H113+H114+
H115+H116+H117+H118+H119+H120+H121+H122+H123+H124+H125+H126+H127+H128+
H129+H130+H131+H133+H134+H135+H136+H137+H138+H139+H140+H141+H142)%>%
mutate(YT023=I001+I002+I003+I004+I005+I006+I007+I008+I009+I010+I011+I012+I014+
I015+I016+I017+I018+I019+I020+I021+I022+I023+I024+I025+I026)%>%
mutate(YT024=J001+J002+J003+J004+J005+J006+J007+J008+J009+J010+J011+J012+J013+
J014+J015+J016+J017+J018+J019+J020+J021+J022+J023+J024+J025+J026+J027+
J028+J029)%>%
mutate(YT025=J030+J031+J032+J033+J034+J035+J036+J038)%>%
mutate(YT026=J039+J040+J041+J042+J043+J044+J046+J047)%>%
mutate(YT027=J048+J049+J050+J051+J052+J053+J054+J055+J056+J057+J058+J059+J060+
J062+J063+J064+J065+J066+J067+J068+J069)%>%
mutate(YT028=J070+J071+J072+J073+J074)%>%
mutate(YT029=J075)%>%
mutate(YT030=J076+J077)%>%
mutate(YT031=0)%>%
mutate(YT032=K001+K002+K003+K004+K005+K006+K007+K008+K009+K010+K011+K012+K013+
K014+K015+K017+K018+K019+K020+K021+K022+K023+K024)%>%
mutate(YT033=K025+K026+K027+K028+K029+K030+K031+K032+K033+K034+K035+K036)%>%
mutate(YT034=K037+K038+K039+K040+K041+K042+K043+K044)%>%
mutate(YT035=L001+L002+L003+L004+L005+L006+L007+L008+L009+L010+L011+L012+L014+
L015+L016+L018+L019+L020+L021+L023+L024+L025+L026+L027+L028+L030)%>%
mutate(YT036=M001+M002+M003+M004+M005+M006)%>%
mutate(YT037=M007+M008+M009+M010+M011)%>%
mutate(YT038=M012+M013+M014+M015+M017+M018)%>%
mutate(YT039=N001+N002+N003+N004+N005+N006+N007+N010+Q011)%>%
mutate(YT040=N008+N013+N014+N015+N016)%>%
mutate(YT041=Q008+Q009+Q012)%>%
mutate(YT042=Q005)%>%
mutate(YT043=0)%>%
mutate(YT044=0)%>%
mutate(YT045=0)

```

Se guarda la tabla de apoyos:

```

agregado <- agregado %>% mutate(enc=2002)
agregado <- agregado %>% mutate(folioviv=substr(folio,5,10))

```



```

agregado <- agregado %>% mutate(foliohog=substr(folio,11,11))
agregado <- agregado %>% mutate(folioviv=as.numeric(folioviv))
agregado <- agregado %>% mutate(foliohog=as.numeric(foliohog))
agregado <- agregado %>% mutate(foliohog=foliohog+1)
Apoyos2002 <- agregado %>%
  select(enc,folioviv,foliohog,YT001,YT002,YT003,YT004,YT005,YT006,YT007,YT008,YT009,
         YT010,YT011,YT012,YT013,YT014,YT015,YT016,YT017,YT018,YT019,YT020,YT021,
         YT022,YT023,YT024,YT025,YT026,YT027,YT028,YT029,YT030,YT031,YT032,YT033,
         YT034,YT035,YT036,YT037,YT038,YT039,YT040,YT041,YT042,YT043,YT044,YT045)
remove(agregado)

```

I. Tabla de apoyos de 2004

```

gasto <- read.dbf("Bases/2004/nomon.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))

```

Se selecciona apoyos:

```

gasto <- gasto %>% filter(tipo_gas=="3")
agregado <- gasto %>%
  group_by(folio,clave) %>% summarise(gasto=sum(gas_tri),.groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave) %>%
  pivot_wider(id_cols=c(folio),values_from=gasto,names_from=clave)

```

Lista de variables para considerar en la construcción:

```

ls(agregado)

```

[1]	"A001"	"A002"	"A003"	"A004"	"A005"	"A006"	"A007"	"A008"	"A009"
[10]	"A010"	"A011"	"A012"	"A013"	"A014"	"A015"	"A016"	"A017"	"A019"
[19]	"A020"	"A021"	"A022"	"A023"	"A024"	"A025"	"A027"	"A028"	"A029"
[28]	"A030"	"A031"	"A032"	"A033"	"A034"	"A035"	"A036"	"A037"	"A038"
[37]	"A039"	"A040"	"A042"	"A043"	"A045"	"A046"	"A047"	"A048"	"A049"
[46]	"A050"	"A051"	"A052"	"A053"	"A054"	"A055"	"A056"	"A057"	"A058"
[55]	"A059"	"A060"	"A061"	"A062"	"A063"	"A064"	"A065"	"A066"	"A068"
[64]	"A069"	"A070"	"A071"	"A072"	"A073"	"A074"	"A075"	"A076"	"A077"
[73]	"A078"	"A079"	"A080"	"A081"	"A082"	"A083"	"A084"	"A085"	"A086"
[82]	"A087"	"A088"	"A089"	"A090"	"A092"	"A095"	"A096"	"A098"	"A099"
[91]	"A100"	"A101"	"A102"	"A103"	"A104"	"A105"	"A106"	"A107"	"A108"
[100]	"A109"	"A110"	"A111"	"A112"	"A113"	"A114"	"A115"	"A116"	"A117"
[109]	"A118"	"A119"	"A121"	"A122"	"A123"	"A124"	"A125"	"A126"	"A127"
[118]	"A128"	"A129"	"A130"	"A131"	"A132"	"A133"	"A134"	"A135"	"A136"
[127]	"A137"	"A138"	"A139"	"A140"	"A141"	"A142"	"A143"	"A144"	"A145"
[136]	"A146"	"A147"	"A148"	"A149"	"A150"	"A151"	"A152"	"A153"	"A154"
[145]	"A155"	"A156"	"A157"	"A158"	"A159"	"A160"	"A161"	"A162"	"A163"
[154]	"A164"	"A165"	"A166"	"A167"	"A168"	"A169"	"A170"	"A171"	"A172"
[163]	"A173"	"A174"	"A175"	"A176"	"A177"	"A178"	"A179"	"A180"	"A183"
[172]	"A184"	"A185"	"A188"	"A189"	"A190"	"A191"	"A192"	"A193"	"A194"
[181]	"A195"	"A196"	"A197"	"A198"	"A199"	"A200"	"A202"	"A203"	"A204"
[190]	"A205"	"A206"	"A207"	"A208"	"A209"	"A210"	"A211"	"A212"	"A213"
[199]	"A214"	"A215"	"A216"	"A217"	"A218"	"A219"	"A220"	"A223"	"A224"
[208]	"A225"	"A226"	"A227"	"A229"	"A230"	"A232"	"A233"	"A234"	"A235"
[217]	"A236"	"A237"	"A238"	"A239"	"A240"	"A242"	"A243"	"B001"	"B002"
[226]	"B003"	"B004"	"B005"	"B006"	"B007"	"C001"	"C002"	"C003"	"C004"
[235]	"C005"	"C006"	"C007"	"C008"	"C009"	"C010"	"C011"	"C012"	"C013"
[244]	"C014"	"C015"	"C016"	"C017"	"C018"	"C019"	"C020"	"C021"	"C022"

[253]	"C023"	"C024"	"D001"	"D002"	"D003"	"D004"	"D005"	"D006"	"D007"
[262]	"D008"	"D009"	"D010"	"D011"	"D012"	"D013"	"D014"	"D015"	"D016"
[271]	"D017"	"D019"	"D020"	"D021"	"D022"	"D023"	"D024"	"E001"	"E002"
[280]	"E003"	"E004"	"E005"	"E006"	"E007"	"E008"	"E009"	"E010"	"E012"
[289]	"E013"	"E014"	"E015"	"E016"	"E017"	"E018"	"E020"	"E021"	"E022"
[298]	"E023"	"E024"	"E025"	"E026"	"E027"	"E028"	"E029"	"E030"	"E031"
[307]	"E032"	"E033"	"F001"	"F002"	"F003"	"F004"	"F005"	"F006"	"F007"
[316]	"F008"	"F009"	"F010"	"F011"	"F013"	"F014"	"F015"	"folio"	"G001"
[325]	"G002"	"G003"	"G004"	"G005"	"G006"	"G007"	"G008"	"G009"	"G010"
[334]	"G019"	"G020"	"G021"	"G023"	"G024"	"G025"	"G026"	"G027"	"G028"
[343]	"G029"	"H001"	"H002"	"H003"	"H004"	"H005"	"H006"	"H007"	"H008"
[352]	"H009"	"H010"	"H011"	"H012"	"H013"	"H014"	"H015"	"H016"	"H017"
[361]	"H018"	"H019"	"H020"	"H021"	"H022"	"H023"	"H024"	"H025"	"H026"
[370]	"H027"	"H028"	"H029"	"H030"	"H031"	"H032"	"H033"	"H034"	"H035"
[379]	"H036"	"H037"	"H038"	"H039"	"H040"	"H041"	"H042"	"H043"	"H044"
[388]	"H045"	"H046"	"H047"	"H048"	"H049"	"H050"	"H051"	"H052"	"H053"
[397]	"H054"	"H055"	"H056"	"H057"	"H058"	"H059"	"H060"	"H061"	"H062"
[406]	"H063"	"H064"	"H065"	"H066"	"H067"	"H068"	"H069"	"H070"	"H071"
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[424]	"H081"	"H082"	"H083"	"H084"	"H085"	"H086"	"H087"	"H088"	"H089"
[433]	"H090"	"H091"	"H092"	"H093"	"H094"	"H095"	"H096"	"H097"	"H098"
[442]	"H099"	"H100"	"H101"	"H102"	"H103"	"H104"	"H105"	"H106"	"H107"
[451]	"H108"	"H109"	"H110"	"H111"	"H112"	"H113"	"H114"	"H115"	"H116"
[460]	"H117"	"H118"	"H119"	"J001"	"J002"	"J003"	"J004"	"J005"	"J006"
[469]	"J007"	"J009"	"J010"	"J011"	"J012"	"J013"	"J014"	"J015"	"J016"
[478]	"J017"	"J018"	"J019"	"J020"	"J021"	"J022"	"J023"	"J024"	"J025"
[487]	"J026"	"J027"	"J028"	"J029"	"J030"	"J031"	"J032"	"J033"	"J034"
[496]	"J035"	"J036"	"J037"	"J038"	"J039"	"J040"	"J041"	"J042"	"J043"
[505]	"J044"	"J045"	"J046"	"J047"	"J048"	"J049"	"J050"	"J051"	"J052"
[514]	"J053"	"J054"	"J055"	"J056"	"J057"	"J058"	"J059"	"J060"	"J061"
[523]	"J062"	"J063"	"J064"	"J065"	"J066"	"J067"	"J069"	"J070"	"J072"
[532]	"K001"	"K002"	"K003"	"K004"	"K005"	"K006"	"K007"	"K008"	"K009"
[541]	"K010"	"K011"	"K012"	"K013"	"K014"	"K015"	"K016"	"K017"	"K018"
[550]	"K019"	"K020"	"K021"	"K022"	"K023"	"K024"	"K025"	"K026"	"K027"
[559]	"K028"	"K029"	"K030"	"K031"	"K032"	"K034"	"K035"	"K036"	"K037"
[568]	"K038"	"K039"	"K040"	"K041"	"K043"	"K044"	"L001"	"L002"	"L003"
[577]	"L004"	"L005"	"L006"	"L007"	"L008"	"L009"	"L010"	"L011"	"L012"
[586]	"L013"	"L015"	"L016"	"L018"	"L019"	"L020"	"L021"	"L022"	"L023"
[595]	"L024"	"L025"	"L026"	"L027"	"L028"	"L029"	"M001"	"M002"	"M003"
[604]	"M004"	"M005"	"M006"	"M007"	"M008"	"M009"	"M010"	"M012"	"M013"
[613]	"M014"	"M015"	"M016"	"M017"	"M018"	"N001"	"N002"	"N003"	"N004"
[622]	"N005"	"N006"	"N007"	"N008"	"N009"	"N011"	"N013"	"N014"	"N015"
[631]	"N016"	"Q001"	"Q003"	"Q006"	"Q009"	"Q010"			

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YT001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A019+A020+A021+A022+A023+A024+A025+A027+A028+A029+
    A030+A031+A032+A033+A034+A035+A036+A037+A038+A039+A040+A042+A043+A045+
    A046+A047+A048+A049+A050+A051+A052+A053+A054+A055+A056+A057+A058+A059+
    A060+A061+A062+A063+A064+A065+A066+A068+A069+A070+A071+A072+A073+A074+
    A075+A076+A077+A078+A079+A080+A081+A082+A083+A084+A085+A086+A087+A088+
    A089+A090+A092+A095+A096+A098+A099+A100+A101+A102+A103+A104+A105+A106+
    A107+A108+A109+A110+A111+A112+A113+A114+A115+A116+A117+A118+A119+A121+

```

```

A122+A123+A124+A125+A126+A127+A128+A129+A130+A131+A132+A133+A134+A135+
A136+A137+A138+A139+A140+A141+A142+A143+A144+A145+A146+A147+A148+A149+
A150+A151+A152+A153+A154+A155+A156+A157+A158+A159+A160+A161+A162+A163+
A164+A165+A166+A167+A168+A169+A170+A171+A172+A173+A174+A175+A176+A177+
A178+A179+A180+A183+A184+A185+A188+A189+A190+A191+A192+A193+A194+A195+
A196+A197+A198+A199+A200+A202+A203+A204+A205+A206+A207+A208)%>%
mutate(YT002=A210+A211)%>%
mutate(YT003=A212+A213+A214+A215+A216+A217+A218)%>%
mutate(YT004=A219+A220+A223+A224+A225+A226+A227+A229+A230+A232+A233+A234)%>%
mutate(YT005=A209)%>%
mutate(YT006=A235+A236+A237+A238+A239)%>%
mutate(YT007=A240+A242)%>%
mutate(YT008=A243)%>%
mutate(YT009=B001+B002+B003+B004+B005+B006+B007)%>%
mutate(YT010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
C014+C015+C016+C017+C018+C019)%>%
mutate(YT011=C020+C021+C022+C023+C024)%>%
mutate(YT012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
D014+D015+D016+D017+D019)%>%
mutate(YT013=D020+D021+D022+D023+D024)%>%
mutate(YT014=E001+E002+E003+E004+E005+E006+E007+E008+E009+E010+E012+E013)%>%
mutate(YT015=E014+E015+E016+E017+E018)%>%
mutate(YT016=E020+E021+E022+E023+E024)%>%
mutate(YT017=E025+E026+E027+E028+E029+E030+E031+E032+E033)%>%
mutate(YT018=F001+F002+F003+F004+F005+F006+F007+F008+F009)%>%
mutate(YT019=F010+F011+F013+F014+F015)%>%
mutate(YT020=G001+G002+G003+G004+G005+G006)%>%
mutate(YT021=G007+G008+G009+G010+G019+G020+G021+G023+G024+G025+G026+G027+G028+G029)%>%
mutate(YT022=H001+H002+H003+H004+H005+H006+H007+H008+H009+H010+H011+H012+H013+
H014+H015+H016+H017+H018+H019+H020+H021+H022+H023+H024+H025+H026+H027+
H028+H029+H030+H031+H032+H033+H034+H035+H036+H037+H038+H039+H040+H041+
H042+H043+H044+H045+H046+H047+H048+H049+H050+H051+H052+H053+H054+H055+
H056+H057+H058+H059+H060+H061+H062+H063+H064+H065+H066+H067+H068+H069+
H070+H071+H072+H073+H074+H075+H076+H077+H078+H079+H080+H081+H082+H083+
H084+H085+H086+H087+H088+H089+H090+H091+H092+H093+H094+H095+H096+H097+
H098+H099+H100+H101+H102+H103+H104+H105+H106+H107+H108+H109+H110+H111+
H112+H113+H114+H115+H116+H117+H118+H119)%>%
mutate(YT023=0)%>%
mutate(YT024=J016+J017+J018+J019+J020+J021+J022+J023+J024+J025+J026+J027+J028+
J029+J030+J031+J032+J033+J034+J035+J036+J037+J038+J062+J063+J064)%>%
mutate(YT025=J039+J040+J041+J042+J043)%>%
mutate(YT026=J001+J002+J003+J004+J005+J006+J007+J009+J010+J011+J012+J013+J014+J015)%>%
mutate(YT027=J044+J045+J046+J047+J048+J049+J050+J051+J052+J053+J054+J055+J056+
J057+J058+J059+J060+J061)%>%
mutate(YT028=J065+J066+J067)%>%
mutate(YT029=J069)%>%
mutate(YT030=J070)%>%
mutate(YT031=J072)%>%
mutate(YT032=K001+K002+K003+K004+K005+K006+K007+K008+K009+K010+K011+K012+K013+
K014+K015+K016+K017+K018+K019+K020+K021+K022+K023+K024)%>%
mutate(YT033=K025+K026+K027+K028+K029+K030+K031+K032+K034+K035+K036)%>%
mutate(YT034=K037+K038+K039+K040+K041+K043+K044)%>%
mutate(YT035=L001+L002+L003+L004+L005+L006+L007+L008+L009+L010+L011+L012+L013+
L015+L016+L018+L019+L020+L021+L022+L023+L024+L025+L026+L027+L028+L029)%>%
mutate(YT036=M001+M002+M003+M004+M005+M006)%>%

```

```
mutate(YT037=M007+M008+M009+M010)%>%
mutate(YT038=M012+M013+M014+M015+M016+M017+M018)%>%
mutate(YT039=N001+N002+N003+N004+N005+N006+N007)%>%
mutate(YT040=N008+N009+N011+N013+N014+N015+N016)%>%
mutate(YT041=Q009+Q010)%>%
mutate(YT042=Q001+Q006)%>%
mutate(YT043=Q003)%>%
mutate(YT044=0)%>%
mutate(YT045=0)
```

Se guarda la tabla de apoyos:

```
agregado <- agregado %>% mutate(enc=2004)
agregado <- agregado %>% mutate(folioviv=substr(folio,5,10))
agregado <- agregado %>% mutate(foliohog=substr(folio,11,11))
agregado <- agregado %>% mutate(folioviv=as.numeric(folioviv))
agregado <- agregado %>% mutate(foliohog=as.numeric(foliohog))
agregado <- agregado %>% mutate(foliohog=foliohog+1)
Apoyos2004 <- agregado %>%
  select(enc, folioviv, foliohog, YT001, YT002, YT003, YT004, YT005, YT006, YT007, YT008, YT009,
    YT010, YT011, YT012, YT013, YT014, YT015, YT016, YT017, YT018, YT019, YT020, YT021,
    YT022, YT023, YT024, YT025, YT026, YT027, YT028, YT029, YT030, YT031, YT032, YT033,
    YT034, YT035, YT036, YT037, YT038, YT039, YT040, YT041, YT042, YT043, YT044, YT045)
remove(agregado)
```

J. Tabla de apoyos de 2005

```
gasto <- read.dbf("Bases/2005/nomon.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona apoyos:

```
gasto <- gasto %>% filter(tipo_gas=="3")
agregado <- gasto %>%
  group_by(folio, clave) %>% summarise(gasto=sum(gas_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave) %>%
  pivot_wider(id_cols=c(folio), values_from=gasto, names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)

[1] "A001" "A002" "A003" "A004" "A005" "A006" "A007" "A008" "A009"
[10] "A010" "A011" "A012" "A013" "A014" "A015" "A016" "A017" "A018"
[19] "A019" "A020" "A021" "A022" "A023" "A024" "A025" "A026" "A027"
[28] "A028" "A029" "A030" "A031" "A032" "A033" "A034" "A035" "A036"
[37] "A037" "A038" "A039" "A040" "A041" "A042" "A043" "A045" "A046"
[46] "A047" "A048" "A049" "A050" "A051" "A052" "A053" "A054" "A055"
[55] "A056" "A057" "A058" "A059" "A060" "A061" "A062" "A063" "A064"
[64] "A065" "A066" "A068" "A069" "A070" "A071" "A072" "A073" "A074"
[73] "A075" "A077" "A078" "A079" "A080" "A081" "A082" "A083" "A084"
[82] "A085" "A086" "A087" "A088" "A089" "A090" "A091" "A092" "A093"
[91] "A094" "A095" "A096" "A098" "A099" "A100" "A101" "A102" "A103"
[100] "A104" "A105" "A106" "A107" "A108" "A109" "A110" "A111" "A112"
[109] "A113" "A114" "A115" "A116" "A117" "A118" "A119" "A120" "A121"
[118] "A122" "A123" "A124" "A125" "A126" "A127" "A128" "A129" "A130"
```

[127]	"A131"	"A132"	"A133"	"A134"	"A135"	"A136"	"A137"	"A138"	"A139"
[136]	"A140"	"A141"	"A142"	"A143"	"A144"	"A145"	"A146"	"A148"	"A149"
[145]	"A150"	"A151"	"A152"	"A153"	"A154"	"A155"	"A156"	"A157"	"A158"
[154]	"A159"	"A160"	"A161"	"A162"	"A163"	"A164"	"A165"	"A166"	"A167"
[163]	"A168"	"A169"	"A170"	"A171"	"A172"	"A173"	"A174"	"A175"	"A176"
[172]	"A177"	"A178"	"A179"	"A180"	"A181"	"A182"	"A183"	"A184"	"A185"
[181]	"A186"	"A188"	"A189"	"A191"	"A192"	"A193"	"A194"	"A195"	"A196"
[190]	"A197"	"A198"	"A199"	"A200"	"A201"	"A202"	"A203"	"A204"	"A205"
[199]	"A206"	"A207"	"A208"	"A209"	"A210"	"A211"	"A212"	"A213"	"A214"
[208]	"A215"	"A216"	"A217"	"A218"	"A219"	"A220"	"A223"	"A224"	"A225"
[217]	"A226"	"A229"	"A230"	"A231"	"A232"	"A233"	"A234"	"A235"	"A236"
[226]	"A237"	"A238"	"A240"	"A243"	"B001"	"B002"	"B003"	"B004"	"B005"
[235]	"B006"	"B007"	"C001"	"C002"	"C003"	"C004"	"C005"	"C006"	"C007"
[244]	"C008"	"C009"	"C010"	"C011"	"C012"	"C013"	"C014"	"C015"	"C016"
[253]	"C017"	"C018"	"C019"	"C020"	"C021"	"C022"	"C023"	"C024"	"D001"
[262]	"D002"	"D003"	"D004"	"D005"	"D006"	"D007"	"D008"	"D009"	"D010"
[271]	"D011"	"D012"	"D013"	"D014"	"D015"	"D016"	"D017"	"D019"	"D020"
[280]	"D021"	"D022"	"D023"	"D024"	"E001"	"E002"	"E003"	"E004"	"E005"
[289]	"E006"	"E007"	"E008"	"E009"	"E010"	"E011"	"E012"	"E013"	"E014"
[298]	"E015"	"E016"	"E017"	"E018"	"E019"	"E020"	"E021"	"E022"	"E023"
[307]	"E024"	"E025"	"E026"	"E027"	"E028"	"E029"	"E030"	"E031"	"E032"
[316]	"E033"	"F001"	"F002"	"F003"	"F004"	"F005"	"F006"	"F008"	"F009"
[325]	"F010"	"F011"	"F012"	"F013"	"F014"	"F015"	"folio"	"G001"	"G002"
[334]	"G003"	"G004"	"G005"	"G007"	"G008"	"G009"	"G010"	"G019"	"G020"
[343]	"G022"	"G023"	"G024"	"G025"	"G026"	"G027"	"G028"	"G029"	"H001"
[352]	"H002"	"H003"	"H004"	"H005"	"H006"	"H007"	"H008"	"H009"	"H010"
[361]	"H011"	"H012"	"H013"	"H014"	"H015"	"H016"	"H017"	"H018"	"H019"
[370]	"H020"	"H021"	"H022"	"H023"	"H024"	"H025"	"H026"	"H027"	"H028"
[379]	"H029"	"H030"	"H031"	"H032"	"H033"	"H034"	"H035"	"H036"	"H037"
[388]	"H038"	"H039"	"H040"	"H041"	"H042"	"H043"	"H044"	"H045"	"H046"
[397]	"H047"	"H048"	"H049"	"H050"	"H051"	"H052"	"H053"	"H054"	"H055"
[406]	"H056"	"H057"	"H058"	"H059"	"H060"	"H061"	"H062"	"H063"	"H064"
[415]	"H065"	"H066"	"H067"	"H068"	"H069"	"H070"	"H071"	"H072"	"H073"
[424]	"H074"	"H075"	"H076"	"H077"	"H078"	"H079"	"H080"	"H081"	"H082"
[433]	"H083"	"H084"	"H085"	"H086"	"H087"	"H088"	"H089"	"H090"	"H091"
[442]	"H092"	"H093"	"H094"	"H095"	"H096"	"H097"	"H098"	"H099"	"H100"
[451]	"H101"	"H102"	"H103"	"H104"	"H105"	"H106"	"H107"	"H109"	"H110"
[460]	"H111"	"H112"	"H113"	"H114"	"H115"	"H116"	"H117"	"H118"	"H119"
[469]	"I001"	"I002"	"I003"	"I004"	"I005"	"I006"	"I007"	"I008"	"I009"
[478]	"I010"	"I011"	"I012"	"I013"	"I014"	"I015"	"I016"	"I017"	"I018"
[487]	"I019"	"I020"	"I021"	"I022"	"I023"	"I024"	"I025"	"I026"	"J001"
[496]	"J002"	"J003"	"J004"	"J005"	"J006"	"J007"	"J009"	"J010"	"J011"
[505]	"J012"	"J013"	"J014"	"J015"	"J016"	"J017"	"J018"	"J019"	"J020"
[514]	"J021"	"J022"	"J023"	"J024"	"J025"	"J026"	"J027"	"J028"	"J029"
[523]	"J030"	"J031"	"J032"	"J033"	"J034"	"J035"	"J036"	"J037"	"J038"
[532]	"J039"	"J040"	"J041"	"J042"	"J043"	"J044"	"J045"	"J046"	"J047"
[541]	"J048"	"J049"	"J050"	"J051"	"J052"	"J053"	"J054"	"J055"	"J056"
[550]	"J057"	"J058"	"J059"	"J060"	"J061"	"J062"	"J063"	"J064"	"J065"
[559]	"J066"	"J067"	"J069"	"J070"	"J071"	"J072"	"K001"	"K002"	"K003"
[568]	"K004"	"K005"	"K006"	"K007"	"K008"	"K009"	"K010"	"K011"	"K012"
[577]	"K013"	"K014"	"K015"	"K016"	"K017"	"K018"	"K019"	"K020"	"K021"
[586]	"K022"	"K023"	"K024"	"K025"	"K026"	"K027"	"K028"	"K029"	"K030"
[595]	"K031"	"K032"	"K033"	"K034"	"K035"	"K036"	"K037"	"K038"	"K039"
[604]	"K040"	"K041"	"K042"	"K043"	"K044"	"L001"	"L002"	"L003"	"L004"
[613]	"L005"	"L006"	"L007"	"L008"	"L009"	"L010"	"L011"	"L012"	"L013"

[622]	"L014"	"L015"	"L016"	"L017"	"L018"	"L019"	"L020"	"L021"	"L022"
[631]	"L023"	"L024"	"L025"	"L026"	"L027"	"L028"	"L029"	"M001"	"M003"
[640]	"M004"	"M005"	"M006"	"M007"	"M008"	"M009"	"M010"	"M011"	"M012"
[649]	"M013"	"M014"	"M015"	"M016"	"M017"	"M018"	"N001"	"N002"	"N003"
[658]	"N004"	"N005"	"N006"	"N007"	"N008"	"N009"	"N010"	"N014"	"N015"
[667]	"N016"	"Q001"	"Q003"	"Q004"	"Q006"	"Q009"	"Q010"	"Q012"	"Q013"

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YT001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A018+A019+A020+A021+A022+A023+A024+A025+A026+A027+
    A028+A029+A030+A031+A032+A033+A034+A035+A036+A037+A038+A039+A040+A041+
    A042+A043+A045+A046+A047+A048+A049+A050+A051+A052+A053+A054+A055+A056+
    A057+A058+A059+A060+A061+A062+A063+A064+A065+A066+A068+A069+A070+A071+
    A072+A073+A074+A075+A077+A078+A079+A080+A081+A082+A083+A084+A085+A086+
    A087+A088+A089+A090+A091+A092+A093+A094+A095+A096+A098+A099+A100+A101+
    A102+A103+A104+A105+A106+A107+A108+A109+A110+A111+A112+A113+A114+A115+
    A116+A117+A118+A119+A120+A121+A122+A123+A124+A125+A126+A127+A128+A129+
    A130+A131+A132+A133+A134+A135+A136+A137+A138+A139+A140+A141+A142+A143+
    A144+A145+A146+A148+A149+A150+A151+A152+A153+A154+A155+A156+A157+A158+
    A159+A160+A161+A162+A163+A164+A165+A166+A167+A168+A169+A170+A171+A172+
    A173+A174+A175+A176+A177+A178+A179+A180+A181+A182+A183+A184+A185+A186+
    A188+A189+A191+A192+A193+A194+A195+A196+A197+A198+A199+A200+A201+A202+
    A203+A204+A205+A206+A207+A208)%>%
  mutate(YT002=A210+A211)%>%
  mutate(YT003=A212+A213+A214+A215+A216+A217+A218)%>%
  mutate(YT004=A219+A220+A223+A224+A225+A226+A229+A230+A231+A232+A233+A234)%>%
  mutate(YT005=A209)%>%
  mutate(YT006=A235+A236+A237+A238)%>%
  mutate(YT007=A240)%>%
  mutate(YT008=A243)%>%
  mutate(YT009=B001+B002+B003+B004+B005+B006+B007)%>%
  mutate(YT010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
    C014+C015+C016+C017+C018+C019)%>%
  mutate(YT011=C020+C021+C022+C023+C024)%>%
  mutate(YT012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
    D014+D015+D016+D017+D019)%>%
  mutate(YT013=D020+D021+D022+D023+D024)%>%
  mutate(YT014=E001+E002+E003+E004+E005+E006+E007+E008+E009+E010+E011+E012+E013)%>%
  mutate(YT015=E014+E015+E016+E017+E018+E019)%>%
  mutate(YT016=E020+E021+E022+E023+E024)%>%
  mutate(YT017=E025+E026+E027+E028+E029+E030+E031+E032+E033)%>%
  mutate(YT018=F001+F002+F003+F004+F005+F006+F008+F009)%>%
  mutate(YT019=F010+F011+F012+F013+F014+F015)%>%
  mutate(YT020=G001+G002+G003+G004+G005)%>%
  mutate(YT021=G007+G008+G009+G010+G019+G020+G022+G023+G024+G025+G026+G027+G028+G029)%>%
  mutate(YT022=H001+H002+H003+H004+H005+H006+H007+H008+H009+H010+H011+H012+H013+
    H014+H015+H016+H017+H018+H019+H020+H021+H022+H023+H024+H025+H026+H027+
    H028+H029+H030+H031+H032+H033+H034+H035+H036+H037+H038+H039+H040+H041+
    H042+H043+H044+H045+H046+H047+H048+H049+H050+H051+H052+H053+H054+H055+
    H056+H057+H058+H059+H060+H061+H062+H063+H064+H065+H066+H067+H068+H069+
    H070+H071+H072+H073+H074+H075+H076+H077+H078+H079+H080+H081+H082+H083+
    H084+H085+H086+H087+H088+H089+H090+H091+H092+H093+H094+H095+H096+H097+
    H098+H099+H100+H101+H102+H103+H104+H105+H106+H107+H109+H110+H111+H112+

```



```

H113+H114+H115+H116+H117+H118+H119)%>%
mutate(YT023=I001+I002+I003+I004+I005+I006+I007+I008+I009+I010+I011+I012+I013+
I014+I015+I016+I017+I018+I019+I020+I021+I022+I023+I024+I025+I026)%>%
mutate(YT024=J016+J017+J018+J019+J020+J021+J022+J023+J024+J025+J026+J027+J028+
J029+J030+J031+J032+J033+J034+J035+J036+J037+J038+J062+J063+J064)%>%
mutate(YT025=J039+J040+J041+J042+J043)%>%
mutate(YT026=J001+J002+J003+J004+J005+J006+J007+J009+J010+J011+J012+J013+J014+J015)%>%
mutate(YT027=J044+J045+J046+J047+J048+J049+J050+J051+J052+J053+J054+J055+J056+
J057+J058+J059+J060+J061)%>%
mutate(YT028=J065+J066+J067)%>%
mutate(YT029=J069)%>%
mutate(YT030=J070+J071)%>%
mutate(YT031=J072)%>%
mutate(YT032=K001+K002+K003+K004+K005+K006+K007+K008+K009+K010+K011+K012+K013+
K014+K015+K016+K017+K018+K019+K020+K021+K022+K023+K024)%>%
mutate(YT033=K025+K026+K027+K028+K029+K030+K031+K032+K033+K034+K035+K036)%>%
mutate(YT034=K037+K038+K039+K040+K041+K042+K043+K044)%>%
mutate(YT035=L001+L002+L003+L004+L005+L006+L007+L008+L009+L010+L011+L012+L013+
L014+L015+L016+L017+L018+L019+L020+L021+L022+L023+L024+L025+L026+L027+
L028+L029)%>%
mutate(YT036=M001+M003+M004+M005+M006)%>%
mutate(YT037=M007+M008+M009+M010+M011)%>%
mutate(YT038=M012+M013+M014+M015+M016+M017+M018)%>%
mutate(YT039=N001+N002+N003+N004+N005+N006+N007+N010+Q012)%>%
mutate(YT040=N008+N009+N014+N015+N016)%>%
mutate(YT041=Q009+Q010+Q013)%>%
mutate(YT042=Q001+Q006)%>%
mutate(YT043=Q003+Q004)%>%
mutate(YT044=0)%>%
mutate(YT045=0)

```

Se guarda la tabla de apoyos:

```

agregado <- agregado %>% mutate(enc=2005)
agregado <- agregado %>% mutate(folioviv=substr(folio,5,10))
agregado <- agregado %>% mutate(foliohog=substr(folio,11,11))
agregado <- agregado %>% mutate(folioviv=as.numeric(folioviv))
agregado <- agregado %>% mutate(foliohog=as.numeric(foliohog))
agregado <- agregado %>% mutate(foliohog=foliohog+1)
Apoyos2005 <- agregado %>%
  select(enc, folioviv, foliohog, YT001, YT002, YT003, YT004, YT005, YT006, YT007, YT008, YT009,
YT010, YT011, YT012, YT013, YT014, YT015, YT016, YT017, YT018, YT019, YT020, YT021,
YT022, YT023, YT024, YT025, YT026, YT027, YT028, YT029, YT030, YT031, YT032, YT033,
YT034, YT035, YT036, YT037, YT038, YT039, YT040, YT041, YT042, YT043, YT044, YT045)
remove(agregado)

```

K. Tabla de apoyos de 2006

```

gasto <- read.dbf("Bases/2006/nomon.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))

```

Se selecciona apoyos:

```

gasto <- gasto %>% filter(tipo_gas=="3")
agregado <- gasto %>%
  group_by(folio, clave) %>% summarise(gasto=sum(gas_tri), .groups="drop")

```



```
remove(gasto)
agregado <- agregado %>% arrange(clave) %>%
  pivot_wider(id_cols=folio, values_from=gasto, names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)
```

```
[1] "A001" "A002" "A003" "A004" "A005" "A006" "A007" "A008" "A009"
[10] "A010" "A011" "A012" "A013" "A014" "A015" "A016" "A017" "A018"
[19] "A019" "A021" "A022" "A023" "A024" "A025" "A026" "A027" "A029"
[28] "A030" "A031" "A032" "A033" "A034" "A035" "A036" "A037" "A038"
[37] "A039" "A040" "A041" "A042" "A043" "A044" "A045" "A046" "A047"
[46] "A048" "A049" "A050" "A051" "A052" "A053" "A054" "A055" "A056"
[55] "A057" "A058" "A059" "A060" "A061" "A062" "A064" "A065" "A066"
[64] "A067" "A068" "A070" "A071" "A072" "A073" "A074" "A075" "A077"
[73] "A078" "A079" "A080" "A081" "A082" "A083" "A084" "A085" "A086"
[82] "A087" "A088" "A089" "A090" "A091" "A092" "A093" "A095" "A096"
[91] "A098" "A099" "A101" "A102" "A103" "A104" "A105" "A106" "A107"
[100] "A108" "A109" "A110" "A111" "A112" "A113" "A114" "A115" "A116"
[109] "A117" "A118" "A119" "A120" "A121" "A122" "A123" "A124" "A125"
[118] "A126" "A127" "A128" "A129" "A130" "A131" "A132" "A133" "A134"
[127] "A135" "A136" "A137" "A138" "A139" "A140" "A141" "A142" "A143"
[136] "A144" "A146" "A147" "A148" "A149" "A150" "A151" "A152" "A153"
[145] "A154" "A155" "A156" "A157" "A158" "A159" "A160" "A161" "A162"
[154] "A163" "A164" "A165" "A166" "A167" "A168" "A169" "A170" "A171"
[163] "A172" "A173" "A174" "A175" "A176" "A177" "A178" "A180" "A181"
[172] "A182" "A183" "A185" "A186" "A187" "A188" "A189" "A191" "A192"
[181] "A194" "A195" "A196" "A198" "A199" "A200" "A201" "A202" "A203"
[190] "A205" "A206" "A207" "A208" "A209" "A210" "A211" "A212" "A213"
[199] "A214" "A215" "A216" "A217" "A218" "A219" "A220" "A221" "A222"
[208] "A223" "A224" "A226" "A227" "A228" "A229" "A230" "A233" "A234"
[217] "A235" "A236" "A237" "A238" "A239" "A242" "A243" "A244" "A245"
[226] "A246" "A247" "B001" "B002" "B003" "B004" "B005" "B006" "B007"
[235] "C001" "C002" "C003" "C004" "C005" "C006" "C007" "C008" "C009"
[244] "C010" "C011" "C012" "C013" "C014" "C015" "C016" "C017" "C018"
[253] "C019" "C020" "C021" "C022" "C023" "C024" "D001" "D002" "D003"
[262] "D004" "D005" "D006" "D007" "D008" "D009" "D010" "D011" "D012"
[271] "D013" "D014" "D015" "D016" "D017" "D018" "D019" "D020" "D021"
[280] "D022" "D023" "D024" "D025" "D026" "E001" "E002" "E003" "E004"
[289] "E005" "E006" "E007" "E008" "E009" "E010" "E012" "E013" "E014"
[298] "E015" "E016" "E017" "E018" "E019" "E020" "E021" "E022" "E023"
[307] "E024" "E025" "E026" "E027" "E028" "E029" "E030" "E031" "E032"
[316] "E033" "F001" "F002" "F003" "F004" "F005" "F006" "F008" "F009"
[325] "F010" "F011" "F012" "F013" "F014" "F015" "folio" "G001" "G002"
[334] "G003" "G004" "G005" "G007" "G008" "G009" "G010" "G011" "G020"
[343] "G021" "G022" "G023" "G024" "G025" "G026" "G027" "G028" "G029"
[352] "G030" "H001" "H002" "H003" "H004" "H005" "H006" "H007" "H008"
[361] "H009" "H010" "H011" "H012" "H013" "H014" "H015" "H016" "H017"
[370] "H018" "H019" "H020" "H021" "H022" "H023" "H024" "H025" "H026"
[379] "H027" "H028" "H029" "H030" "H031" "H032" "H033" "H034" "H035"
[388] "H036" "H037" "H038" "H039" "H040" "H041" "H042" "H043" "H044"
[397] "H045" "H046" "H047" "H048" "H049" "H050" "H051" "H052" "H053"
[406] "H054" "H055" "H056" "H057" "H058" "H059" "H060" "H061" "H062"
[415] "H063" "H064" "H065" "H066" "H067" "H068" "H069" "H070" "H071"
[424] "H072" "H073" "H074" "H075" "H076" "H077" "H078" "H079" "H080"
```

[433]	"H081"	"H082"	"H083"	"H084"	"H085"	"H086"	"H087"	"H088"	"H089"
[442]	"H090"	"H091"	"H092"	"H093"	"H094"	"H095"	"H096"	"H097"	"H098"
[451]	"H099"	"H100"	"H101"	"H102"	"H103"	"H104"	"H105"	"H106"	"H107"
[460]	"H108"	"H109"	"H110"	"H111"	"H112"	"H113"	"H114"	"H115"	"H116"
[469]	"H117"	"H118"	"H119"	"I001"	"I002"	"I003"	"I004"	"I005"	"I006"
[478]	"I007"	"I008"	"I009"	"I010"	"I011"	"I012"	"I014"	"I015"	"I016"
[487]	"I017"	"I018"	"I019"	"I020"	"I021"	"I022"	"I023"	"I024"	"I025"
[496]	"I026"	"J001"	"J002"	"J003"	"J004"	"J005"	"J006"	"J007"	"J008"
[505]	"J009"	"J010"	"J011"	"J012"	"J013"	"J014"	"J015"	"J016"	"J017"
[514]	"J018"	"J019"	"J020"	"J021"	"J022"	"J023"	"J024"	"J025"	"J026"
[523]	"J027"	"J028"	"J029"	"J030"	"J031"	"J032"	"J033"	"J034"	"J035"
[532]	"J036"	"J037"	"J038"	"J039"	"J040"	"J041"	"J042"	"J043"	"J044"
[541]	"J045"	"J046"	"J047"	"J048"	"J049"	"J050"	"J051"	"J052"	"J053"
[550]	"J054"	"J055"	"J056"	"J057"	"J058"	"J059"	"J060"	"J061"	"J062"
[559]	"J063"	"J064"	"J065"	"J066"	"J067"	"J068"	"J069"	"J070"	"J071"
[568]	"J072"	"K001"	"K002"	"K003"	"K004"	"K005"	"K006"	"K007"	"K008"
[577]	"K009"	"K010"	"K011"	"K012"	"K013"	"K014"	"K015"	"K016"	"K017"
[586]	"K018"	"K019"	"K020"	"K021"	"K022"	"K023"	"K024"	"K025"	"K026"
[595]	"K027"	"K028"	"K029"	"K030"	"K031"	"K032"	"K033"	"K034"	"K035"
[604]	"K036"	"K037"	"K038"	"K039"	"K040"	"K041"	"K042"	"K043"	"L001"
[613]	"L002"	"L003"	"L004"	"L005"	"L006"	"L007"	"L008"	"L010"	"L011"
[622]	"L012"	"L013"	"L015"	"L016"	"L017"	"L018"	"L019"	"L020"	"L021"
[631]	"L022"	"L023"	"L024"	"L025"	"L026"	"L027"	"L028"	"L029"	"M001"
[640]	"M002"	"M003"	"M004"	"M005"	"M006"	"M007"	"M008"	"M009"	"M010"
[649]	"M011"	"M012"	"M013"	"M014"	"M015"	"M016"	"M017"	"M018"	"N001"
[658]	"N002"	"N003"	"N004"	"N005"	"N006"	"N007"	"N008"	"N009"	"N010"
[667]	"N013"	"N014"	"N015"	"N016"	"Q001"	"Q003"	"Q004"	"Q006"	"Q007"
[676]	"Q009"	"Q012"	"Q015"						

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YT001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A018+A019+A021+A022+A023+A024+A025+A026+A027+A029+
    A030+A031+A032+A033+A034+A035+A036+A037+A038+A039+A040+A041+A042+A043+
    A044+A045+A046+A047+A048+A049+A050+A051+A052+A053+A054+A055+A056+A057+
    A058+A059+A060+A061+A062+A064+A065+A066+A067+A068+A070+A071+A072+A073+
    A074+A075+A077+A078+A079+A080+A081+A082+A083+A084+A085+A086+A087+A088+
    A089+A090+A091+A092+A093+A095+A096+A098+A099+A101+A102+A103+A104+A105+
    A106+A107+A108+A109+A110+A111+A112+A113+A114+A115+A116+A117+A118+A119+
    A120+A121+A122+A123+A124+A125+A126+A127+A128+A129+A130+A131+A132+A133+
    A134+A135+A136+A137+A138+A139+A140+A141+A142+A143+A144+A146+A147+A148+
    A149+A150+A151+A152+A153+A154+A155+A156+A157+A158+A159+A160+A161+A162+
    A163+A164+A165+A166+A167+A168+A169+A170+A171+A172+A173+A174+A175+A176+
    A177+A178+A180+A181+A182+A183+A185+A186+A187+A188+A189+A191+A192+A194+
    A195+A196+A198+A199+A200+A201+A202+A203+A205+A206+A207+A208+A209+A210+A211)%>%
  mutate(YT002=A213+A214)%>%
  mutate(YT003=A215+A216+A217+A218+A219+A220+A221+A222)%>%
  mutate(YT004=A223+A224+A226+A227+A228+A229+A230+A233+A234+A235+A236+A237+A238)%>%
  mutate(YT005=A212)%>%
  mutate(YT006=A243+A244+A245+A246+A247)%>%
  mutate(YT007=A239)%>%
  mutate(YT008=A242)%>%
  mutate(YT009=B001+B002+B003+B004+B005+B006+B007)%>%
  mutate(YT010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+

```

```

C014+C015+C016+C017+C018+C019)%>%
mutate(YT011=C020+C021+C022+C023+C024)%>%
mutate(YT012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
D014+D015+D016+D017+D018+D019+D020+D021)%>%
mutate(YT013=D022+D023+D024+D025+D026)%>%
mutate(YT014=E001+E002+E003+E004+E005+E006+E007+E008+E009+E010+E012+E013)%>%
mutate(YT015=E014+E015+E016+E017+E018+E019)%>%
mutate(YT016=E020+E021+E022+E023+E024)%>%
mutate(YT017=E025+E026+E027+E028+E029+E030+E031+E032+E033)%>%
mutate(YT018=F001+F002+F003+F004+F005+F006+F008+F009)%>%
mutate(YT019=F010+F011+F012+F013+F014+F015)%>%
mutate(YT020=G001+G002+G003+G004+G005)%>%
mutate(YT021=G007+G008+G009+G010+G011+G020+G021+G022+G023+G024+G025+G026+G027+
G028+G029+G030)%>%
mutate(YT022=H001+H002+H003+H004+H005+H006+H007+H008+H009+H010+H011+H012+H013+
H014+H015+H016+H017+H018+H019+H020+H021+H022+H023+H024+H025+H026+H027+
H028+H029+H030+H031+H032+H033+H034+H035+H036+H037+H038+H039+H040+H041+
H042+H043+H044+H045+H046+H047+H048+H049+H050+H051+H052+H053+H054+H055+
H056+H057+H058+H059+H060+H061+H062+H063+H064+H065+H066+H067+H068+H069+
H070+H071+H072+H073+H074+H075+H076+H077+H078+H079+H080+H081+H082+H083+
H084+H085+H086+H087+H088+H089+H090+H091+H092+H093+H094+H095+H096+H097+
H098+H099+H100+H101+H102+H103+H104+H105+H106+H107+H108+H109+H110+H111+
H112+H113+H114+H115+H116+H117+H118+H119)%>%
mutate(YT023=I001+I002+I003+I004+I005+I006+I007+I008+I009+I010+I011+I012+I014+
I015+I016+I017+I018+I019+I020+I021+I022+I023+I024+I025+I026)%>%
mutate(YT024=J016+J017+J018+J019+J020+J021+J022+J023+J024+J025+J026+J027+J028+
J029+J030+J031+J032+J033+J034+J035+J036+J037+J038+J062+J063+J064)%>%
mutate(YT025=J039+J040+J041+J042+J043)%>%
mutate(YT026=J001+J002+J003+J004+J005+J006+J007+J008+J009+J010+J011+J012+J013+
J014+J015)%>%
mutate(YT027=J044+J045+J046+J047+J048+J049+J050+J051+J052+J053+J054+J055+J056+
J057+J058+J059+J060+J061)%>%
mutate(YT028=J065+J066+J067+J068)%>%
mutate(YT029=J069)%>%
mutate(YT030=J070+J071)%>%
mutate(YT031=J072)%>%
mutate(YT032=K001+K002+K003+K004+K005+K006+K007+K008+K009+K010+K011+K012+K013+
K014+K015+K016+K017+K018+K019+K020+K021+K022+K023+K024)%>%
mutate(YT033=K025+K026+K027+K028+K029+K030+K031+K032+K033+K034+K035+K036)%>%
mutate(YT034=K037+K038+K039+K040+K041+K042+K043)%>%
mutate(YT035=L001+L002+L003+L004+L005+L006+L007+L008+L010+L011+L012+L013+L015+
L016+L017+L018+L019+L020+L021+L022+L023+L024+L025+L026+L027+L028+L029)%>%
mutate(YT036=M001+M002+M003+M004+M005+M006)%>%
mutate(YT037=M007+M008+M009+M010+M011)%>%
mutate(YT038=M012+M013+M014+M015+M016+M017+M018)%>%
mutate(YT039=N001+N002+N003+N004+N005+N006+N007+N010+Q012)%>%
mutate(YT040=N008+N009+N013+N014+N015+N016+Q007)%>%
mutate(YT041=Q009)%>%
mutate(YT042=Q001+Q006+Q015)%>%
mutate(YT043=Q003+Q004)%>%
mutate(YT044=0)%>%
mutate(YT045=0)

```

Se guarda la tabla de apoyos:

```
agregado <- agregado %>% mutate(enc=2006)
agregado <- agregado %>% mutate(folioviv=substr(folio,5,10))
agregado <- agregado %>% mutate(foliohog=substr(folio,11,11))
agregado <- agregado %>% mutate(folioviv=as.numeric(folioviv))
agregado <- agregado %>% mutate(foliohog=as.numeric(foliohog))
agregado <- agregado %>% mutate(foliohog=foliohog+1)
Apoyos2006 <- agregado %>%
  select(enc, folioviv, foliohog, YT001, YT002, YT003, YT004, YT005, YT006, YT007, YT008, YT009,
         YT010, YT011, YT012, YT013, YT014, YT015, YT016, YT017, YT018, YT019, YT020, YT021,
         YT022, YT023, YT024, YT025, YT026, YT027, YT028, YT029, YT030, YT031, YT032, YT033,
         YT034, YT035, YT036, YT037, YT038, YT039, YT040, YT041, YT042, YT043, YT044, YT045)
remove(agregado)
```

L. Tabla de apoyos de 2008

```
gasto <- read.dbf("Bases/2008/nomon.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona apoyos:

```
gasto <- gasto %>% filter(tipogasto==3|tipogasto==4)
agregado <- gasto %>% group_by(folioviv, foliohog, clave) %>%
  summarise(gasto=sum(apo_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave) %>%
  pivot_wider(id_cols=c(folioviv, foliohog), values_from=gasto, names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)

[1] "A001" "A002" "A003" "A004" "A005" "A006"
[7] "A007" "A008" "A009" "A010" "A011" "A012"
[13] "A013" "A014" "A015" "A016" "A017" "A018"
[19] "A019" "A020" "A021" "A022" "A023" "A024"
[25] "A025" "A026" "A027" "A029" "A030" "A031"
[31] "A032" "A033" "A034" "A035" "A036" "A037"
[37] "A038" "A039" "A040" "A041" "A042" "A045"
[43] "A046" "A047" "A048" "A049" "A050" "A051"
[49] "A052" "A053" "A054" "A055" "A056" "A057"
[55] "A058" "A059" "A060" "A061" "A062" "A063"
[61] "A064" "A065" "A066" "A067" "A068" "A070"
[67] "A071" "A072" "A073" "A074" "A075" "A076"
[73] "A077" "A078" "A079" "A080" "A081" "A082"
[79] "A083" "A084" "A085" "A086" "A087" "A088"
[85] "A089" "A090" "A091" "A092" "A093" "A095"
[91] "A096" "A097" "A098" "A099" "A100" "A101"
[97] "A102" "A103" "A104" "A105" "A106" "A107"
[103] "A108" "A109" "A110" "A111" "A112" "A113"
[109] "A114" "A115" "A116" "A117" "A118" "A119"
[115] "A120" "A121" "A122" "A123" "A124" "A125"
[121] "A126" "A127" "A128" "A129" "A130" "A131"
[127] "A132" "A133" "A134" "A135" "A136" "A137"
[133] "A138" "A139" "A140" "A141" "A142" "A143"
[139] "A144" "A145" "A146" "A147" "A148" "A149"
```

[145]	"A150"	"A151"	"A152"	"A153"	"A154"	"A155"
[151]	"A156"	"A157"	"A158"	"A159"	"A160"	"A161"
[157]	"A162"	"A163"	"A164"	"A165"	"A166"	"A167"
[163]	"A168"	"A169"	"A170"	"A171"	"A172"	"A173"
[169]	"A174"	"A175"	"A176"	"A177"	"A178"	"A179"
[175]	"A180"	"A181"	"A182"	"A183"	"A185"	"A186"
[181]	"A187"	"A188"	"A190"	"A191"	"A192"	"A194"
[187]	"A195"	"A196"	"A197"	"A198"	"A199"	"A200"
[193]	"A201"	"A202"	"A203"	"A204"	"A205"	"A206"
[199]	"A207"	"A208"	"A209"	"A210"	"A211"	"A212"
[205]	"A213"	"A214"	"A215"	"A216"	"A217"	"A218"
[211]	"A219"	"A220"	"A221"	"A222"	"A223"	"A224"
[217]	"A225"	"A228"	"A229"	"A230"	"A231"	"A233"
[223]	"A234"	"A235"	"A236"	"A237"	"A238"	"A239"
[229]	"A242"	"A243"	"A244"	"A245"	"A246"	"B001"
[235]	"B002"	"B003"	"B004"	"B005"	"B006"	"B007"
[241]	"C001"	"C002"	"C003"	"C004"	"C005"	"C006"
[247]	"C007"	"C008"	"C009"	"C010"	"C011"	"C012"
[253]	"C013"	"C014"	"C015"	"C016"	"C017"	"C018"
[259]	"C019"	"C020"	"C021"	"C022"	"C023"	"C024"
[265]	"D001"	"D002"	"D003"	"D004"	"D005"	"D006"
[271]	"D007"	"D008"	"D009"	"D010"	"D011"	"D012"
[277]	"D013"	"D014"	"D015"	"D016"	"D017"	"D018"
[283]	"D019"	"D020"	"D021"	"D022"	"D023"	"D024"
[289]	"D025"	"D026"	"E001"	"E002"	"E003"	"E004"
[295]	"E005"	"E006"	"E007"	"E008"	"E009"	"E010"
[301]	"E012"	"E013"	"E014"	"E015"	"E016"	"E017"
[307]	"E018"	"E019"	"E020"	"E021"	"E022"	"E023"
[313]	"E024"	"E025"	"E026"	"E027"	"E028"	"E029"
[319]	"E030"	"E031"	"E032"	"E033"	"F001"	"F002"
[325]	"F003"	"F004"	"F005"	"F006"	"F007"	"F008"
[331]	"F009"	"F010"	"F011"	"F013"	"F014"	"F015"
[337]	"F016"	"F017"	"foliohog"	"folioviv"	"G001"	"G002"
[343]	"G003"	"G004"	"G005"	"G007"	"G008"	"G009"
[349]	"G010"	"G011"	"G012"	"G013"	"G014"	"G015"
[355]	"G016"	"G017"	"G018"	"G019"	"G020"	"G021"
[361]	"G022"	"H001"	"H002"	"H003"	"H004"	"H005"
[367]	"H006"	"H007"	"H008"	"H009"	"H010"	"H011"
[373]	"H012"	"H013"	"H014"	"H015"	"H016"	"H017"
[379]	"H018"	"H019"	"H020"	"H021"	"H022"	"H023"
[385]	"H024"	"H025"	"H026"	"H027"	"H028"	"H029"
[391]	"H030"	"H031"	"H032"	"H033"	"H034"	"H035"
[397]	"H036"	"H037"	"H038"	"H039"	"H040"	"H041"
[403]	"H042"	"H043"	"H044"	"H045"	"H046"	"H047"
[409]	"H048"	"H049"	"H050"	"H051"	"H052"	"H053"
[415]	"H054"	"H055"	"H056"	"H057"	"H058"	"H059"
[421]	"H060"	"H061"	"H062"	"H063"	"H064"	"H065"
[427]	"H066"	"H067"	"H068"	"H069"	"H070"	"H071"
[433]	"H072"	"H073"	"H074"	"H075"	"H076"	"H077"
[439]	"H078"	"H079"	"H080"	"H081"	"H082"	"H083"
[445]	"H084"	"H085"	"H086"	"H087"	"H088"	"H089"
[451]	"H090"	"H091"	"H092"	"H093"	"H094"	"H095"
[457]	"H096"	"H097"	"H098"	"H099"	"H100"	"H101"
[463]	"H102"	"H103"	"H104"	"H105"	"H106"	"H107"
[469]	"H108"	"H109"	"H110"	"H111"	"H112"	"H113"

[475]	"H114"	"H115"	"H116"	"H117"	"H118"	"H119"
[481]	"H120"	"H121"	"H123"	"H124"	"H125"	"H126"
[487]	"H127"	"H128"	"H129"	"H130"	"H131"	"H132"
[493]	"H133"	"H134"	"H135"	"H136"	"I001"	"I002"
[499]	"I003"	"I004"	"I005"	"I006"	"I007"	"I008"
[505]	"I009"	"I010"	"I011"	"I012"	"I014"	"I015"
[511]	"I016"	"I017"	"I018"	"I019"	"I020"	"I021"
[517]	"I022"	"I023"	"I024"	"I025"	"I026"	"J001"
[523]	"J002"	"J003"	"J004"	"J005"	"J006"	"J007"
[529]	"J008"	"J009"	"J010"	"J011"	"J012"	"J013"
[535]	"J014"	"J015"	"J016"	"J017"	"J018"	"J019"
[541]	"J020"	"J021"	"J022"	"J023"	"J024"	"J025"
[547]	"J026"	"J027"	"J028"	"J029"	"J030"	"J031"
[553]	"J032"	"J033"	"J034"	"J035"	"J036"	"J037"
[559]	"J038"	"J039"	"J040"	"J041"	"J042"	"J043"
[565]	"J044"	"J045"	"J046"	"J047"	"J048"	"J049"
[571]	"J050"	"J051"	"J052"	"J053"	"J054"	"J055"
[577]	"J056"	"J057"	"J058"	"J059"	"J060"	"J061"
[583]	"J062"	"J063"	"J064"	"J065"	"J066"	"J067"
[589]	"J068"	"J069"	"J070"	"J071"	"J072"	"K001"
[595]	"K002"	"K003"	"K004"	"K005"	"K006"	"K007"
[601]	"K009"	"K010"	"K011"	"K012"	"K013"	"K014"
[607]	"K015"	"K016"	"K017"	"K019"	"K021"	"K022"
[613]	"K023"	"K024"	"K025"	"K026"	"K027"	"K028"
[619]	"K029"	"K030"	"K031"	"K032"	"K033"	"K034"
[625]	"K035"	"K036"	"K037"	"K038"	"K039"	"K040"
[631]	"K041"	"K042"	"K043"	"K044"	"L001"	"L002"
[637]	"L003"	"L004"	"L005"	"L006"	"L007"	"L008"
[643]	"L009"	"L010"	"L011"	"L012"	"L013"	"L015"
[649]	"L016"	"L017"	"L018"	"L019"	"L020"	"L021"
[655]	"L022"	"L023"	"L024"	"L025"	"L026"	"L027"
[661]	"L028"	"L029"	"M001"	"M002"	"M003"	"M004"
[667]	"M005"	"M006"	"M007"	"M008"	"M009"	"M010"
[673]	"M011"	"M012"	"M013"	"M014"	"M015"	"M016"
[679]	"M017"	"M018"	"N001"	"N002"	"N003"	"N004"
[685]	"N005"	"N006"	"N007"	"N008"	"N009"	"N010"
[691]	"N013"	"N014"	"N015"	"N016"	"Q001"	"Q003"
[697]	"Q004"	"Q005"	"Q006"	"Q008"	"Q009"	"Q010"
[703]	"Q012"					

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YT001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A018+A019+A020+A021+A022+A023+A024+A025+A026+A027+
    A029+A030+A031+A032+A033+A034+A035+A036+A037+A038+A039+A040+A041+A042+
    A045+A046+A047+A048+A049+A050+A051+A052+A053+A054+A055+A056+A057+A058+
    A059+A060+A061+A062+A063+A064+A065+A066+A067+A068+A070+A071+A072+A073+
    A074+A075+A076+A077+A078+A079+A080+A081+A082+A083+A084+A085+A086+A087+
    A088+A089+A090+A091+A092+A093+A095+A096+A097+A098+A099+A100+A101+A102+
    A103+A104+A105+A106+A107+A108+A109+A110+A111+A112+A113+A114+A115+A116+
    A117+A118+A119+A120+A121+A122+A123+A124+A125+A126+A127+A128+A129+A130+
    A131+A132+A133+A134+A135+A136+A137+A138+A139+A140+A141+A142+A143+A144+
    A145+A146+A147+A148+A149+A150+A151+A152+A153+A154+A155+A156+A157+A158+
    A159+A160+A161+A162+A163+A164+A165+A166+A167+A168+A169+A170+A171+A172+

```

```

A173+A174+A175+A176+A177+A178+A179+A180+A181+A182+A183+A185+A186+A187+
A188+A190+A191+A192+A194+A195+A196+A197+A198+A199+A200+A201+A202+A203+
A204+A205+A206+A207+A208+A209+A210+A211)%>%
mutate(YT002=A213+A214)%>%
mutate(YT003=A215+A216+A217+A218+A219+A220+A221+A222)%>%
mutate(YT004=A223+A224+A225+A228+A229+A230+A231+A233+A234+A235+A236+A237+A238)%>%
mutate(YT005=A212)%>%
mutate(YT006=A243+A244+A245+A246)%>%
mutate(YT007=A239)%>%
mutate(YT008=A242)%>%
mutate(YT009=B001+B002+B003+B004+B005+B006+B007)%>%
mutate(YT010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
C014+C015+C016+C017+C018+C019)%>%
mutate(YT011=C020+C021+C022+C023+C024)%>%
mutate(YT012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
D014+D015+D016+D017+D018+D019+D020+D021)%>%
mutate(YT013=D022+D023+D024+D025+D026)%>%
mutate(YT014=E001+E002+E003+E004+E005+E006+E007+E008+E009+E010+E012+E013)%>%
mutate(YT015=E014+E015+E016+E017+E018+E019)%>%
mutate(YT016=E020+E021+E022+E023+E024)%>%
mutate(YT017=E025+E026+E027+E028+E029+E030+E031+E032+E033)%>%
mutate(YT018=F001+F002+F003+F004+F005+F006+F007+F008+F009)%>%
mutate(YT019=F010+F011+F013+F014+F015+F016+F017)%>%
mutate(YT020=G001+G002+G003+G004+G005)%>%
mutate(YT021=G007+G008+G009+G010+G011+G012+G013+G014+G015+G016+G017+G018+G019+
G020+G021+G022)%>%
mutate(YT022=H001+H002+H003+H004+H005+H006+H007+H008+H009+H010+H011+H012+H013+
H014+H015+H016+H017+H018+H019+H020+H021+H022+H023+H024+H025+H026+H027+
H028+H029+H030+H031+H032+H033+H034+H035+H036+H037+H038+H039+H040+H041+
H042+H043+H044+H045+H046+H047+H048+H049+H050+H051+H052+H053+H054+H055+
H056+H057+H058+H059+H060+H061+H062+H063+H064+H065+H066+H067+H068+H069+
H070+H071+H072+H073+H074+H075+H076+H077+H078+H079+H080+H081+H082+H083+
H084+H085+H086+H087+H088+H089+H090+H091+H092+H093+H094+H095+H096+H097+
H098+H099+H100+H101+H102+H103+H104+H105+H106+H107+H108+H109+H110+H111+
H112+H113+H114+H115+H116+H117+H118+H119+H120+H121+H123+H124+H125+H126+
H127+H128+H129+H130+H131+H132+H133+H134+H135+H136)%>%
mutate(YT023=I001+I002+I003+I004+I005+I006+I007+I008+I009+I010+I011+I012+I014+
I015+I016+I017+I018+I019+I020+I021+I022+I023+I024+I025+I026)%>%
mutate(YT024=J016+J017+J018+J019+J020+J021+J022+J023+J024+J025+J026+J027+J028+
J029+J030+J031+J032+J033+J034+J035+J036+J037+J038+J062+J063+J064)%>%
mutate(YT025=J039+J040+J041+J042+J043)%>%
mutate(YT026=J001+J002+J003+J004+J005+J006+J007+J008+J009+J010+J011+J012+J013+
J014+J015)%>%
mutate(YT027=J044+J045+J046+J047+J048+J049+J050+J051+J052+J053+J054+J055+J056+
J057+J058+J059+J060+J061)%>%
mutate(YT028=J065+J066+J067+J068)%>%
mutate(YT029=J069)%>%
mutate(YT030=J070+J071)%>%
mutate(YT031=J072)%>%
mutate(YT032=K001+K002+K003+K004+K005+K006+K007+K009+K010+K011+K012+K013+K014+
K015+K016+K017+K019+K021+K022+K023+K024)%>%
mutate(YT033=K025+K026+K027+K028+K029+K030+K031+K032+K033+K034+K035+K036)%>%
mutate(YT034=K037+K038+K039+K040+K041+K042+K043+K044)%>%
mutate(YT035=L001+L002+L003+L004+L005+L006+L007+L008+L009+L010+L011+L012+L013+
L015+L016+L017+L018+L019+L020+L021+L022+L023+L024+L025+L026+L027+L028+L029

```



```

)%>%
  mutate(YT036=M001+M002+M003+M004+M005+M006)%>%
  mutate(YT037=M007+M008+M009+M010+M011)%>%
  mutate(YT038=M012+M013+M014+M015+M016+M017+M018)%>%
  mutate(YT039=N001+N002+N003+N004+N005+N006+N007+N010+Q012)%>%
  mutate(YT040=N008+N009+N013+N014+N015+N016+Q008)%>%
  mutate(YT041=Q009+Q010)%>%
  mutate(YT042=Q001+Q006)%>%
  mutate(YT043=Q003+Q004+Q005)%>%
  mutate(YT044=0)%>%
  mutate(YT045=0)

```

Se guarda la tabla de apoyos:

```

agregado <- agregado %>% mutate(enc=2008)
agregado <- agregado %>% mutate(folioviv=as.numeric(folioviv))
agregado <- agregado %>% mutate(foliohog=as.numeric(foliohog))
agregado <- agregado %>% mutate(foliohog=foliohog+1)
Apoyos2008 <- agregado %>%
  select(enc, folioviv, foliohog, YT001, YT002, YT003, YT004, YT005, YT006, YT007, YT008, YT009,
         YT010, YT011, YT012, YT013, YT014, YT015, YT016, YT017, YT018, YT019, YT020, YT021,
         YT022, YT023, YT024, YT025, YT026, YT027, YT028, YT029, YT030, YT031, YT032, YT033,
         YT034, YT035, YT036, YT037, YT038, YT039, YT040, YT041, YT042, YT043, YT044, YT045)
remove(agregado)

```

M. Tabla de apoyos de 2010

```

gasto <- read.dbf("Bases/2010/nomone.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))

```

Se selecciona apoyos:

```

gasto <- gasto %>% filter(tipogasto=="3"|tipogasto=="4")
agregado <- gasto %>% group_by(folioviv, foliohog, clave) %>%
  summarise(gasto=sum(apo_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave) %>%
  pivot_wider(id_cols=c(folioviv, foliohog), values_from=gasto, names_from=clave)

```

Lista de variables para considerar en la construcción:

```

ls(agregado)

```

[1]	"A001"	"A002"	"A003"	"A004"	"A005"	"A006"
[7]	"A007"	"A008"	"A009"	"A010"	"A011"	"A012"
[13]	"A013"	"A014"	"A015"	"A016"	"A017"	"A018"
[19]	"A019"	"A020"	"A021"	"A022"	"A023"	"A024"
[25]	"A025"	"A026"	"A027"	"A029"	"A030"	"A031"
[31]	"A032"	"A033"	"A034"	"A035"	"A036"	"A037"
[37]	"A038"	"A039"	"A040"	"A041"	"A042"	"A043"
[43]	"A044"	"A045"	"A046"	"A047"	"A048"	"A049"
[49]	"A050"	"A051"	"A052"	"A053"	"A054"	"A055"
[55]	"A056"	"A057"	"A058"	"A059"	"A060"	"A061"
[61]	"A062"	"A063"	"A064"	"A065"	"A066"	"A067"
[67]	"A068"	"A070"	"A071"	"A072"	"A073"	"A074"
[73]	"A075"	"A076"	"A077"	"A078"	"A079"	"A080"
[79]	"A081"	"A082"	"A083"	"A084"	"A085"	"A086"

[85]	"A087"	"A088"	"A089"	"A090"	"A091"	"A092"
[91]	"A093"	"A094"	"A095"	"A096"	"A097"	"A098"
[97]	"A099"	"A100"	"A101"	"A102"	"A103"	"A104"
[103]	"A105"	"A106"	"A107"	"A108"	"A109"	"A110"
[109]	"A111"	"A112"	"A113"	"A114"	"A115"	"A116"
[115]	"A117"	"A118"	"A119"	"A120"	"A121"	"A122"
[121]	"A123"	"A124"	"A125"	"A126"	"A127"	"A128"
[127]	"A129"	"A130"	"A131"	"A132"	"A133"	"A134"
[133]	"A135"	"A136"	"A137"	"A138"	"A139"	"A140"
[139]	"A141"	"A142"	"A143"	"A144"	"A146"	"A148"
[145]	"A149"	"A151"	"A152"	"A153"	"A154"	"A155"
[151]	"A156"	"A157"	"A158"	"A159"	"A160"	"A161"
[157]	"A162"	"A163"	"A164"	"A165"	"A166"	"A167"
[163]	"A168"	"A169"	"A170"	"A171"	"A172"	"A173"
[169]	"A174"	"A175"	"A176"	"A177"	"A178"	"A179"
[175]	"A180"	"A181"	"A182"	"A183"	"A185"	"A186"
[181]	"A187"	"A188"	"A191"	"A192"	"A193"	"A194"
[187]	"A196"	"A198"	"A199"	"A200"	"A201"	"A202"
[193]	"A203"	"A204"	"A205"	"A206"	"A207"	"A208"
[199]	"A209"	"A210"	"A211"	"A212"	"A213"	"A214"
[205]	"A215"	"A216"	"A217"	"A218"	"A219"	"A220"
[211]	"A221"	"A222"	"A224"	"A229"	"A230"	"A233"
[217]	"A234"	"A236"	"A237"	"A238"	"A239"	"A242"
[223]	"A243"	"A244"	"A245"	"A246"	"B001"	"B002"
[229]	"B003"	"B004"	"B005"	"B006"	"B007"	"C001"
[235]	"C002"	"C003"	"C004"	"C005"	"C006"	"C007"
[241]	"C008"	"C009"	"C010"	"C011"	"C012"	"C013"
[247]	"C014"	"C015"	"C016"	"C017"	"C018"	"C019"
[253]	"C020"	"C021"	"C022"	"C023"	"C024"	"D001"
[259]	"D002"	"D003"	"D004"	"D005"	"D006"	"D007"
[265]	"D008"	"D009"	"D010"	"D011"	"D012"	"D013"
[271]	"D014"	"D015"	"D016"	"D017"	"D018"	"D019"
[277]	"D020"	"D021"	"D022"	"D023"	"D024"	"D025"
[283]	"D026"	"E001"	"E002"	"E003"	"E004"	"E005"
[289]	"E006"	"E007"	"E008"	"E009"	"E010"	"E012"
[295]	"E013"	"E014"	"E015"	"E016"	"E017"	"E018"
[301]	"E019"	"E020"	"E021"	"E022"	"E023"	"E024"
[307]	"E025"	"E026"	"E027"	"E028"	"E029"	"E030"
[313]	"E031"	"E032"	"E033"	"E034"	"F001"	"F002"
[319]	"F003"	"F004"	"F005"	"F006"	"F007"	"F008"
[325]	"F009"	"F010"	"F011"	"F012"	"F013"	"F014"
[331]	"foliohog"	"folioviv"	"G001"	"G003"	"G005"	"G006"
[337]	"G007"	"G008"	"G009"	"G010"	"G011"	"G012"
[343]	"G013"	"G014"	"G015"	"G016"	"H001"	"H002"
[349]	"H003"	"H004"	"H005"	"H006"	"H007"	"H008"
[355]	"H009"	"H010"	"H011"	"H012"	"H013"	"H014"
[361]	"H015"	"H016"	"H017"	"H018"	"H019"	"H020"
[367]	"H021"	"H022"	"H023"	"H024"	"H025"	"H026"
[373]	"H027"	"H028"	"H029"	"H030"	"H031"	"H032"
[379]	"H033"	"H034"	"H035"	"H036"	"H037"	"H038"
[385]	"H039"	"H040"	"H041"	"H042"	"H043"	"H044"
[391]	"H045"	"H046"	"H047"	"H048"	"H049"	"H050"
[397]	"H051"	"H052"	"H053"	"H054"	"H055"	"H056"
[403]	"H057"	"H058"	"H059"	"H060"	"H061"	"H062"
[409]	"H063"	"H064"	"H065"	"H066"	"H067"	"H068"

[415]	"H069"	"H070"	"H071"	"H072"	"H073"	"H074"
[421]	"H075"	"H076"	"H077"	"H078"	"H079"	"H080"
[427]	"H081"	"H082"	"H083"	"H084"	"H085"	"H086"
[433]	"H087"	"H088"	"H089"	"H090"	"H091"	"H092"
[439]	"H093"	"H094"	"H095"	"H096"	"H097"	"H098"
[445]	"H099"	"H100"	"H102"	"H103"	"H104"	"H105"
[451]	"H106"	"H107"	"H108"	"H109"	"H110"	"H111"
[457]	"H112"	"H113"	"H114"	"H115"	"H116"	"H117"
[463]	"H118"	"H119"	"H121"	"H123"	"H124"	"H125"
[469]	"H126"	"H127"	"H128"	"H129"	"H130"	"H131"
[475]	"H132"	"H134"	"H135"	"H136"	"I001"	"I002"
[481]	"I003"	"I004"	"I005"	"I006"	"I007"	"I008"
[487]	"I009"	"I010"	"I011"	"I012"	"I014"	"I015"
[493]	"I016"	"I017"	"I018"	"I019"	"I020"	"I021"
[499]	"I022"	"I023"	"I024"	"I025"	"I026"	"J001"
[505]	"J002"	"J003"	"J004"	"J005"	"J006"	"J007"
[511]	"J008"	"J009"	"J010"	"J011"	"J012"	"J013"
[517]	"J014"	"J015"	"J016"	"J017"	"J018"	"J019"
[523]	"J020"	"J021"	"J022"	"J023"	"J024"	"J025"
[529]	"J026"	"J027"	"J028"	"J029"	"J030"	"J031"
[535]	"J032"	"J033"	"J034"	"J035"	"J036"	"J037"
[541]	"J038"	"J039"	"J040"	"J041"	"J042"	"J043"
[547]	"J044"	"J045"	"J046"	"J047"	"J048"	"J049"
[553]	"J050"	"J051"	"J052"	"J053"	"J054"	"J055"
[559]	"J056"	"J057"	"J058"	"J059"	"J060"	"J061"
[565]	"J062"	"J063"	"J064"	"J065"	"J066"	"J067"
[571]	"J069"	"J070"	"J071"	"J072"	"K001"	"K002"
[577]	"K004"	"K005"	"K006"	"K007"	"K008"	"K009"
[583]	"K010"	"K011"	"K012"	"K013"	"K014"	"K015"
[589]	"K016"	"K017"	"K018"	"K019"	"K020"	"K021"
[595]	"K022"	"K024"	"K025"	"K026"	"K027"	"K028"
[601]	"K029"	"K030"	"K031"	"K032"	"K033"	"K034"
[607]	"K035"	"K036"	"K037"	"K038"	"K039"	"K040"
[613]	"K041"	"K042"	"K044"	"K045"	"L001"	"L002"
[619]	"L003"	"L004"	"L005"	"L006"	"L007"	"L008"
[625]	"L009"	"L010"	"L012"	"L013"	"L014"	"L015"
[631]	"L016"	"L017"	"L018"	"L019"	"L020"	"L021"
[637]	"L023"	"L024"	"L025"	"L026"	"L027"	"L028"
[643]	"L029"	"M001"	"M002"	"M003"	"M004"	"M005"
[649]	"M006"	"M007"	"M008"	"M009"	"M010"	"M011"
[655]	"M012"	"M014"	"M015"	"M016"	"M017"	"M018"
[661]	"N001"	"N002"	"N003"	"N004"	"N005"	"N006"
[667]	"N008"	"N010"	"N011"	"N013"	"N014"	"N015"
[673]	"N016"	"Q001"	"Q003"	"Q004"	"Q005"	"Q006"
[679]	"Q013"	"R001"	"R002"	"R003"	"R004"	"R005"
[685]	"R006"	"R007"	"R008"	"R009"	"R010"	"R011"
[691]	"R012"	"R013"				

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YT001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A018+A019+A020+A021+A022+A023+A024+A025+A026+A027+
    A029+A030+A031+A032+A033+A034+A035+A036+A037+A038+A039+A040+A041+A042+
    A043+A044+A045+A046+A047+A048+A049+A050+A051+A052+A053+A054+A055+A056+

```

```

A057+A058+A059+A060+A061+A062+A063+A064+A065+A066+A067+A068+A070+A071+
A072+A073+A074+A075+A076+A077+A078+A079+A080+A081+A082+A083+A084+A085+
A086+A087+A088+A089+A090+A091+A092+A093+A094+A095+A096+A097+A098+A099+
A100+A101+A102+A103+A104+A105+A106+A107+A108+A109+A110+A111+A112+A113+
A114+A115+A116+A117+A118+A119+A120+A121+A122+A123+A124+A125+A126+A127+
A128+A129+A130+A131+A132+A133+A134+A135+A136+A137+A138+A139+A140+A141+
A142+A143+A144+A146+A148+A149+A151+A152+A153+A154+A155+A156+A157+A158+
A159+A160+A161+A162+A163+A164+A165+A166+A167+A168+A169+A170+A171+A172+
A173+A174+A175+A176+A177+A178+A179+A180+A181+A182+A183+A185+A186+A187+
A188+A191+A192+A193+A194+A196+A198+A199+A200+A201+A202+A203+A204+A205+
A206+A207+A208+A209+A210+A211)%>%
mutate(YT002=A213+A214)%>%
mutate(YT003=A215+A216+A217+A218+A219+A220+A221+A222)%>%
mutate(YT004=A224+A229+A230+A233+A234+A236+A237+A238)%>%
mutate(YT005=A212)%>%
mutate(YT006=A243+A244+A245+A246)%>%
mutate(YT007=A239)%>%
mutate(YT008=A242)%>%
mutate(YT009=B001+B002+B003+B004+B005+B006+B007)%>%
mutate(YT010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
C014+C015+C016+C017+C018+C019)%>%
mutate(YT011=C020+C021+C022+C023+C024)%>%
mutate(YT012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
D014+D015+D016+D017+D018+D019+D020+D021)%>%
mutate(YT013=D022+D023+D024+D025+D026)%>%
mutate(YT014=E001+E002+E003+E004+E005+E006+E007+E008+E009+E010+E012+E013)%>%
mutate(YT015=E014+E015+E016+E017+E018+E019+E020+E021)%>%
mutate(YT016=E022+E023+E024+E025+E026)%>%
mutate(YT017=E027+E028+E029+E030+E031+E032+E033+E034)%>%
mutate(YT018=F001+F002+F003+F004+F005+F006+R005+R006+R007+R008+R009+R010+R011)%>%
mutate(YT019=F007+F008+F009+F010+F011+F012+F013+F014+R012)%>%
mutate(YT020=G001+G003)%>%
mutate(YT021=G005+G006+G007+G008+G009+G010+G011+G012+G013+G014+G015+G016+R001+
R002+R003+R004+R013)%>%
mutate(YT022=H001+H002+H003+H004+H005+H006+H007+H008+H009+H010+H011+H012+H013+
H014+H015+H016+H017+H018+H019+H020+H021+H022+H023+H024+H025+H026+H027+
H028+H029+H030+H031+H032+H033+H034+H035+H036+H037+H038+H039+H040+H041+
H042+H043+H044+H045+H046+H047+H048+H049+H050+H051+H052+H053+H054+H055+
H056+H057+H058+H059+H060+H061+H062+H063+H064+H065+H066+H067+H068+H069+
H070+H071+H072+H073+H074+H075+H076+H077+H078+H079+H080+H081+H082+H083+
H084+H085+H086+H087+H088+H089+H090+H091+H092+H093+H094+H095+H096+H097+
H098+H099+H100+H102+H103+H104+H105+H106+H107+H108+H109+H110+H111+H112+
H113+H114+H115+H116+H117+H118+H119+H121+H123+H124+H125+H126+H127+H128+
H129+H130+H131+H132+H134+H135+H136)%>%
mutate(YT023=I001+I002+I003+I004+I005+I006+I007+I008+I009+I010+I011+I012+I014+
I015+I016+I017+I018+I019+I020+I021+I022+I023+I024+I025+I026)%>%
mutate(YT024=J016+J017+J018+J019+J020+J021+J022+J023+J024+J025+J026+J027+J028+
J029+J030+J031+J032+J033+J034+J035+J036+J037+J038+J062+J063+J064)%>%
mutate(YT025=J039+J040+J041+J042+J043)%>%
mutate(YT026=J001+J002+J003+J004+J005+J006+J007+J008+J009+J010+J011+J012+J013+
J014+J015)%>%
mutate(YT027=J044+J045+J046+J047+J048+J049+J050+J051+J052+J053+J054+J055+J056+
J057+J058+J059+J060+J061)%>%
mutate(YT028=J065+J066+J067)%>%
mutate(YT029=J069)%>%

```

```
mutate(YT030=J070+J071)%>%
mutate(YT031=J072)%>%
mutate(YT032=K001+K002+K004+K005+K006+K007+K008+K009+K010+K011+K012+K013+K014+
      K015+K016+K017+K018+K019+K020+K021+K022+K024+K025)%>%
mutate(YT033=K026+K027+K028+K029+K030+K031+K032+K033+K034+K035+K036+K037)%>%
mutate(YT034=K038+K039+K040+K041+K042+K044+K045)%>%
mutate(YT035=L001+L002+L003+L004+L005+L006+L007+L008+L009+L010+L012+L013+L014+
      L015+L016+L017+L018+L019+L020+L021+L023+L024+L025+L026+L027+L028+L029)%>%
mutate(YT036=M001+M002+M003+M004+M005+M006)%>%
mutate(YT037=M007+M008+M009+M010+M011)%>%
mutate(YT038=M012+M014+M015+M016+M017+M018)%>%
mutate(YT039=N001+N002+N003+N004+N005+N006+N010)%>%
mutate(YT040=N008+N011+N013+N014+N015+N016)%>%
mutate(YT041=Q013)%>%
mutate(YT042=Q001+Q006)%>%
mutate(YT043=Q003+Q004+Q005)%>%
mutate(YT044=0)%>%
mutate(YT045=0)
```

Se guarda la tabla de apoyos:

```
agregado <- agregado %>% mutate(enc=2010)
agregado <- agregado %>% mutate(folioviv=as.numeric(folioviv))
agregado <- agregado %>% mutate(foliohog=as.numeric(foliohog))
agregado <- agregado %>% mutate(foliohog=foliohog+1)
Apoyos2010 <- agregado %>%
  select(enc, folioviv, foliohog, YT001, YT002, YT003, YT004, YT005, YT006, YT007, YT008, YT009,
        YT010, YT011, YT012, YT013, YT014, YT015, YT016, YT017, YT018, YT019, YT020, YT021,
        YT022, YT023, YT024, YT025, YT026, YT027, YT028, YT029, YT030, YT031, YT032, YT033,
        YT034, YT035, YT036, YT037, YT038, YT039, YT040, YT041, YT042, YT043, YT044, YT045)
remove(agregado)
```

N. Tabla de apoyos de 2012

```
gasto <- read.dbf("Bases/2012/gastohogar.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona apoyos:

```
gasto <- gasto %>% filter(tipo_gasto=="G5"|tipo_gasto=="G6")
agregado <- gasto %>% group_by(folioviv, foliohog, clave) %>%
  summarise(gasto=sum(gas_nm_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave) %>%
  pivot_wider(id_cols=c(folioviv, foliohog), values_from=gasto, names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)
```

[1]	"A001"	"A002"	"A003"	"A004"	"A005"	"A006"
[7]	"A007"	"A008"	"A009"	"A010"	"A011"	"A012"
[13]	"A013"	"A014"	"A015"	"A016"	"A017"	"A018"
[19]	"A019"	"A020"	"A021"	"A022"	"A023"	"A024"
[25]	"A025"	"A026"	"A027"	"A029"	"A030"	"A031"
[31]	"A033"	"A034"	"A035"	"A036"	"A037"	"A038"
[37]	"A039"	"A040"	"A041"	"A042"	"A043"	"A044"

[43]	"A045"	"A046"	"A047"	"A048"	"A049"	"A050"
[49]	"A051"	"A052"	"A053"	"A055"	"A056"	"A057"
[55]	"A058"	"A059"	"A060"	"A061"	"A062"	"A063"
[61]	"A064"	"A065"	"A066"	"A067"	"A068"	"A070"
[67]	"A071"	"A072"	"A073"	"A074"	"A075"	"A076"
[73]	"A078"	"A079"	"A080"	"A081"	"A082"	"A083"
[79]	"A084"	"A085"	"A086"	"A087"	"A088"	"A089"
[85]	"A090"	"A091"	"A092"	"A093"	"A095"	"A097"
[91]	"A098"	"A101"	"A102"	"A103"	"A104"	"A106"
[97]	"A107"	"A108"	"A109"	"A110"	"A111"	"A112"
[103]	"A113"	"A114"	"A115"	"A116"	"A117"	"A118"
[109]	"A119"	"A120"	"A121"	"A122"	"A124"	"A125"
[115]	"A126"	"A127"	"A129"	"A130"	"A131"	"A132"
[121]	"A133"	"A134"	"A135"	"A137"	"A138"	"A139"
[127]	"A140"	"A141"	"A142"	"A143"	"A144"	"A146"
[133]	"A147"	"A148"	"A149"	"A151"	"A152"	"A153"
[139]	"A154"	"A155"	"A156"	"A157"	"A158"	"A159"
[145]	"A160"	"A161"	"A162"	"A163"	"A164"	"A165"
[151]	"A166"	"A167"	"A168"	"A169"	"A170"	"A171"
[157]	"A172"	"A173"	"A175"	"A176"	"A177"	"A178"
[163]	"A179"	"A180"	"A181"	"A182"	"A185"	"A186"
[169]	"A187"	"A188"	"A191"	"A192"	"A194"	"A196"
[175]	"A198"	"A199"	"A200"	"A201"	"A202"	"A203"
[181]	"A204"	"A205"	"A206"	"A207"	"A208"	"A209"
[187]	"A210"	"A211"	"A212"	"A213"	"A215"	"A216"
[193]	"A217"	"A218"	"A219"	"A220"	"A221"	"A222"
[199]	"A223"	"A224"	"A228"	"A229"	"A231"	"A233"
[205]	"A234"	"A236"	"A239"	"A242"	"A243"	"A244"
[211]	"A245"	"A246"	"A247"	"B001"	"B002"	"B003"
[217]	"B004"	"B005"	"B006"	"B007"	"C001"	"C002"
[223]	"C003"	"C004"	"C005"	"C006"	"C007"	"C008"
[229]	"C009"	"C010"	"C011"	"C012"	"C013"	"C014"
[235]	"C015"	"C016"	"C017"	"C018"	"C019"	"C020"
[241]	"C021"	"C022"	"C023"	"C024"	"D001"	"D002"
[247]	"D003"	"D004"	"D005"	"D006"	"D007"	"D008"
[253]	"D009"	"D010"	"D011"	"D012"	"D013"	"D014"
[259]	"D015"	"D016"	"D017"	"D018"	"D019"	"D021"
[265]	"D022"	"D023"	"D024"	"D025"	"D026"	"E001"
[271]	"E002"	"E003"	"E004"	"E005"	"E006"	"E007"
[277]	"E008"	"E009"	"E012"	"E013"	"E014"	"E015"
[283]	"E016"	"E017"	"E018"	"E020"	"E022"	"E023"
[289]	"E024"	"E025"	"E026"	"E027"	"E028"	"E029"
[295]	"E030"	"E031"	"E032"	"E034"	"F001"	"F002"
[301]	"F003"	"F004"	"F005"	"F006"	"F007"	"F008"
[307]	"F010"	"F012"	"F013"	"F014"	"foliohog"	"folioviv"
[313]	"G002"	"G003"	"G005"	"G007"	"G009"	"G011"
[319]	"G012"	"G013"	"G014"	"G015"	"H001"	"H002"
[325]	"H003"	"H004"	"H005"	"H006"	"H007"	"H008"
[331]	"H009"	"H012"	"H013"	"H014"	"H015"	"H016"
[337]	"H017"	"H018"	"H019"	"H020"	"H021"	"H022"
[343]	"H023"	"H024"	"H025"	"H026"	"H027"	"H028"
[349]	"H029"	"H030"	"H031"	"H032"	"H033"	"H034"
[355]	"H035"	"H036"	"H037"	"H039"	"H040"	"H041"
[361]	"H042"	"H043"	"H044"	"H045"	"H046"	"H047"
[367]	"H048"	"H049"	"H050"	"H051"	"H053"	"H054"

[373]	"H055"	"H056"	"H057"	"H058"	"H059"	"H060"
[379]	"H061"	"H062"	"H063"	"H064"	"H065"	"H066"
[385]	"H067"	"H068"	"H069"	"H070"	"H071"	"H072"
[391]	"H073"	"H074"	"H075"	"H076"	"H077"	"H078"
[397]	"H079"	"H080"	"H081"	"H082"	"H083"	"H084"
[403]	"H085"	"H086"	"H087"	"H088"	"H089"	"H090"
[409]	"H091"	"H092"	"H093"	"H094"	"H095"	"H096"
[415]	"H097"	"H098"	"H099"	"H100"	"H102"	"H103"
[421]	"H104"	"H105"	"H106"	"H107"	"H108"	"H109"
[427]	"H110"	"H111"	"H112"	"H113"	"H114"	"H115"
[433]	"H116"	"H117"	"H118"	"H119"	"H120"	"H123"
[439]	"H124"	"H125"	"H126"	"H127"	"H129"	"H130"
[445]	"H131"	"H132"	"H134"	"H135"	"H136"	"I001"
[451]	"I002"	"I003"	"I004"	"I005"	"I006"	"I007"
[457]	"I008"	"I009"	"I010"	"I011"	"I012"	"I014"
[463]	"I015"	"I016"	"I017"	"I018"	"I019"	"I020"
[469]	"I021"	"I022"	"I023"	"I024"	"I025"	"I026"
[475]	"J001"	"J002"	"J003"	"J004"	"J005"	"J006"
[481]	"J007"	"J008"	"J009"	"J010"	"J011"	"J012"
[487]	"J013"	"J014"	"J015"	"J016"	"J017"	"J018"
[493]	"J019"	"J020"	"J021"	"J022"	"J023"	"J024"
[499]	"J025"	"J026"	"J027"	"J028"	"J029"	"J030"
[505]	"J031"	"J032"	"J033"	"J034"	"J035"	"J036"
[511]	"J037"	"J038"	"J039"	"J040"	"J041"	"J042"
[517]	"J043"	"J044"	"J045"	"J046"	"J047"	"J048"
[523]	"J049"	"J050"	"J051"	"J052"	"J053"	"J054"
[529]	"J055"	"J056"	"J057"	"J058"	"J059"	"J060"
[535]	"J061"	"J062"	"J063"	"J064"	"J065"	"J066"
[541]	"J067"	"J069"	"J070"	"J072"	"K001"	"K002"
[547]	"K004"	"K005"	"K006"	"K007"	"K008"	"K009"
[553]	"K010"	"K011"	"K012"	"K013"	"K014"	"K015"
[559]	"K016"	"K018"	"K019"	"K020"	"K021"	"K022"
[565]	"K024"	"K025"	"K026"	"K027"	"K028"	"K029"
[571]	"K030"	"K031"	"K032"	"K033"	"K034"	"K035"
[577]	"K036"	"K037"	"K038"	"K039"	"K040"	"K041"
[583]	"K042"	"K043"	"K044"	"K045"	"L001"	"L002"
[589]	"L003"	"L004"	"L005"	"L006"	"L007"	"L008"
[595]	"L009"	"L010"	"L011"	"L012"	"L013"	"L014"
[601]	"L015"	"L016"	"L017"	"L018"	"L019"	"L020"
[607]	"L023"	"L024"	"L025"	"L026"	"L027"	"L029"
[613]	"M001"	"M002"	"M003"	"M004"	"M005"	"M006"
[619]	"M007"	"M008"	"M009"	"M010"	"M012"	"M013"
[625]	"M014"	"M015"	"M016"	"M017"	"M018"	"N001"
[631]	"N002"	"N003"	"N004"	"N005"	"N006"	"N008"
[637]	"N010"	"N014"	"N015"	"N016"	"Q001"	"Q003"
[643]	"Q006"	"Q010"	"Q013"	"R001"	"R002"	"R003"
[649]	"R004"	"R005"	"R006"	"R007"	"R008"	"R009"
[655]	"R010"	"R011"	"R012"			

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YT001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A018+A019+A020+A021+A022+A023+A024+A025+A026+A027+
    A029+A030+A031+A033+A034+A035+A036+A037+A038+A039+A040+A041+A042+A043+

```



```

A044+A045+A046+A047+A048+A049+A050+A051+A052+A053+A055+A056+A057+A058+
A059+A060+A061+A062+A063+A064+A065+A066+A067+A068+A070+A071+A072+A073+
A074+A075+A076+A078+A079+A080+A081+A082+A083+A084+A085+A086+A087+A088+
A089+A090+A091+A092+A093+A095+A097+A098+A101+A102+A103+A104+A106+A107+
A108+A109+A110+A111+A112+A113+A114+A115+A116+A117+A118+A119+A120+A121+
A122+A124+A125+A126+A127+A129+A130+A131+A132+A133+A134+A135+A137+A138+
A139+A140+A141+A142+A143+A144+A146+A147+A148+A149+A151+A152+A153+A154+
A155+A156+A157+A158+A159+A160+A161+A162+A163+A164+A165+A166+A167+A168+
A169+A170+A171+A172+A173+A175+A176+A177+A178+A179+A180+A181+A182+A185+
A186+A187+A188+A191+A192+A194+A196+A198+A199+A200+A201+A202+A203+A204+
A205+A206+A207+A208+A209+A210+A211)%>%
mutate(YT002=A213)%>%
mutate(YT003=A215+A216+A217+A218+A219+A220+A221+A222)%>%
mutate(YT004=A223+A224+A228+A229+A231+A233+A234+A236)%>%
mutate(YT005=A212)%>%
mutate(YT006=A243+A244+A245+A246+A247)%>%
mutate(YT007=A239)%>%
mutate(YT008=A242)%>%
mutate(YT009=B001+B002+B003+B004+B005+B006+B007)%>%
mutate(YT010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
C014+C015+C016+C017+C018+C019)%>%
mutate(YT011=C020+C021+C022+C023+C024)%>%
mutate(YT012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
D014+D015+D016+D017+D018+D019+D021)%>%
mutate(YT013=D022+D023+D024+D025+D026)%>%
mutate(YT014=E001+E002+E003+E004+E005+E006+E007+E008+E009+E012+E013)%>%
mutate(YT015=E014+E015+E016+E017+E018+E020)%>%
mutate(YT016=E022+E023+E024+E025+E026)%>%
mutate(YT017=E027+E028+E029+E030+E031+E032+E034)%>%
mutate(YT018=F001+F002+F003+F004+F005+F006+R005+R006+R007+R008+R009+R010+R011)%>%
mutate(YT019=F007+F008+F010+F012+F013+F014+R012)%>%
mutate(YT020=G002+G003)%>%
mutate(YT021=G005+G007+G009+G011+G012+G013+G014+G015+R001+R002+R003+R004)%>%
mutate(YT022=H001+H002+
H003+H004+H005+H006+H007+H008+H009+H012+H013+H014+H015+H016+H017+H018+
H019+H020+H021+H022+H023+H024+H025+H026+H027+H028+H029+H030+H031+H032+
H033+H034+H035+H036+H037+H039+H040+H041+H042+H043+H044+H045+H046+H047+
H048+H049+H050+H051+H053+H054+H055+H056+H057+H058+H059+H060+H061+H062+
H063+H064+H065+H066+H067+H068+H069+H070+H071+H072+H073+H074+H075+H076+
H077+H078+H079+H080+H081+H082+H083+H084+H085+H086+H087+H088+H089+H090+
H091+H092+H093+H094+H095+H096+H097+H098+H099+H100+H102+H103+H104+H105+
H106+H107+H108+H109+H110+H111+H112+H113+H114+H115+H116+H117+H118+H119+
H120+H123+H124+H125+H126+H127+H129+H130+H131+H132+H134+H135+H136)%>%
mutate(YT023=I001+I002+I003+I004+I005+I006+I007+I008+I009+I010+I011+I012+I014+
I015+I016+I017+I018+I019+I020+I021+I022+I023+I024+I025+I026)%>%
mutate(YT024=J016+J017+J018+J019+J020+J021+J022+J023+J024+J025+J026+J027+J028+
J029+J030+J031+J032+J033+J034+J035+J036+J037+J038+J062+J063+J064)%>%
mutate(YT025=J039+J040+J041+J042+J043)%>%
mutate(YT026=J001+J002+J003+J004+J005+J006+J007+J008+J009+J010+J011+J012+J013+
J014+J015)%>%
mutate(YT027=J044+J045+J046+J047+J048+J049+J050+J051+J052+J053+J054+J055+J056+
J057+J058+J059+J060+J061)%>%
mutate(YT028=J065+J066+J067)%>%
mutate(YT029=J069)%>%
mutate(YT030=J070)%>%

```

```
mutate(YT031=J072)%>%
mutate(YT032=K001+K002+
      K004+K005+K006+K007+K008+K009+K010+K011+K012+K013+K014+K015+K016+K018+
      K019+K020+K021+K022+K024+K025)%>%
mutate(YT033=K026+K027+K028+K029+K030+K031+K032+K033+K034+K035+K036+K037)%>%
mutate(YT034=K038+K039+K040+K041+K042+K043+K044+K045)%>%
mutate(YT035=L001+L002+L003+L004+L005+L006+L007+L008+L009+L010+L011+L012+L013+
      L014+L015+L016+L017+L018+L019+L020+L023+L024+L025+L026+L027+L029)%>%
mutate(YT036=M001+M002+M003+M004+M005+M006)%>%
mutate(YT037=M007+M008+M009+M010)%>%
mutate(YT038=M012+M013+M014+M015+M016+M017+M018)%>%
mutate(YT039=N001+N002+N003+N004+N005+N006+N010)%>%
mutate(YT040=N008+N014+N015+N016)%>%
mutate(YT041=Q010+Q013)%>%
mutate(YT042=Q001+Q006)%>%
mutate(YT043=Q003)%>%
mutate(YT044=0)%>%
mutate(YT045=0)
```

Se guarda la tabla de apoyos:

```
agregado <- agregado %>% mutate(enc=2012)
agregado <- agregado %>% mutate(folioviv=as.numeric(folioviv))
agregado <- agregado %>% mutate(foliohog=as.numeric(foliohog))
agregado <- agregado %>% mutate(foliohog=foliohog+1)
Apoyos2012 <- agregado %>%
  select(enc, folioviv, foliohog, YT001, YT002, YT003, YT004, YT005, YT006, YT007, YT008, YT009,
        YT010, YT011, YT012, YT013, YT014, YT015, YT016, YT017, YT018, YT019, YT020, YT021,
        YT022, YT023, YT024, YT025, YT026, YT027, YT028, YT029, YT030, YT031, YT032, YT033,
        YT034, YT035, YT036, YT037, YT038, YT039, YT040, YT041, YT042, YT043, YT044, YT045)
remove(agregado)
```

O. Tabla de apoyos de 2014

```
gasto <- read.dbf("Bases/2014/gastohogar.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona apoyos:

```
gasto <- gasto %>% filter(tipo_gasto=="G5"|tipo_gasto=="G6")
agregado <- gasto %>% group_by(folioviv, foliohog, clave) %>%
  summarise(gasto=sum(gas_nm_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave) %>%
  pivot_wider(id_cols=c(folioviv, foliohog), values_from=gasto, names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)
```

[1]	"A001"	"A002"	"A003"	"A004"	"A005"	"A006"
[7]	"A007"	"A008"	"A009"	"A010"	"A011"	"A012"
[13]	"A013"	"A014"	"A015"	"A016"	"A017"	"A018"
[19]	"A019"	"A020"	"A021"	"A022"	"A023"	"A024"
[25]	"A025"	"A026"	"A027"	"A028"	"A029"	"A030"
[31]	"A031"	"A032"	"A033"	"A034"	"A035"	"A036"
[37]	"A037"	"A038"	"A039"	"A040"	"A041"	"A042"

[43]	"A043"	"A044"	"A045"	"A048"	"A049"	"A050"
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[55]	"A057"	"A058"	"A059"	"A060"	"A061"	"A062"
[61]	"A064"	"A065"	"A066"	"A067"	"A068"	"A069"
[67]	"A070"	"A071"	"A072"	"A073"	"A074"	"A075"
[73]	"A076"	"A077"	"A078"	"A079"	"A080"	"A081"
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[85]	"A088"	"A089"	"A090"	"A091"	"A092"	"A093"
[91]	"A094"	"A095"	"A096"	"A098"	"A099"	"A100"
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[157]	"A162"	"A163"	"A164"	"A165"	"A166"	"A167"
[163]	"A168"	"A169"	"A170"	"A171"	"A172"	"A173"
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[175]	"A180"	"A181"	"A182"	"A183"	"A185"	"A186"
[181]	"A187"	"A188"	"A189"	"A191"	"A192"	"A194"
[187]	"A195"	"A196"	"A197"	"A198"	"A199"	"A200"
[193]	"A201"	"A202"	"A203"	"A204"	"A205"	"A206"
[199]	"A207"	"A208"	"A209"	"A210"	"A211"	"A212"
[205]	"A213"	"A215"	"A216"	"A217"	"A218"	"A219"
[211]	"A220"	"A221"	"A222"	"A223"	"A224"	"A228"
[217]	"A229"	"A230"	"A233"	"A234"	"A235"	"A236"
[223]	"A237"	"A239"	"A240"	"A242"	"A243"	"A244"
[229]	"A245"	"A246"	"A247"	"B001"	"B002"	"B003"
[235]	"B004"	"B005"	"B006"	"B007"	"C001"	"C002"
[241]	"C003"	"C004"	"C005"	"C006"	"C007"	"C008"
[247]	"C009"	"C010"	"C011"	"C012"	"C013"	"C014"
[253]	"C015"	"C016"	"C017"	"C018"	"C019"	"C020"
[259]	"C021"	"C022"	"C023"	"C024"	"D001"	"D002"
[265]	"D003"	"D004"	"D005"	"D006"	"D007"	"D008"
[271]	"D009"	"D010"	"D011"	"D012"	"D013"	"D014"
[277]	"D015"	"D016"	"D017"	"D018"	"D019"	"D020"
[283]	"D021"	"D022"	"D023"	"D024"	"D025"	"D026"
[289]	"E001"	"E002"	"E003"	"E004"	"E005"	"E006"
[295]	"E007"	"E008"	"E009"	"E010"	"E013"	"E014"
[301]	"E015"	"E017"	"E019"	"E020"	"E021"	"E022"
[307]	"E023"	"E024"	"E025"	"E026"	"E027"	"E028"
[313]	"E029"	"E030"	"E031"	"E032"	"E033"	"E034"
[319]	"F001"	"F002"	"F003"	"F004"	"F005"	"F006"
[325]	"F007"	"F008"	"F009"	"F010"	"F011"	"F013"
[331]	"F014"	"foliohog"	"folioviv"	"G002"	"G003"	"G005"
[337]	"G006"	"G007"	"G008"	"G009"	"G010"	"G011"
[343]	"G012"	"G013"	"G015"	"G016"	"H001"	"H002"
[349]	"H003"	"H004"	"H005"	"H006"	"H007"	"H008"
[355]	"H009"	"H010"	"H011"	"H012"	"H013"	"H014"
[361]	"H015"	"H016"	"H017"	"H018"	"H019"	"H020"
[367]	"H021"	"H022"	"H023"	"H024"	"H025"	"H026"

[373]	"H027"	"H028"	"H029"	"H030"	"H031"	"H032"
[379]	"H033"	"H034"	"H035"	"H036"	"H037"	"H038"
[385]	"H039"	"H040"	"H041"	"H042"	"H043"	"H044"
[391]	"H045"	"H046"	"H047"	"H048"	"H049"	"H050"
[397]	"H051"	"H052"	"H053"	"H054"	"H055"	"H056"
[403]	"H057"	"H058"	"H059"	"H060"	"H061"	"H062"
[409]	"H063"	"H064"	"H065"	"H066"	"H067"	"H068"
[415]	"H069"	"H070"	"H071"	"H072"	"H073"	"H074"
[421]	"H075"	"H076"	"H077"	"H078"	"H079"	"H080"
[427]	"H081"	"H082"	"H083"	"H084"	"H085"	"H086"
[433]	"H087"	"H088"	"H089"	"H090"	"H091"	"H092"
[439]	"H093"	"H094"	"H095"	"H096"	"H097"	"H098"
[445]	"H099"	"H100"	"H102"	"H103"	"H104"	"H105"
[451]	"H106"	"H107"	"H108"	"H109"	"H110"	"H111"
[457]	"H112"	"H113"	"H114"	"H115"	"H116"	"H117"
[463]	"H118"	"H119"	"H120"	"H121"	"H123"	"H124"
[469]	"H125"	"H126"	"H127"	"H128"	"H129"	"H130"
[475]	"H131"	"H132"	"H134"	"H135"	"H136"	"I001"
[481]	"I002"	"I003"	"I004"	"I005"	"I006"	"I007"
[487]	"I008"	"I009"	"I010"	"I011"	"I012"	"I014"
[493]	"I015"	"I016"	"I017"	"I018"	"I019"	"I020"
[499]	"I021"	"I022"	"I023"	"I024"	"I025"	"I026"
[505]	"J001"	"J002"	"J003"	"J004"	"J005"	"J006"
[511]	"J007"	"J008"	"J009"	"J010"	"J011"	"J012"
[517]	"J013"	"J015"	"J016"	"J017"	"J018"	"J019"
[523]	"J020"	"J021"	"J022"	"J023"	"J024"	"J025"
[529]	"J026"	"J027"	"J028"	"J029"	"J030"	"J031"
[535]	"J032"	"J033"	"J034"	"J035"	"J036"	"J037"
[541]	"J038"	"J039"	"J040"	"J041"	"J042"	"J043"
[547]	"J044"	"J045"	"J046"	"J047"	"J048"	"J049"
[553]	"J050"	"J051"	"J052"	"J053"	"J054"	"J055"
[559]	"J056"	"J057"	"J058"	"J059"	"J060"	"J061"
[565]	"J062"	"J063"	"J064"	"J065"	"J066"	"J067"
[571]	"J068"	"J069"	"J070"	"J071"	"K001"	"K002"
[577]	"K004"	"K005"	"K006"	"K007"	"K008"	"K009"
[583]	"K010"	"K011"	"K012"	"K013"	"K014"	"K015"
[589]	"K016"	"K018"	"K019"	"K020"	"K021"	"K022"
[595]	"K023"	"K024"	"K025"	"K026"	"K027"	"K028"
[601]	"K029"	"K030"	"K031"	"K032"	"K033"	"K034"
[607]	"K035"	"K036"	"K037"	"K038"	"K039"	"K040"
[613]	"K041"	"K042"	"K043"	"K044"	"K045"	"L001"
[619]	"L002"	"L003"	"L004"	"L005"	"L006"	"L007"
[625]	"L008"	"L010"	"L011"	"L012"	"L013"	"L014"
[631]	"L015"	"L016"	"L018"	"L019"	"L020"	"L023"
[637]	"L024"	"L025"	"L026"	"L027"	"L028"	"L029"
[643]	"M001"	"M002"	"M003"	"M004"	"M005"	"M006"
[649]	"M007"	"M008"	"M009"	"M010"	"M011"	"M012"
[655]	"M013"	"M014"	"M015"	"M016"	"M017"	"M018"
[661]	"N001"	"N002"	"N003"	"N004"	"N005"	"N006"
[667]	"N008"	"N010"	"N013"	"N014"	"N015"	"N016"
[673]	"Q002"	"Q003"	"Q004"	"Q006"	"Q007"	"Q009"
[679]	"Q011"	"Q012"	"R001"	"R002"	"R003"	"R004"
[685]	"R005"	"R006"	"R007"	"R008"	"R009"	"R010"
[691]	"R011"	"R012"	"R013"			

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YT001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A018+A019+A020+A021+A022+A023+A024+A025+A026+A027+
    A028+A029+A030+A031+A032+A033+A034+A035+A036+A037+A038+A039+A040+A041+
    A042+A043+A044+A045+A048+A049+A050+A051+A052+A053+A054+A055+A056+A057+
    A058+A059+A060+A061+A062+A064+A065+A066+A067+A068+A069+A070+A071+A072+
    A073+A074+A075+A076+A077+A078+A079+A080+A081+A082+A083+A084+A085+A086+
    A087+A088+A089+A090+A091+A092+A093+A094+A095+A096+A098+A099+A100+A101+
    A102+A103+A104+A106+A107+A108+A109+A110+A111+A112+A113+A114+A115+A116+
    A117+A118+A119+A120+A121+A122+A123+A124+A125+A126+A127+A128+A129+A130+
    A131+A132+A133+A134+A135+A136+A137+A138+A139+A140+A141+A142+A143+A144+
    A145+A146+A147+A148+A149+A150+A151+A152+A153+A154+A155+A156+A157+A158+
    A159+A160+A161+A162+A163+A164+A165+A166+A167+A168+A169+A170+A171+A172+
    A173+A174+A175+A176+A177+A178+A179+A180+A181+A182+A183+A185+A186+A187+
    A188+A189+A191+A192+A194+A195+A196+A197+A198+A199+A200+A201+A202+A203+
    A204+A205+A206+A207+A208+A209+A210+A211)%>%
  mutate(YT002=A213)%>%
  mutate(YT003=A215+A216+A217+A218+A219+A220+A221+A222)%>%
  mutate(YT004=A223+A224+A228+A229+A230+A233+A234+A235+A236+A237)%>%
  mutate(YT005=A212)%>%
  mutate(YT006=A243+A244+A245+A246+A247)%>%
  mutate(YT007=A239+A240)%>%
  mutate(YT008=A242)%>%
  mutate(YT009=B001+B002+B003+B004+B005+B006+B007)%>%
  mutate(YT010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
    C014+C015+C016+C017+C018+C019)%>%
  mutate(YT011=C020+C021+C022+C023+C024)%>%
  mutate(YT012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
    D014+D015+D016+D017+D018+D019+D020+D021)%>%
  mutate(YT013=D022+D023+D024+D025+D026)%>%
  mutate(YT014=E001+E002+E003+E004+E005+E006+E007+E008+E009+E010+E013)%>%
  mutate(YT015=E014+E015+E017+E019+E020+E021)%>%
  mutate(YT016=E022+E023+E024+E025+E026)%>%
  mutate(YT017=E027+E028+E029+E030+E031+E032+E033+E034)%>%
  mutate(YT018=F001+F002+F003+F004+F005+F006+R005+R006+R007+R008+R009+R010+R011)%>%
  mutate(YT019=F007+F008+F009+F010+F011+F013+F014+R012)%>%
  mutate(YT020=G002+G003)%>%
  mutate(YT021=G005+G006+G007+G008+G009+G010+G011+G012+G013+G015+G016+R001+R002+
    R003+R004+R013)%>%
  mutate(YT022=H001+H002+H003+H004+H005+H006+H007+H008+H009+H010+H011+H012+H013+
    H014+H015+H016+H017+H018+H019+H020+H021+H022+H023+H024+H025+H026+H027+
    H028+H029+H030+H031+H032+H033+H034+H035+H036+H037+H038+H039+H040+H041+
    H042+H043+H044+H045+H046+H047+H048+H049+H050+H051+H052+H053+H054+H055+
    H056+H057+H058+H059+H060+H061+H062+H063+H064+H065+H066+H067+H068+H069+
    H070+H071+H072+H073+H074+H075+H076+H077+H078+H079+H080+H081+H082+H083+
    H084+H085+H086+H087+H088+H089+H090+H091+H092+H093+H094+H095+H096+H097+
    H098+H099+H100+H102+H103+H104+H105+H106+H107+H108+H109+H110+H111+H112+
    H113+H114+H115+H116+H117+H118+H119+H120+H121+H123+H124+H125+H126+H127+
    H128+H129+H130+H131+H132+H134+H135+H136)%>%
  mutate(YT023=I001+I002+I003+I004+I005+I006+I007+I008+I009+I010+I011+I012+I014+
    I015+I016+I017+I018+I019+I020+I021+I022+I023+I024+I025+I026)%>%
  mutate(YT024=J016+J017+J018+J019+J020+J021+J022+J023+J024+J025+J026+J027+J028+

```

```

J029+J030+J031+J032+J033+J034+J035+J036+J037+J038+J062+J063+J064)%>%
mutate(YT025=J039+J040+J041+J042+J043)%>%
mutate(YT026=J001+J002+J003+J004+J005+J006+J007+J008+J009+J010+J011+J012+J013+J015)
%>%
mutate(YT027=J044+J045+J046+J047+J048+J049+J050+J051+J052+J053+J054+J055+J056+
J057+J058+J059+J060+J061)%>%
mutate(YT028=J065+J066+J067+J068)%>%
mutate(YT029=J069)%>%
mutate(YT030=J070+J071)%>%
mutate(YT031=0)%>%
mutate(YT032=K001+K002+K004+K005+K006+K007+K008+K009+K010+K011+K012+K013+K014+
K015+K016+K018+K019+K020+K021+K022+K023+K024+K025)%>%
mutate(YT033=K026+K027+K028+K029+K030+K031+K032+K033+K034+K035+K036+K037)%>%
mutate(YT034=K038+K039+K040+K041+K042+K043+K044+K045)%>%
mutate(YT035=L001+L002+L003+L004+L005+L006+L007+L008+L010+L011+L012+L013+L014+
L015+L016+L018+L019+L020+L023+L024+L025+L026+L027+L028+L029)%>%
mutate(YT036=M001+M002+M003+M004+M005+M006)%>%
mutate(YT037=M007+M008+M009+M010+M011)%>%
mutate(YT038=M012+M013+M014+M015+M016+M017+M018)%>%
mutate(YT039=N001+N002+N003+N004+N005+N006+N010+Q012)%>%
mutate(YT040=N008+N013+N014+N015+N016+Q007)%>%
mutate(YT041=Q009)%>%
mutate(YT042=Q002+Q006)%>%
mutate(YT043=Q003+Q004)%>%
mutate(YT044=Q011)%>%
mutate(YT045=0)

```

Se guarda la tabla de apoyos:

```

agregado <- agregado %>% mutate(enc=2014)
agregado <- agregado %>% mutate(folioviv=as.numeric(folioviv))
agregado <- agregado %>% mutate(foliohog=as.numeric(foliohog))
Apoyos2014 <- agregado %>%
  select(enc, folioviv, foliohog, YT001, YT002, YT003, YT004, YT005, YT006, YT007, YT008, YT009,
YT010, YT011, YT012, YT013, YT014, YT015, YT016, YT017, YT018, YT019, YT020, YT021,
YT022, YT023, YT024, YT025, YT026, YT027, YT028, YT029, YT030, YT031, YT032, YT033,
YT034, YT035, YT036, YT037, YT038, YT039, YT040, YT041, YT042, YT043, YT044, YT045)
remove(agregado)

```

P. Tabla de apoyos de 2016

```

gasto <- read.dbf("Bases/2016/gastoshogar.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))

```

Se selecciona apoyos:

```

gasto <- gasto %>% filter(tipo_gasto=="G5"|tipo_gasto=="G6")
agregado <- gasto %>% group_by(folioviv, foliohog, clave) %>%
  summarise(gasto=sum(gas_nm_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave) %>%
  pivot_wider(id_cols=c(folioviv, foliohog), values_from=gasto, names_from=clave)

```

Lista de variables para considerar en la construcción:

ls(agregado)						
[1]	"A001"	"A002"	"A003"	"A004"	"A005"	"A006"
[7]	"A007"	"A008"	"A009"	"A010"	"A011"	"A012"
[13]	"A013"	"A014"	"A015"	"A016"	"A017"	"A018"
[19]	"A019"	"A020"	"A021"	"A022"	"A023"	"A024"
[25]	"A025"	"A026"	"A027"	"A028"	"A029"	"A030"
[31]	"A031"	"A032"	"A033"	"A034"	"A035"	"A036"
[37]	"A037"	"A038"	"A039"	"A040"	"A041"	"A042"
[43]	"A043"	"A044"	"A045"	"A046"	"A047"	"A048"
[49]	"A049"	"A050"	"A051"	"A052"	"A053"	"A054"
[55]	"A055"	"A056"	"A057"	"A058"	"A059"	"A060"
[61]	"A061"	"A062"	"A063"	"A064"	"A065"	"A066"
[67]	"A067"	"A068"	"A069"	"A070"	"A071"	"A072"
[73]	"A073"	"A074"	"A075"	"A076"	"A077"	"A078"
[79]	"A079"	"A080"	"A081"	"A082"	"A083"	"A084"
[85]	"A085"	"A086"	"A087"	"A088"	"A089"	"A090"
[91]	"A091"	"A092"	"A093"	"A094"	"A095"	"A096"
[97]	"A097"	"A098"	"A099"	"A100"	"A101"	"A102"
[103]	"A103"	"A104"	"A105"	"A106"	"A107"	"A108"
[109]	"A109"	"A110"	"A111"	"A112"	"A113"	"A114"
[115]	"A115"	"A116"	"A117"	"A118"	"A119"	"A120"
[121]	"A121"	"A122"	"A123"	"A124"	"A125"	"A126"
[127]	"A127"	"A128"	"A129"	"A130"	"A131"	"A132"
[133]	"A133"	"A134"	"A135"	"A136"	"A137"	"A138"
[139]	"A139"	"A140"	"A141"	"A142"	"A143"	"A144"
[145]	"A145"	"A146"	"A147"	"A148"	"A149"	"A150"
[151]	"A151"	"A152"	"A153"	"A154"	"A155"	"A156"
[157]	"A157"	"A158"	"A159"	"A160"	"A161"	"A162"
[163]	"A163"	"A164"	"A165"	"A166"	"A167"	"A168"
[169]	"A169"	"A170"	"A171"	"A172"	"A173"	"A174"
[175]	"A175"	"A176"	"A177"	"A178"	"A179"	"A180"
[181]	"A181"	"A182"	"A183"	"A185"	"A186"	"A187"
[187]	"A188"	"A189"	"A190"	"A191"	"A192"	"A193"
[193]	"A194"	"A195"	"A196"	"A197"	"A198"	"A199"
[199]	"A200"	"A201"	"A202"	"A203"	"A204"	"A205"
[205]	"A206"	"A207"	"A208"	"A209"	"A210"	"A211"
[211]	"A212"	"A213"	"A214"	"A215"	"A216"	"A217"
[217]	"A218"	"A219"	"A220"	"A221"	"A222"	"A223"
[223]	"A224"	"A225"	"A227"	"A228"	"A229"	"A230"
[229]	"A231"	"A232"	"A233"	"A234"	"A235"	"A236"
[235]	"A237"	"A238"	"A239"	"A242"	"A243"	"A244"
[241]	"A245"	"A246"	"A247"	"B001"	"B002"	"B003"
[247]	"B004"	"B005"	"B006"	"B007"	"C001"	"C002"
[253]	"C003"	"C004"	"C005"	"C006"	"C007"	"C008"
[259]	"C009"	"C010"	"C011"	"C012"	"C013"	"C014"
[265]	"C015"	"C016"	"C017"	"C018"	"C019"	"C020"
[271]	"C021"	"C022"	"C023"	"C024"	"D001"	"D002"
[277]	"D003"	"D004"	"D005"	"D006"	"D007"	"D008"
[283]	"D009"	"D010"	"D011"	"D012"	"D013"	"D014"
[289]	"D015"	"D016"	"D017"	"D018"	"D019"	"D020"
[295]	"D021"	"D022"	"D023"	"D024"	"D025"	"D026"
[301]	"E001"	"E002"	"E003"	"E004"	"E005"	"E006"
[307]	"E007"	"E008"	"E009"	"E010"	"E011"	"E012"

[313]	"E013"	"E014"	"E015"	"E016"	"E017"	"E018"
[319]	"E019"	"E020"	"E021"	"E022"	"E023"	"E024"
[325]	"E025"	"E026"	"E027"	"E028"	"E029"	"E030"
[331]	"E031"	"E032"	"E033"	"E034"	"F001"	"F002"
[337]	"F003"	"F004"	"F005"	"F006"	"F007"	"F008"
[343]	"F009"	"F010"	"F011"	"F012"	"F013"	"F014"
[349]	"foliohog"	"folioviv"	"G001"	"G002"	"G003"	"G004"
[355]	"G005"	"G006"	"G007"	"G008"	"G009"	"G010"
[361]	"G011"	"G012"	"G013"	"G014"	"G015"	"G016"
[367]	"H001"	"H002"	"H003"	"H004"	"H005"	"H006"
[373]	"H007"	"H008"	"H009"	"H010"	"H011"	"H012"
[379]	"H013"	"H014"	"H015"	"H016"	"H017"	"H018"
[385]	"H019"	"H020"	"H021"	"H022"	"H023"	"H024"
[391]	"H025"	"H026"	"H027"	"H028"	"H029"	"H030"
[397]	"H031"	"H032"	"H033"	"H034"	"H035"	"H036"
[403]	"H037"	"H038"	"H039"	"H040"	"H041"	"H042"
[409]	"H043"	"H044"	"H045"	"H046"	"H047"	"H048"
[415]	"H049"	"H050"	"H051"	"H052"	"H053"	"H054"
[421]	"H055"	"H056"	"H057"	"H058"	"H059"	"H060"
[427]	"H061"	"H062"	"H063"	"H064"	"H065"	"H066"
[433]	"H067"	"H068"	"H069"	"H070"	"H071"	"H072"
[439]	"H073"	"H074"	"H075"	"H076"	"H077"	"H078"
[445]	"H079"	"H080"	"H081"	"H082"	"H083"	"H084"
[451]	"H085"	"H086"	"H087"	"H088"	"H089"	"H090"
[457]	"H091"	"H092"	"H093"	"H094"	"H095"	"H096"
[463]	"H097"	"H098"	"H099"	"H100"	"H101"	"H102"
[469]	"H103"	"H104"	"H105"	"H106"	"H107"	"H108"
[475]	"H109"	"H110"	"H111"	"H112"	"H113"	"H114"
[481]	"H115"	"H116"	"H117"	"H118"	"H119"	"H120"
[487]	"H121"	"H122"	"H123"	"H124"	"H125"	"H126"
[493]	"H127"	"H128"	"H129"	"H130"	"H131"	"H132"
[499]	"H134"	"H135"	"H136"	"I001"	"I002"	"I003"
[505]	"I004"	"I005"	"I006"	"I007"	"I008"	"I009"
[511]	"I010"	"I011"	"I012"	"I013"	"I014"	"I015"
[517]	"I016"	"I017"	"I018"	"I019"	"I020"	"I021"
[523]	"I022"	"I023"	"I024"	"I025"	"I026"	"J001"
[529]	"J002"	"J003"	"J004"	"J005"	"J006"	"J007"
[535]	"J008"	"J009"	"J010"	"J011"	"J012"	"J013"
[541]	"J014"	"J015"	"J016"	"J017"	"J018"	"J019"
[547]	"J020"	"J021"	"J022"	"J023"	"J024"	"J025"
[553]	"J026"	"J027"	"J028"	"J029"	"J030"	"J031"
[559]	"J032"	"J033"	"J034"	"J035"	"J036"	"J037"
[565]	"J038"	"J039"	"J040"	"J041"	"J042"	"J043"
[571]	"J044"	"J045"	"J046"	"J047"	"J048"	"J049"
[577]	"J050"	"J051"	"J052"	"J053"	"J054"	"J055"
[583]	"J056"	"J057"	"J058"	"J059"	"J060"	"J061"
[589]	"J062"	"J063"	"J064"	"J065"	"J066"	"J067"
[595]	"J068"	"J069"	"J070"	"J071"	"K001"	"K002"
[601]	"K003"	"K004"	"K005"	"K006"	"K007"	"K008"
[607]	"K009"	"K010"	"K011"	"K012"	"K013"	"K014"
[613]	"K015"	"K016"	"K017"	"K018"	"K019"	"K020"
[619]	"K021"	"K022"	"K023"	"K024"	"K025"	"K026"
[625]	"K027"	"K028"	"K029"	"K030"	"K031"	"K032"
[631]	"K033"	"K034"	"K035"	"K036"	"K037"	"K038"
[637]	"K039"	"K040"	"K041"	"K042"	"K043"	"K044"

[643]	"K045"	"L001"	"L002"	"L003"	"L004"	"L005"
[649]	"L006"	"L007"	"L008"	"L009"	"L010"	"L011"
[655]	"L012"	"L013"	"L014"	"L015"	"L016"	"L017"
[661]	"L018"	"L019"	"L020"	"L021"	"L023"	"L024"
[667]	"L025"	"L026"	"L027"	"L028"	"L029"	"M001"
[673]	"M002"	"M003"	"M004"	"M005"	"M006"	"M007"
[679]	"M008"	"M009"	"M010"	"M011"	"M012"	"M013"
[685]	"M014"	"M015"	"M016"	"M017"	"M018"	"N001"
[691]	"N002"	"N003"	"N004"	"N005"	"N006"	"N007"
[697]	"N008"	"N009"	"N010"	"N012"	"N013"	"N014"
[703]	"N015"	"N016"	"Q001"	"Q002"	"Q003"	"Q004"
[709]	"Q005"	"Q006"	"Q009"	"Q012"	"Q013"	"R001"
[715]	"R002"	"R003"	"R004"	"R005"	"R006"	"R007"
[721]	"R008"	"R009"	"R010"	"R011"	"R012"	"R013"

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YT001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A018+A019+A020+A021+A022+A023+A024+A025+A026+A027+
    A028+A029+A030+A031+A032+A033+A034+A035+A036+A037+A038+A039+A040+A041+
    A042+A043+A044+A045+A046+A047+A048+A049+A050+A051+A052+A053+A054+A055+
    A056+A057+A058+A059+A060+A061+A062+A063+A064+A065+A066+A067+A068+A069+
    A070+A071+A072+A073+A074+A075+A076+A077+A078+A079+A080+A081+A082+A083+
    A084+A085+A086+A087+A088+A089+A090+A091+A092+A093+A094+A095+A096+A097+
    A098+A099+A100+A101+A102+A103+A104+A105+A106+A107+A108+A109+A110+A111+
    A112+A113+A114+A115+A116+A117+A118+A119+A120+A121+A122+A123+A124+A125+
    A126+A127+A128+A129+A130+A131+A132+A133+A134+A135+A136+A137+A138+A139+
    A140+A141+A142+A143+A144+A145+A146+A147+A148+A149+A150+A151+A152+A153+
    A154+A155+A156+A157+A158+A159+A160+A161+A162+A163+A164+A165+A166+A167+
    A168+A169+A170+A171+A172+A173+A174+A175+A176+A177+A178+A179+A180+A181+
    A182+A183+A185+A186+A187+A188+A189+A190+A191+A192+A193+A194+A195+A196+
    A197+A198+A199+A200+A201+A202+A203+A204+A205+A206+A207+A208+A209+A210+A211)%>%
  mutate(YT002=A213+A214)%>%
  mutate(YT003=A215+A216+A217+A218+A219+A220+A221+A222)%>%
  mutate(YT004=A223+A224+A225+A227+A228+A229+A230+A231+A232+A233+A234+A235+A236+
    A237+A238)%>%
  mutate(YT005=A212)%>%
  mutate(YT006=A243+A244+A245+A246+A247)%>%
  mutate(YT007=A239)%>%
  mutate(YT008=A242)%>%
  mutate(YT009=B001+B002+B003+B004+B005+B006+B007)%>%
  mutate(YT010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
    C014+C015+C016+C017+C018+C019)%>%
  mutate(YT011=C020+C021+C022+C023+C024)%>%
  mutate(YT012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
    D014+D015+D016+D017+D018+D019+D020+D021)%>%
  mutate(YT013=D022+D023+D024+D025+D026)%>%
  mutate(YT014=E001+E002+E003+E004+E005+E006+E007+E008+E009+E010+E011+E012+E013)%>%
  mutate(YT015=E014+E015+E016+E017+E018+E019+E020+E021)%>%
  mutate(YT016=E022+E023+E024+E025+E026)%>%
  mutate(YT017=E027+E028+E029+E030+E031+E032+E033+E034)%>%
  mutate(YT018=F001+F002+F003+F004+F005+F006+R005+R006+R007+R008+R009+R010+R011)%>%
  mutate(YT019=F007+F008+F009+F010+F011+F012+F013+F014+R012)%>%
  mutate(YT020=G001+G002+G003+G004)%>%

```

```

mutate(YT021=G005+G006+G007+G008+G009+G010+G011+G012+G013+G014+G015+G016+R001+
  R002+R003+R004+R013)%>%
mutate(YT022=H001+H002+H003+H004+H005+H006+H007+H008+H009+H010+H011+H012+H013+
  H014+H015+H016+H017+H018+H019+H020+H021+H022+H023+H024+H025+H026+H027+
  H028+H029+H030+H031+H032+H033+H034+H035+H036+H037+H038+H039+H040+H041+
  H042+H043+H044+H045+H046+H047+H048+H049+H050+H051+H052+H053+H054+H055+
  H056+H057+H058+H059+H060+H061+H062+H063+H064+H065+H066+H067+H068+H069+
  H070+H071+H072+H073+H074+H075+H076+H077+H078+H079+H080+H081+H082+H083+
  H084+H085+H086+H087+H088+H089+H090+H091+H092+H093+H094+H095+H096+H097+
  H098+H099+H100+H101+H102+H103+H104+H105+H106+H107+H108+H109+H110+H111+
  H112+H113+H114+H115+H116+H117+H118+H119+H120+H121+H122+H123+H124+H125+
  H126+H127+H128+H129+H130+H131+H132+H133+H134+H135+H136)%>%
mutate(YT023=I001+I002+I003+I004+I005+I006+I007+I008+I009+I010+I011+I012+I013+
  I014+I015+I016+I017+I018+I019+I020+I021+I022+I023+I024+I025+I026)%>%
mutate(YT024=J016+J017+J018+J019+J020+J021+J022+J023+J024+J025+J026+J027+J028+
  J029+J030+J031+J032+J033+J034+J035+J036+J037+J038+J062+J063+J064)%>%
mutate(YT025=J039+J040+J041+J042+J043)%>%
mutate(YT026=J001+J002+J003+J004+J005+J006+J007+J008+J009+J010+J011+J012+J013+
  J014+J015)%>%
mutate(YT027=J044+J045+J046+J047+J048+J049+J050+J051+J052+J053+J054+J055+J056+
  J057+J058+J059+J060+J061)%>%
mutate(YT028=J065+J066+J067+J068)%>%
mutate(YT029=J069)%>%
mutate(YT030=J070+J071)%>%
mutate(YT031=0)%>%
mutate(YT032=K001+K002+K003+K004+K005+K006+K007+K008+K009+K010+K011+K012+K013+
  K014+K015+K016+K017+K018+K019+K020+K021+K022+K023+K024+K025)%>%
mutate(YT033=K026+K027+K028+K029+K030+K031+K032+K033+K034+K035+K036+K037)%>%
mutate(YT034=K038+K039+K040+K041+K042+K043+K044+K045)%>%
mutate(YT035=L001+L002+L003+L004+L005+L006+L007+L008+L009+L010+L011+L012+L013+
  L014+L015+L016+L017+L018+L019+L020+L021+L023+L024+L025+L026+L027+L028+
  L029)%>%
mutate(YT036=M001+M002+M003+M004+M005+M006)%>%
mutate(YT037=M007+M008+M009+M010+M011)%>%
mutate(YT038=M012+M013+M014+M015+M016+M017+M018)%>%
mutate(YT039=N001+N002+N003+N004+N005+N006+N007+N010+Q012)%>%
mutate(YT040=N008+N009+N012+N013+N014+N015+N016)%>%
mutate(YT041=Q009+Q013)%>%
mutate(YT042=Q001+Q002+Q006)%>%
mutate(YT043=Q003+Q004+Q005)%>%
mutate(YT044=0)%>%
mutate(YT045=0)

```

Se guarda la tabla de apoyos:

```

agregado <- agregado %>% mutate(enc=2016)
agregado <- agregado %>% mutate(folioviv=as.numeric(folioviv))
agregado <- agregado %>% mutate(foliohog=as.numeric(foliohog))
Apoyos2016 <- agregado %>%
  select(enc, folioviv, foliohog, YT001, YT002, YT003, YT004, YT005, YT006, YT007, YT008, YT009,
    YT010, YT011, YT012, YT013, YT014, YT015, YT016, YT017, YT018, YT019, YT020, YT021,
    YT022, YT023, YT024, YT025, YT026, YT027, YT028, YT029, YT030, YT031, YT032, YT033,
    YT034, YT035, YT036, YT037, YT038, YT039, YT040, YT041, YT042, YT043, YT044, YT045)
remove(agregado)

```

Q. Tabla de apoyos de 2018

```
gasto <- read.dbf("Bases/2018/gastoshogar.dbf",as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona apoyos:

```
gasto <- gasto %>% filter(tipo_gasto=="G5"|tipo_gasto=="G6")
agregado <- gasto %>% group_by(folioviv,foliohog,clave) %>%
  summarise(gasto=sum(gas_nm_tri),.groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave) %>%
  pivot_wider(id_cols=c(folioviv,foliohog),values_from=gasto,names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)
```

[1]	"A001"	"A002"	"A003"	"A004"	"A005"	"A006"
[7]	"A007"	"A008"	"A009"	"A010"	"A011"	"A012"
[13]	"A013"	"A014"	"A015"	"A016"	"A017"	"A018"
[19]	"A019"	"A020"	"A021"	"A022"	"A023"	"A024"
[25]	"A025"	"A026"	"A027"	"A028"	"A029"	"A030"
[31]	"A031"	"A032"	"A033"	"A034"	"A035"	"A036"
[37]	"A037"	"A038"	"A039"	"A040"	"A041"	"A042"
[43]	"A043"	"A044"	"A045"	"A046"	"A047"	"A048"
[49]	"A049"	"A050"	"A051"	"A052"	"A053"	"A054"
[55]	"A055"	"A056"	"A057"	"A058"	"A059"	"A060"
[61]	"A061"	"A062"	"A063"	"A064"	"A065"	"A066"
[67]	"A067"	"A068"	"A070"	"A071"	"A072"	"A073"
[73]	"A074"	"A075"	"A076"	"A077"	"A078"	"A079"
[79]	"A080"	"A081"	"A082"	"A083"	"A084"	"A085"
[85]	"A086"	"A087"	"A088"	"A089"	"A090"	"A091"
[91]	"A092"	"A093"	"A094"	"A095"	"A096"	"A097"
[97]	"A098"	"A099"	"A101"	"A102"	"A103"	"A104"
[103]	"A106"	"A107"	"A108"	"A109"	"A110"	"A111"
[109]	"A112"	"A113"	"A114"	"A115"	"A116"	"A117"
[115]	"A118"	"A119"	"A120"	"A121"	"A122"	"A123"
[121]	"A124"	"A125"	"A126"	"A127"	"A128"	"A129"
[127]	"A130"	"A131"	"A132"	"A133"	"A134"	"A135"
[133]	"A136"	"A137"	"A138"	"A139"	"A140"	"A141"
[139]	"A142"	"A143"	"A144"	"A145"	"A146"	"A147"
[145]	"A148"	"A149"	"A150"	"A151"	"A152"	"A153"
[151]	"A154"	"A155"	"A156"	"A157"	"A158"	"A159"
[157]	"A160"	"A161"	"A162"	"A163"	"A164"	"A165"
[163]	"A166"	"A167"	"A168"	"A169"	"A170"	"A171"
[169]	"A172"	"A173"	"A174"	"A175"	"A176"	"A177"
[175]	"A178"	"A179"	"A180"	"A181"	"A182"	"A183"
[181]	"A185"	"A186"	"A187"	"A188"	"A189"	"A190"
[187]	"A191"	"A192"	"A193"	"A194"	"A195"	"A196"
[193]	"A197"	"A198"	"A199"	"A200"	"A201"	"A202"
[199]	"A203"	"A204"	"A205"	"A206"	"A207"	"A208"
[205]	"A209"	"A210"	"A211"	"A212"	"A213"	"A215"
[211]	"A216"	"A217"	"A218"	"A219"	"A220"	"A221"
[217]	"A222"	"A223"	"A224"	"A225"	"A226"	"A227"
[223]	"A228"	"A229"	"A231"	"A233"	"A234"	"A235"
[229]	"A236"	"A237"	"A238"	"A239"	"A241"	"A242"

[235]	"A243"	"A244"	"A245"	"A246"	"A247"	"B001"
[241]	"B002"	"B003"	"B004"	"B005"	"B006"	"B007"
[247]	"C001"	"C002"	"C003"	"C004"	"C005"	"C006"
[253]	"C007"	"C008"	"C009"	"C010"	"C011"	"C012"
[259]	"C013"	"C014"	"C015"	"C016"	"C017"	"C018"
[265]	"C019"	"C020"	"C021"	"C022"	"C023"	"C024"
[271]	"D001"	"D002"	"D003"	"D004"	"D005"	"D006"
[277]	"D007"	"D008"	"D009"	"D010"	"D011"	"D012"
[283]	"D013"	"D014"	"D015"	"D016"	"D017"	"D018"
[289]	"D019"	"D021"	"D022"	"D023"	"D024"	"D025"
[295]	"D026"	"E001"	"E002"	"E003"	"E004"	"E005"
[301]	"E006"	"E007"	"E008"	"E009"	"E010"	"E012"
[307]	"E013"	"E014"	"E015"	"E016"	"E017"	"E018"
[313]	"E020"	"E021"	"E022"	"E023"	"E024"	"E025"
[319]	"E026"	"E027"	"E028"	"E029"	"E030"	"E031"
[325]	"E032"	"E034"	"F001"	"F002"	"F003"	"F004"
[331]	"F005"	"F006"	"F007"	"F008"	"F009"	"F010"
[337]	"F011"	"F012"	"F013"	"F014"	"foliohog"	"folioviv"
[343]	"G001"	"G002"	"G003"	"G004"	"G005"	"G006"
[349]	"G007"	"G008"	"G009"	"G010"	"G011"	"G012"
[355]	"G013"	"G014"	"G015"	"G016"	"H001"	"H002"
[361]	"H003"	"H004"	"H005"	"H006"	"H007"	"H008"
[367]	"H009"	"H010"	"H011"	"H012"	"H013"	"H014"
[373]	"H015"	"H016"	"H017"	"H018"	"H019"	"H020"
[379]	"H021"	"H022"	"H023"	"H024"	"H025"	"H026"
[385]	"H027"	"H028"	"H029"	"H030"	"H031"	"H032"
[391]	"H033"	"H034"	"H035"	"H036"	"H037"	"H038"
[397]	"H039"	"H040"	"H041"	"H042"	"H043"	"H044"
[403]	"H045"	"H046"	"H047"	"H048"	"H049"	"H050"
[409]	"H051"	"H052"	"H053"	"H054"	"H055"	"H056"
[415]	"H057"	"H058"	"H059"	"H060"	"H061"	"H062"
[421]	"H063"	"H064"	"H065"	"H066"	"H067"	"H068"
[427]	"H069"	"H070"	"H071"	"H072"	"H073"	"H074"
[433]	"H075"	"H076"	"H077"	"H078"	"H079"	"H080"
[439]	"H081"	"H082"	"H083"	"H084"	"H085"	"H086"
[445]	"H087"	"H088"	"H089"	"H090"	"H091"	"H092"
[451]	"H093"	"H094"	"H095"	"H096"	"H097"	"H098"
[457]	"H099"	"H100"	"H101"	"H102"	"H103"	"H104"
[463]	"H105"	"H106"	"H107"	"H108"	"H109"	"H110"
[469]	"H111"	"H112"	"H113"	"H114"	"H115"	"H116"
[475]	"H117"	"H118"	"H119"	"H120"	"H121"	"H122"
[481]	"H123"	"H124"	"H125"	"H126"	"H127"	"H128"
[487]	"H129"	"H130"	"H131"	"H132"	"H133"	"H134"
[493]	"H135"	"H136"	"I001"	"I002"	"I003"	"I004"
[499]	"I005"	"I006"	"I007"	"I008"	"I009"	"I010"
[505]	"I011"	"I012"	"I013"	"I014"	"I015"	"I016"
[511]	"I017"	"I018"	"I019"	"I020"	"I021"	"I022"
[517]	"I023"	"I024"	"I025"	"I026"	"J001"	"J002"
[523]	"J003"	"J004"	"J005"	"J006"	"J007"	"J008"
[529]	"J009"	"J010"	"J011"	"J012"	"J013"	"J014"
[535]	"J015"	"J016"	"J017"	"J018"	"J019"	"J020"
[541]	"J021"	"J022"	"J023"	"J024"	"J025"	"J026"
[547]	"J027"	"J028"	"J029"	"J030"	"J031"	"J032"
[553]	"J033"	"J034"	"J035"	"J036"	"J037"	"J038"
[559]	"J039"	"J040"	"J041"	"J042"	"J043"	"J044"

[565]	"J045"	"J046"	"J047"	"J048"	"J049"	"J050"
[571]	"J051"	"J052"	"J053"	"J054"	"J055"	"J056"
[577]	"J057"	"J058"	"J059"	"J060"	"J061"	"J062"
[583]	"J063"	"J064"	"J065"	"J066"	"J067"	"J068"
[589]	"J069"	"J070"	"J071"	"J072"	"K001"	"K002"
[595]	"K003"	"K004"	"K005"	"K006"	"K007"	"K008"
[601]	"K009"	"K010"	"K011"	"K012"	"K013"	"K014"
[607]	"K015"	"K016"	"K017"	"K018"	"K019"	"K020"
[613]	"K021"	"K022"	"K023"	"K024"	"K025"	"K026"
[619]	"K027"	"K028"	"K029"	"K030"	"K031"	"K032"
[625]	"K033"	"K034"	"K035"	"K036"	"K037"	"K038"
[631]	"K039"	"K040"	"K041"	"K042"	"K043"	"K044"
[637]	"K045"	"L001"	"L002"	"L003"	"L004"	"L005"
[643]	"L006"	"L007"	"L008"	"L009"	"L010"	"L011"
[649]	"L012"	"L013"	"L014"	"L015"	"L016"	"L017"
[655]	"L018"	"L019"	"L020"	"L021"	"L022"	"L023"
[661]	"L024"	"L025"	"L026"	"L027"	"L028"	"L029"
[667]	"M001"	"M002"	"M003"	"M004"	"M005"	"M006"
[673]	"M007"	"M008"	"M009"	"M010"	"M011"	"M012"
[679]	"M013"	"M014"	"M015"	"M016"	"M017"	"M018"
[685]	"N001"	"N002"	"N003"	"N004"	"N005"	"N006"
[691]	"N008"	"N009"	"N010"	"N011"	"N014"	"N015"
[697]	"N016"	"Q001"	"Q002"	"Q003"	"Q004"	"Q005"
[703]	"Q006"	"Q007"	"Q009"	"Q010"	"Q011"	"Q012"
[709]	"Q013"	"R001"	"R002"	"R003"	"R004"	"R005"
[715]	"R006"	"R007"	"R008"	"R009"	"R010"	"R011"
[721]	"R012"	"R013"				

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YT001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A018+A019+A020+A021+A022+A023+A024+A025+A026+A027+
    A028+A029+A030+A031+A032+A033+A034+A035+A036+A037+A038+A039+A040+A041+
    A042+A043+A044+A045+A046+A047+A048+A049+A050+A051+A052+A053+A054+A055+
    A056+A057+A058+A059+A060+A061+A062+A063+A064+A065+A066+A067+A068+A070+
    A071+A072+A073+A074+A075+A076+A077+A078+A079+A080+A081+A082+A083+A084+
    A085+A086+A087+A088+A089+A090+A091+A092+A093+A094+A095+A096+A097+A098+
    A099+A101+A102+A103+A104+A106+A107+A108+A109+A110+A111+A112+A113+A114+
    A115+A116+A117+A118+A119+A120+A121+A122+A123+A124+A125+A126+A127+A128+
    A129+A130+A131+A132+A133+A134+A135+A136+A137+A138+A139+A140+A141+A142+
    A143+A144+A145+A146+A147+A148+A149+A150+A151+A152+A153+A154+A155+A156+
    A157+A158+A159+A160+A161+A162+A163+A164+A165+A166+A167+A168+A169+A170+
    A171+A172+A173+A174+A175+A176+A177+A178+A179+A180+A181+A182+A183+A185+
    A186+A187+A188+A189+A190+A191+A192+A193+A194+A195+A196+A197+A198+A199+
    A200+A201+A202+A203+A204+A205+A206+A207+A208+A209+A210+A211)%>%
  mutate(YT002=A213)%>%
  mutate(YT003=A215+A216+A217+A218+A219+A220+A221+A222)%>%
  mutate(YT004=A223+A224+A225+A226+A227+A228+A229+A231+A233+A234+A235+A236+A237+A238)%>%
  mutate(YT005=A212)%>%
  mutate(YT006=A243+A244+A245+A246+A247)%>%
  mutate(YT007=A239+A241)%>%
  mutate(YT008=A242)%>%
  mutate(YT009=B001+B002+B003+B004+B005+B006+B007)%>%
  mutate(YT010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+

```

```

C014+C015+C016+C017+C018+C019)%>%
mutate(YT011=C020+C021+C022+C023+C024)%>%
mutate(YT012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
D014+D015+D016+D017+D018+D019+D021)%>%
mutate(YT013=D022+D023+D024+D025+D026)%>%
mutate(YT014=E001+E002+E003+E004+E005+E006+E007+E008+E009+E010+E012+E013)%>%
mutate(YT015=E014+E015+E016+E017+E018+E020+E021)%>%
mutate(YT016=E022+E023+E024+E025+E026)%>%
mutate(YT017=E027+E028+E029+E030+E031+E032+E034)%>%
mutate(YT018=F001+F002+F003+F004+F005+F006+R005+R006+R007+R008+R009+R010+R011)%>%
mutate(YT019=F007+F008+F009+F010+F011+F012+F013+F014+R012)%>%
mutate(YT020=G001+G002+G003+G004)%>%
mutate(YT021=G005+G006+G007+G008+G009+G010+G011+G012+G013+G014+G015+G016+R001+
R002+R003+R004+R013)%>%
mutate(YT022=H001+H002+H003+H004+H005+H006+H007+H008+H009+H010+H011+H012+H013+
H014+H015+H016+H017+H018+H019+H020+H021+H022+H023+H024+H025+H026+H027+
H028+H029+H030+H031+H032+H033+H034+H035+H036+H037+H038+H039+H040+H041+
H042+H043+H044+H045+H046+H047+H048+H049+H050+H051+H052+H053+H054+H055+
H056+H057+H058+H059+H060+H061+H062+H063+H064+H065+H066+H067+H068+H069+
H070+H071+H072+H073+H074+H075+H076+H077+H078+H079+H080+H081+H082+H083+
H084+H085+H086+H087+H088+H089+H090+H091+H092+H093+H094+H095+H096+H097+
H098+H099+H100+H101+H102+H103+H104+H105+H106+H107+H108+H109+H110+H111+
H112+H113+H114+H115+H116+H117+H118+H119+H120+H121+H122+H123+H124+H125+
H126+H127+H128+H129+H130+H131+H132+H133+H134+H135+H136)%>%
mutate(YT023=I001+I002+I003+I004+I005+I006+I007+I008+I009+I010+I011+I012+I013+
I014+I015+I016+I017+I018+I019+I020+I021+I022+I023+I024+I025+I026)%>%
mutate(YT024=J016+J017+J018+J019+J020+J021+J022+J023+J024+J025+J026+J027+J028+
J029+J030+J031+J032+J033+J034+J035+J036+J037+J038+J062+J063+J064)%>%
mutate(YT025=J039+J040+J041+J042+J043)%>%
mutate(YT026=J001+J002+J003+J004+J005+J006+J007+J008+J009+J010+J011+J012+J013+
J014+J015)%>%
mutate(YT027=J044+J045+J046+J047+J048+J049+J050+J051+J052+J053+J054+J055+J056+
J057+J058+J059+J060+J061)%>%
mutate(YT028=J065+J066+J067+J068)%>%
mutate(YT029=J069)%>%
mutate(YT030=J070+J071)%>%
mutate(YT031=J072)%>%
mutate(YT032=K001+K002+K003+K004+K005+K006+K007+K008+K009+K010+K011+K012+K013+
K014+K015+K016+K017+K018+K019+K020+K021+K022+K023+K024+K025)%>%
mutate(YT033=K026+K027+K028+K029+K030+K031+K032+K033+K034+K035+K036+K037)%>%
mutate(YT034=K038+K039+K040+K041+K042+K043+K044+K045)%>%
mutate(YT035=L001+L002+L003+L004+L005+L006+L007+L008+L009+L010+L011+L012+L013+
L014+L015+L016+L017+L018+L019+L020+L021+L022+L023+L024+L025+L026+L027+
L028+L029)%>%
mutate(YT036=M001+M002+M003+M004+M005+M006)%>%
mutate(YT037=M007+M008+M009+M010+M011)%>%
mutate(YT038=M012+M013+M014+M015+M016+M017+M018)%>%
mutate(YT039=N001+N002+N003+N004+N005+N006+N010+Q012)%>%
mutate(YT040=N008+N009+N011+N014+N015+N016+Q007)%>%
mutate(YT041=Q009+Q010+Q013)%>%
mutate(YT042=Q001+Q002+Q006)%>%
mutate(YT043=Q003+Q004+Q005)%>%
mutate(YT044=Q011)%>%
mutate(YT045=0)

```


Se guarda la tabla de apoyos:

```
agregado <- agregado %>% mutate(enc=2018)
agregado <- agregado %>% mutate(folioviv=as.numeric(folioviv))
agregado <- agregado %>% mutate(foliohog=as.numeric(foliohog))
Apoyos2018 <- agregado %>%
  select(enc, folioviv, foliohog, YT001, YT002, YT003, YT004, YT005, YT006, YT007, YT008, YT009,
         YT010, YT011, YT012, YT013, YT014, YT015, YT016, YT017, YT018, YT019, YT020, YT021,
         YT022, YT023, YT024, YT025, YT026, YT027, YT028, YT029, YT030, YT031, YT032, YT033,
         YT034, YT035, YT036, YT037, YT038, YT039, YT040, YT041, YT042, YT043, YT044, YT045)
remove(agregado)
```

R. Tabla de apoyos de 2020

```
gasto <- read.dbf("Bases/2020/gastoshogar.dbf", as.is=TRUE)
colnames(gasto) <- tolower(colnames(gasto))
```

Se selecciona apoyos:

```
gasto <- gasto %>% filter(tipo_gasto=="G5" | tipo_gasto=="G6")
agregado <- gasto %>% group_by(folioviv, foliohog, clave) %>%
  summarise(gasto=sum(gas_nm_tri), .groups="drop")
remove(gasto)
agregado <- agregado %>% arrange(clave) %>%
  pivot_wider(id_cols=c(folioviv, foliohog), values_from=gasto, names_from=clave)
```

Lista de variables para considerar en la construcción:

```
ls(agregado)
```

[1]	"A001"	"A002"	"A003"	"A004"	"A005"	"A006"
[7]	"A007"	"A008"	"A009"	"A010"	"A011"	"A012"
[13]	"A013"	"A014"	"A015"	"A016"	"A017"	"A018"
[19]	"A019"	"A020"	"A021"	"A022"	"A023"	"A024"
[25]	"A025"	"A026"	"A027"	"A028"	"A029"	"A030"
[31]	"A031"	"A032"	"A033"	"A034"	"A035"	"A036"
[37]	"A037"	"A038"	"A039"	"A040"	"A041"	"A042"
[43]	"A043"	"A044"	"A045"	"A046"	"A047"	"A048"
[49]	"A049"	"A050"	"A051"	"A052"	"A053"	"A054"
[55]	"A055"	"A056"	"A057"	"A058"	"A059"	"A060"
[61]	"A061"	"A062"	"A063"	"A064"	"A065"	"A066"
[67]	"A067"	"A068"	"A069"	"A070"	"A071"	"A072"
[73]	"A073"	"A074"	"A075"	"A076"	"A077"	"A078"
[79]	"A079"	"A080"	"A081"	"A082"	"A083"	"A084"
[85]	"A085"	"A086"	"A087"	"A088"	"A089"	"A090"
[91]	"A091"	"A092"	"A093"	"A094"	"A095"	"A096"
[97]	"A097"	"A098"	"A099"	"A101"	"A102"	"A103"
[103]	"A104"	"A105"	"A106"	"A107"	"A108"	"A109"
[109]	"A110"	"A111"	"A112"	"A113"	"A114"	"A115"
[115]	"A116"	"A117"	"A118"	"A119"	"A120"	"A121"
[121]	"A122"	"A123"	"A124"	"A125"	"A126"	"A127"
[127]	"A128"	"A129"	"A130"	"A131"	"A132"	"A133"
[133]	"A134"	"A135"	"A136"	"A137"	"A138"	"A139"
[139]	"A140"	"A141"	"A142"	"A143"	"A144"	"A145"
[145]	"A146"	"A147"	"A148"	"A149"	"A150"	"A151"
[151]	"A152"	"A153"	"A154"	"A155"	"A156"	"A157"
[157]	"A158"	"A159"	"A160"	"A161"	"A162"	"A163"

[163]	"A164"	"A165"	"A166"	"A167"	"A168"	"A169"
[169]	"A170"	"A171"	"A172"	"A173"	"A174"	"A175"
[175]	"A176"	"A177"	"A178"	"A179"	"A180"	"A181"
[181]	"A182"	"A183"	"A185"	"A186"	"A187"	"A188"
[187]	"A189"	"A190"	"A191"	"A192"	"A193"	"A194"
[193]	"A195"	"A196"	"A197"	"A198"	"A199"	"A200"
[199]	"A201"	"A202"	"A203"	"A204"	"A205"	"A206"
[205]	"A207"	"A208"	"A209"	"A210"	"A211"	"A212"
[211]	"A213"	"A214"	"A215"	"A216"	"A217"	"A218"
[217]	"A219"	"A220"	"A221"	"A222"	"A223"	"A224"
[223]	"A226"	"A227"	"A228"	"A229"	"A230"	"A231"
[229]	"A232"	"A233"	"A234"	"A235"	"A236"	"A237"
[235]	"A238"	"A239"	"A241"	"A242"	"A243"	"A244"
[241]	"A245"	"A246"	"A247"	"B001"	"B002"	"B003"
[247]	"B004"	"B005"	"B006"	"B007"	"C001"	"C002"
[253]	"C003"	"C004"	"C005"	"C006"	"C007"	"C008"
[259]	"C009"	"C010"	"C011"	"C012"	"C013"	"C014"
[265]	"C015"	"C016"	"C017"	"C018"	"C019"	"C020"
[271]	"C021"	"C022"	"C023"	"C024"	"D001"	"D002"
[277]	"D003"	"D004"	"D005"	"D006"	"D007"	"D008"
[283]	"D009"	"D010"	"D011"	"D012"	"D013"	"D014"
[289]	"D015"	"D016"	"D017"	"D018"	"D019"	"D020"
[295]	"D021"	"D022"	"D023"	"D024"	"D025"	"D026"
[301]	"E001"	"E002"	"E003"	"E004"	"E005"	"E006"
[307]	"E007"	"E008"	"E009"	"E010"	"E011"	"E012"
[313]	"E014"	"E015"	"E016"	"E017"	"E018"	"E019"
[319]	"E020"	"E022"	"E023"	"E024"	"E025"	"E026"
[325]	"E027"	"E028"	"E029"	"E030"	"E031"	"E032"
[331]	"E034"	"F001"	"F002"	"F003"	"F004"	"F005"
[337]	"F006"	"F007"	"F008"	"F009"	"F010"	"F011"
[343]	"F012"	"F013"	"F014"	"foliohog"	"folioviv"	"G001"
[349]	"G002"	"G003"	"G004"	"G005"	"G006"	"G007"
[355]	"G008"	"G009"	"G010"	"G011"	"G012"	"G013"
[361]	"G014"	"G015"	"G016"	"H001"	"H002"	"H003"
[367]	"H004"	"H005"	"H006"	"H007"	"H008"	"H009"
[373]	"H010"	"H011"	"H012"	"H013"	"H014"	"H015"
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[457]	"H094"	"H095"	"H096"	"H097"	"H098"	"H099"
[463]	"H100"	"H101"	"H102"	"H103"	"H104"	"H105"
[469]	"H106"	"H107"	"H108"	"H109"	"H110"	"H111"
[475]	"H112"	"H113"	"H114"	"H115"	"H116"	"H117"
[481]	"H118"	"H119"	"H120"	"H121"	"H122"	"H123"
[487]	"H124"	"H125"	"H126"	"H127"	"H128"	"H129"

[493]	"H130"	"H131"	"H132"	"H134"	"H135"	"H136"
[499]	"I001"	"I002"	"I003"	"I004"	"I005"	"I006"
[505]	"I007"	"I008"	"I009"	"I010"	"I011"	"I012"
[511]	"I014"	"I015"	"I016"	"I017"	"I018"	"I019"
[517]	"I020"	"I021"	"I022"	"I023"	"I024"	"I025"
[523]	"I026"	"J001"	"J002"	"J003"	"J004"	"J005"
[529]	"J006"	"J007"	"J008"	"J009"	"J010"	"J011"
[535]	"J012"	"J013"	"J014"	"J015"	"J016"	"J017"
[541]	"J018"	"J019"	"J020"	"J021"	"J022"	"J023"
[547]	"J024"	"J025"	"J026"	"J027"	"J028"	"J029"
[553]	"J030"	"J031"	"J032"	"J033"	"J034"	"J035"
[559]	"J036"	"J037"	"J038"	"J039"	"J040"	"J041"
[565]	"J042"	"J043"	"J044"	"J045"	"J046"	"J047"
[571]	"J048"	"J049"	"J050"	"J051"	"J052"	"J053"
[577]	"J054"	"J055"	"J056"	"J057"	"J058"	"J059"
[583]	"J060"	"J061"	"J062"	"J063"	"J064"	"J065"
[589]	"J066"	"J067"	"J068"	"J069"	"J070"	"J071"
[595]	"J072"	"K001"	"K002"	"K003"	"K004"	"K005"
[601]	"K006"	"K007"	"K008"	"K009"	"K010"	"K011"
[607]	"K012"	"K013"	"K014"	"K015"	"K016"	"K017"
[613]	"K018"	"K019"	"K020"	"K021"	"K022"	"K023"
[619]	"K024"	"K025"	"K026"	"K027"	"K028"	"K029"
[625]	"K030"	"K031"	"K032"	"K033"	"K034"	"K035"
[631]	"K036"	"K037"	"K038"	"K039"	"K040"	"K041"
[637]	"K042"	"K043"	"K044"	"K045"	"L001"	"L002"
[643]	"L003"	"L004"	"L005"	"L006"	"L007"	"L008"
[649]	"L009"	"L010"	"L011"	"L012"	"L013"	"L014"
[655]	"L015"	"L016"	"L017"	"L018"	"L019"	"L020"
[661]	"L021"	"L023"	"L024"	"L025"	"L026"	"L027"
[667]	"L028"	"L029"	"M001"	"M002"	"M003"	"M004"
[673]	"M005"	"M006"	"M007"	"M008"	"M009"	"M010"
[679]	"M011"	"M012"	"M013"	"M014"	"M015"	"M016"
[685]	"M017"	"M018"	"N001"	"N002"	"N003"	"N004"
[691]	"N005"	"N007"	"N008"	"N009"	"N010"	"N013"
[697]	"N014"	"N015"	"N016"	"Q001"	"Q003"	"Q004"
[703]	"Q005"	"Q006"	"Q007"	"Q009"	"Q010"	"Q012"
[709]	"Q013"	"R001"	"R002"	"R003"	"R004"	"R005"
[715]	"R006"	"R007"	"R008"	"R009"	"R010"	"R011"
[721]	"R012"	"R013"				

Construcción propuesta:

```

agregado [is.na(agregado)] <- 0
agregado <- agregado %>%
  mutate(YT001=A001+A002+A003+A004+A005+A006+A007+A008+A009+A010+A011+A012+A013+
    A014+A015+A016+A017+A018+A019+A020+A021+A022+A023+A024+A025+A026+A027+
    A028+A029+A030+A031+A032+A033+A034+A035+A036+A037+A038+A039+A040+A041+
    A042+A043+A044+A045+A046+A047+A048+A049+A050+A051+A052+A053+A054+A055+
    A056+A057+A058+A059+A060+A061+A062+A063+A064+A065+A066+A067+A068+A069+
    A070+A071+A072+A073+A074+A075+A076+A077+A078+A079+A080+A081+A082+A083+
    A084+A085+A086+A087+A088+A089+A090+A091+A092+A093+A094+A095+A096+A097+
    A098+A099+A101+A102+A103+A104+A105+A106+A107+A108+A109+A110+A111+A112+
    A113+A114+A115+A116+A117+A118+A119+A120+A121+A122+A123+A124+A125+A126+
    A127+A128+A129+A130+A131+A132+A133+A134+A135+A136+A137+A138+A139+A140+
    A141+A142+A143+A144+A145+A146+A147+A148+A149+A150+A151+A152+A153+A154+
    A155+A156+A157+A158+A159+A160+A161+A162+A163+A164+A165+A166+A167+A168+

```

```

A169+A170+A171+A172+A173+A174+A175+A176+A177+A178+A179+A180+A181+A182+
A183+A185+A186+A187+A188+A189+A190+A191+A192+A193+A194+A195+A196+A197+
A198+A199+A200+A201+A202+A203+A204+A205+A206+A207+A208+A209+A210+A211)%>%
mutate(YT002=A213+A214)%>%
mutate(YT003=A215+A216+A217+A218+A219+A220+A221+A222)%>%
mutate(YT004=A223+A224+A226+A227+A228+A229+A230+A231+A232+A233+A234+A235+A236+
A237+A238)%>%
mutate(YT005=A212)%>%
mutate(YT006=A243+A244+A245+A246+A247)%>%
mutate(YT007=A239+A241)%>%
mutate(YT008=A242)%>%
mutate(YT009=B001+B002+B003+B004+B005+B006+B007)%>%
mutate(YT010=C001+C002+C003+C004+C005+C006+C007+C008+C009+C010+C011+C012+C013+
C014+C015+C016+C017+C018+C019)%>%
mutate(YT011=C020+C021+C022+C023+C024)%>%
mutate(YT012=D001+D002+D003+D004+D005+D006+D007+D008+D009+D010+D011+D012+D013+
D014+D015+D016+D017+D018+D019+D020+D021)%>%
mutate(YT013=D022+D023+D024+D025+D026)%>%
mutate(YT014=E001+E002+E003+E004+E005+E006+E007+E008+E009+E010+E011+E012)%>%
mutate(YT015=E014+E015+E016+E017+E018+E019+E020)%>%
mutate(YT016=E022+E023+E024+E025+E026)%>%
mutate(YT017=E027+E028+E029+E030+E031+E032+E034)%>%
mutate(YT018=F001+F002+F003+F004+F005+F006+R005+R006+R007+R008+R009+R010+R011)%>%
mutate(YT019=F007+F008+F009+F010+F011+F012+F013+F014+R012)%>%
mutate(YT020=G001+G002+G003+G004)%>%
mutate(YT021=G005+G006+G007+G008+G009+G010+G011+G012+G013+G014+G015+G016+R001+
R002+R003+R004+R013)%>%
mutate(YT022=H001+H002+H003+H004+H005+H006+H007+H008+H009+H010+H011+H012+H013+
H014+H015+H016+H017+H018+H019+H020+H021+H022+H023+H024+H025+H026+H027+
H028+H029+H030+H031+H032+H033+H034+H035+H036+H037+H038+H039+H040+H041+
H042+H043+H044+H045+H046+H047+H048+H049+H050+H051+H052+H053+H054+H055+
H056+H057+H058+H059+H060+H061+H062+H063+H064+H065+H066+H067+H068+H069+
H070+H071+H072+H073+H074+H075+H076+H077+H078+H079+H080+H081+H082+H083+
H084+H085+H086+H087+H088+H089+H090+H091+H092+H093+H094+H095+H096+H097+
H098+H099+H100+H101+H102+H103+H104+H105+H106+H107+H108+H109+H110+H111+
H112+H113+H114+H115+H116+H117+H118+H119+H120+H121+H122+H123+H124+H125+
H126+H127+H128+H129+H130+H131+H132+H134+H135+H136)%>%
mutate(YT023=I001+I002+I003+I004+I005+I006+I007+I008+I009+I010+I011+I012+I014+
I015+I016+I017+I018+I019+I020+I021+I022+I023+I024+I025+I026)%>%
mutate(YT024=J016+J017+J018+J019+J020+J021+J022+J023+J024+J025+J026+J027+J028+
J029+J030+J031+J032+J033+J034+J035+J036+J037+J038+J062+J063+J064)%>%
mutate(YT025=J039+J040+J041+J042+J043)%>%
mutate(YT026=J001+J002+J003+J004+J005+J006+J007+J008+J009+J010+J011+J012+J013+
J014+J015)%>%
mutate(YT027=J044+J045+J046+J047+J048+J049+J050+J051+J052+J053+J054+J055+J056+
J057+J058+J059+J060+J061)%>%
mutate(YT028=J065+J066+J067+J068)%>%
mutate(YT029=J069)%>%
mutate(YT030=J070+J071)%>%
mutate(YT031=J072)%>%
mutate(YT032=K001+K002+K003+K004+K005+K006+K007+K008+K009+K010+K011+K012+K013+
K014+K015+K016+K017+K018+K019+K020+K021+K022+K023+K024+K025)%>%
mutate(YT033=K026+K027+K028+K029+K030+K031+K032+K033+K034+K035+K036+K037)%>%
mutate(YT034=K038+K039+K040+K041+K042+K043+K044+K045)%>%
mutate(YT035=L001+L002+L003+L004+L005+L006+L007+L008+L009+L010+L011+L012+L013+

```

```

L014+L015+L016+L017+L018+L019+L020+L021+L023+L024+L025+L026+L027+L028+
L029)%>%
mutate(YT036=M001+M002+M003+M004+M005+M006)%>%
mutate(YT037=M007+M008+M009+M010+M011)%>%
mutate(YT038=M012+M013+M014+M015+M016+M017+M018)%>%
mutate(YT039=N001+N002+N003+N004+N005+N007+N010+Q012)%>%
mutate(YT040=N008+N009+N013+N014+N015+N016+Q007)%>%
mutate(YT041=Q009+Q010++Q013)%>%
mutate(YT042=Q001+Q006)%>%
mutate(YT043=Q003+Q004+Q005)%>%
mutate(YT044=0)%>%
mutate(YT045=0)

```

Se guarda la tabla de apoyos:

```

agregado <- agregado %>% mutate(enc=2020)
agregado <- agregado %>% mutate(folioviv=as.numeric(folioviv))
agregado <- agregado %>% mutate(foliohog=as.numeric(foliohog))
Apoyos2020 <- agregado %>%
  select(enc, folioviv, foliohog, YT001, YT002, YT003, YT004, YT005, YT006, YT007, YT008, YT009,
         YT010, YT011, YT012, YT013, YT014, YT015, YT016, YT017, YT018, YT019, YT020, YT021,
         YT022, YT023, YT024, YT025, YT026, YT027, YT028, YT029, YT030, YT031, YT032, YT033,
         YT034, YT035, YT036, YT037, YT038, YT039, YT040, YT041, YT042, YT043, YT044, YT045)
remove(agregado)

```

Se genera el cuadro de control. De acuerdo con la definición de la construcción de la encuesta de 2018, se han excluido para el cuadro de control las claves de gasto Q001 a Q016 y K038 a K045.

Cuadro 21
Tabla de apoyos: cuadro de control

enc	Hogares	Apoyos
1984	7 002 702	232 018 505
1989	5 811 372	2 352 717 090
1992	9 271 995	7 651 551 951
1994	9 538 218	8 843 647 461
1996	10 630 434	14 724 397 545
1998	11 212 435	20 301 370 653
2000	12 978 863	30 151 462 085
2002	15 594 762	38 128 005 272
2004	16 075 619	45 227 853 912
2005	16 071 495	44 328 561 755
2006	19 341 866	74 904 702 110
2008	17 628 710	65 132 001 585
2010	17 367 410	63 096 761 052
2012	20 928 496	86 130 723 516
2014	19 209 640	76 438 106 395
2016	21 803 986	97 811 923 287
2018	21 564 769	110 825 597 413
2020	21 310 962	181 509 641

Fuente: Elaboración propia.

IX. Base de nuevos apoyos homologada de la ENIGH

A. Base de apoyos del gobierno federal

El INEGI no consideró en la construcción de la variable de ingreso los nuevos programas que el gobierno federal ha otorgado como parte de sus programas de bienestar. Algunos de estos apoyos son percepciones de capital, por ejemplo, Tandas para el Bienestar (Microcréditos para el Bienestar) o Crédito Ganadero a la Palabra. Otros son transferencias gubernamentales, como Sembrando Vida, Programa Nacional de Fertilizantes y Programa de Desarrollo Rural. Existe un tercer grupo que consiste en dar incentivos y apoyos para la comercialización, por ejemplo, el programa de Agromercados Sociales y SustenCuadros y los Precios de Garantía. En el primer caso se otorga un monto de dinero para incentivar la producción de productos agropecuarios y pesqueros; en el segundo se garantiza un precio al productor, que le permite enfrentar fluctuaciones a la baja del precio de venta de su producto, en este caso se registra la diferencia entre el precio de mercado y el precio de garantía. En ambos casos se trata de ingresos de los pequeños negocios.

B. Negocios agropecuarios

```
agro <- read.dbf("Bases/2020/agro.dbf", as.is=TRUE)
```

Se selecciona nuevos apoyos:

```
agro <- agro %>% filter(nvo_apoyo=="1")
```

Se calculan las variables:

```
agro[is.na(agro)] <- 0
agro <- agro %>%
  mutate(clave1=ifelse(nvo_prog1=="2001" | nvo_prog1=="2002", "P109", nvo_prog1)) %>%
  mutate(clave1=ifelse(nvo_prog1=="2003" | nvo_prog1=="2004", "P110", clave1)) %>%
  mutate(clave1=ifelse(nvo_prog1=="2005" | nvo_prog1=="2006", "P111", clave1)) %>%
  mutate(clave1=ifelse(nvo_prog1=="2007" | nvo_prog1=="2008", "P112", clave1)) %>%
  mutate(clave1=ifelse(nvo_prog1=="2009" | nvo_prog1=="2010", "P113", clave1)) %>%
```

```

mutate(clave1=ifelse(nvo_prog1=="2011"|nvo_prog1=="2012","P114",clave1)) %>%
mutate(clave1=ifelse(nvo_prog1=="2013"|nvo_prog1=="2014","P115",clave1)) %>%
mutate(clave1=ifelse(nvo_prog1=="2015"|nvo_prog1=="2016","P116",clave1))
agro <- agro %>%
mutate(clave2=ifelse(nvo_prog2=="2001"|nvo_prog2=="2002","P109",nvo_prog2)) %>%
mutate(clave2=ifelse(nvo_prog2=="2003"|nvo_prog2=="2004","P110",clave2)) %>%
mutate(clave2=ifelse(nvo_prog2=="2005"|nvo_prog2=="2006","P111",clave2)) %>%
mutate(clave2=ifelse(nvo_prog2=="2007"|nvo_prog2=="2008","P112",clave2)) %>%
mutate(clave2=ifelse(nvo_prog2=="2009"|nvo_prog2=="2010","P113",clave2)) %>%
mutate(clave2=ifelse(nvo_prog2=="2011"|nvo_prog2=="2012","P114",clave2)) %>%
mutate(clave2=ifelse(nvo_prog2=="2013"|nvo_prog2=="2014","P115",clave2)) %>%
mutate(clave2=ifelse(nvo_prog2=="2015"|nvo_prog2=="2016","P116",clave2))
agro <- agro %>%
mutate(clave3=ifelse(nvo_prog3=="2001"|nvo_prog3=="2002","P109",nvo_prog3)) %>%
mutate(clave3=ifelse(nvo_prog3=="2003"|nvo_prog3=="2004","P110",clave3)) %>%
mutate(clave3=ifelse(nvo_prog3=="2005"|nvo_prog3=="2006","P111",clave3)) %>%
mutate(clave3=ifelse(nvo_prog3=="2007"|nvo_prog3=="2008","P112",clave3)) %>%
mutate(clave3=ifelse(nvo_prog3=="2009"|nvo_prog3=="2010","P113",clave3)) %>%
mutate(clave3=ifelse(nvo_prog3=="2011"|nvo_prog3=="2012","P114",clave3)) %>%
mutate(clave3=ifelse(nvo_prog3=="2013"|nvo_prog3=="2014","P115",clave3)) %>%
mutate(clave3=ifelse(nvo_prog3=="2015"|nvo_prog3=="2016","P116",clave3))

```

Se prepara la base:

```

agro <- agro %>%
select(folioviv,foliohog,numren,clave1,clave2,clave3,nvo_cant1,nvo_cant2,nvo_cant3)
agro1 <- agro %>%
group_by(folioviv,foliohog,numren,clave1) %>%
summarise(t=sum(nvo_cant1),.groups = "drop") %>%
arrange(clave1) %>%
pivot_wider(id_cols=c(folioviv,foliohog,numren),names_from=clave1,values_from=t)
agro2 <- agro %>%
group_by(folioviv,foliohog,numren,clave2) %>%
summarise(t=sum(nvo_cant2),.groups = "drop") %>%
arrange(clave2) %>%
pivot_wider(id_cols=c(folioviv,foliohog,numren),names_from=clave2,values_from=t)
agro3 <- agro %>%
group_by(folioviv,foliohog,numren,clave3) %>%
summarise(t=sum(nvo_cant3),.groups = "drop") %>%
arrange(clave3) %>%
pivot_wider(id_cols=c(folioviv,foliohog,numren),names_from=clave3,values_from=t)
agro1 <- agro1 %>% left_join(agro2,by=c("folioviv","foliohog","numren"))
agro1 <- agro1 %>% left_join(agro3,by=c("folioviv","foliohog","numren"))
remove(agro,agro2,agro3)

```

Se calculan los nuevos apoyos:

```

agro1[is.na(agro1)] <- 0
agro1 <- agro1 %>%
mutate(P109=(P109.x+P109.y)/4) %>%
mutate(P110=(P110.x+P110.y)/4) %>%
mutate(P111=P111/4) %>%
mutate(P112=(P112.x+P112.y)/4) %>%
mutate(P113=(P113/4)) %>%
mutate(P114=(P114.x+P114.y)/4) %>%
mutate(P115=(P115.x+P115.y)/4) %>%
mutate(P116=(P116.x+P116.y)/4)

```


C. Negocios no agropecuarios

```
noagro <- read.dbf("Bases/2020/noagro.dbf", as.is=TRUE)
```

Se selecciona nuevos apoyos:

```
noagro <- noagro %>% filter(nvo_apoyo=="1")
```

Se calculan las variables:

```
noagro [is.na(noagro)] <- 0
noagro <- noagro %>%
  mutate(clave1=ifelse(nvo_prog1=="2001" | nvo_prog1=="2002", "P109", nvo_prog1)) %>%
  mutate(clave1=ifelse(nvo_prog1=="2003" | nvo_prog1=="2004", "P110", clave1)) %>%
  mutate(clave1=ifelse(nvo_prog1=="2005" | nvo_prog1=="2006", "P111", clave1)) %>%
  mutate(clave1=ifelse(nvo_prog1=="2007" | nvo_prog1=="2008", "P112", clave1)) %>%
  mutate(clave1=ifelse(nvo_prog1=="2009" | nvo_prog1=="2010", "P113", clave1)) %>%
  mutate(clave1=ifelse(nvo_prog1=="2011" | nvo_prog1=="2012", "P114", clave1)) %>%
  mutate(clave1=ifelse(nvo_prog1=="2013" | nvo_prog1=="2014", "P115", clave1)) %>%
  mutate(clave1=ifelse(nvo_prog1=="2015" | nvo_prog1=="2016", "P116", clave1))
noagro <- noagro %>%
  mutate(clave2=ifelse(nvo_prog2=="2001" | nvo_prog2=="2002", "P109", nvo_prog2)) %>%
  mutate(clave2=ifelse(nvo_prog2=="2003" | nvo_prog2=="2004", "P110", clave2)) %>%
  mutate(clave2=ifelse(nvo_prog2=="2005" | nvo_prog2=="2006", "P111", clave2)) %>%
  mutate(clave2=ifelse(nvo_prog2=="2007" | nvo_prog2=="2008", "P112", clave2)) %>%
  mutate(clave2=ifelse(nvo_prog2=="2009" | nvo_prog2=="2010", "P113", clave2)) %>%
  mutate(clave2=ifelse(nvo_prog2=="2011" | nvo_prog2=="2012", "P114", clave2)) %>%
  mutate(clave2=ifelse(nvo_prog2=="2013" | nvo_prog2=="2014", "P115", clave2)) %>%
  mutate(clave2=ifelse(nvo_prog2=="2015" | nvo_prog2=="2016", "P116", clave2))
noagro <- noagro %>%
  mutate(clave3=ifelse(nvo_prog3=="2001" | nvo_prog3=="2002", "P109", nvo_prog3)) %>%
  mutate(clave3=ifelse(nvo_prog3=="2003" | nvo_prog3=="2004", "P110", clave3)) %>%
  mutate(clave3=ifelse(nvo_prog3=="2005" | nvo_prog3=="2006", "P111", clave3)) %>%
  mutate(clave3=ifelse(nvo_prog3=="2007" | nvo_prog3=="2008", "P112", clave3)) %>%
  mutate(clave3=ifelse(nvo_prog3=="2009" | nvo_prog3=="2010", "P113", clave3)) %>%
  mutate(clave3=ifelse(nvo_prog3=="2011" | nvo_prog3=="2012", "P114", clave3)) %>%
  mutate(clave3=ifelse(nvo_prog3=="2013" | nvo_prog3=="2014", "P115", clave3)) %>%
  mutate(clave3=ifelse(nvo_prog3=="2015" | nvo_prog3=="2016", "P116", clave3))
```

Se prepara la base:

```
noagro <- noagro %>%
  select(folioviv, foliohog, numren, clave1, clave2, clave3, nvo_cant1, nvo_cant2, nvo_cant3)
noagro1 <- noagro %>%
  group_by(folioviv, foliohog, numren, clave1) %>%
  summarise(t=sum(nvo_cant1), .groups = "drop") %>%
  arrange(clave1) %>%
  pivot_wider(id_cols=c(folioviv, foliohog, numren), names_from=clave1, values_from=t)
noagro2 <- noagro %>%
  group_by(folioviv, foliohog, numren, clave2) %>%
  summarise(t=sum(nvo_cant2), .groups = "drop") %>%
  arrange(clave2) %>%
  pivot_wider(id_cols=c(folioviv, foliohog, numren), names_from=clave2, values_from=t)
noagro3 <- noagro %>%
  group_by(folioviv, foliohog, numren, clave3) %>%
  summarise(t=sum(nvo_cant3), .groups = "drop") %>%
  arrange(clave3) %>%
```

```

pivot_wider(id_cols=c(folioviv,foliohog,numren),names_from=clave3,values_from=t)
noagro1 <- noagro1 %>% left_join(noagro2,by=c("folioviv","foliohog","numren"))
noagro1 <- noagro1 %>% left_join(noagro3,by=c("folioviv","foliohog","numren"))
remove(noagro,noagro2,noagro3)

```

Se calculan los nuevos apoyos:

```

noagro1[is.na(noagro1)] <- 0
noagro1 <- noagro1 %>%
  mutate(P109=P109/4) %>%
  mutate(P110=P110/4) %>%
  mutate(P111=0) %>%
  mutate(P112=P112/4) %>%
  mutate(P113=P113/4) %>%
  mutate(P114=(P114.x+P114.y)/4) %>%
  mutate(P115=(P115.x+P115.y)/4) %>%
  mutate(P116=(P116.x+P116.y)/4)

```

Se unen las dos bases, negocios agropecuarios y no agropecuarios:

```

agro1 <- agro1 %>%
  select(folioviv,foliohog,numren,P109,P110,P111,P112,P113,P114,P115,P116)
noagro1 <- noagro1 %>%
  select(folioviv,foliohog,numren,P109,P110,P111,P112,P113,P114,P115,P116)
NuevosApoyos <- bind_rows(agro1,noagro1)
remove(agro1,noagro1)
NuevosApoyos <- NuevosApoyos %>% group_by(folioviv,foliohog,numren) %>%
  summarise(P109=sum(P109),
            P110=sum(P110),
            P111=sum(P111),
            P112=sum(P112),
            P113=sum(P113),
            P114=sum(P114),
            P115=sum(P115),
            P116=sum(P116),.groups = "drop")

```

D. Se genera el cuadro de control

```

NuevosApoyos <- NuevosApoyos %>% mutate(enc=2020)
NuevosApoyos <- NuevosApoyos %>% mutate(folioviv=as.numeric(folioviv))
NuevosApoyos <- NuevosApoyos %>% mutate(foliohog=as.numeric(foliohog))
NuevosApoyos <- NuevosApoyos %>% mutate(numren=as.integer(numren))
load("Hogares.RData")
NuevosApoyos <- NuevosApoyos %>% inner_join(Hogar,by=c("enc","folioviv","foliohog"))

```

Cuadro 22
Nuevos apoyos: cuadro de control

Programa	Apoyos
Sembrando	2 119 040 931
Tandas	844 401 990
Agromercados	747 500
Garantía	29 385 607
Ganadero	77 736 933
Fertilizantes	145 916 208
Rural	85 020 480
Otros	613 130 667

Fuente: Elaboración propia.

X. Base a nivel de personas

Se construye, finalmente, una base de datos homologada a nivel de persona, con las variables de las tablas de datos sociodemográficos (SocioDemo.RData), de ingreso (Ingreso.RData), remuneraciones en especie (Especie.RData), nuevas transferencias que el gobierno federal actual ha comenzado a otorgar (NuevosApoyo.RData), información de los hogares (Hogares.RData), del autoconsumo (Autoconsumo.RData), y de la renta imputada de la vivienda (Alquiler.RData).

```
load("SocioDemo.RData")
load("Ingreso.RData")
load("Especie.RData")
load("NuevosApoyos.RData")
load("Hogares.RData")
load("Autoconsumo.RData")
load("Alquiler.RData")
```

En primer paso consiste en unir las bases con información a nivel de personas:

```
Base <- Personas %>% left_join(Ingreso,by=c("enc","folioviv","foliohog","numren"))
Base <- Base %>% left_join(Especie,by=c("enc","folioviv","foliohog","numren"))
Base <- Base %>% left_join(NuevosApoyos,by=c("enc","folioviv","foliohog","numren"))
remove(Personas,Ingreso,Especie,NuevosApoyos)
```

En segundo lugar, se deben agregar las variables que a nivel de hogar. En este caso se divide la información de autoconsumo y de estimación del alquiler de la vivienda, entre el número de integrantes del hogar (tamhog):

```
Hogar <- Hogar %>% left_join(Autoconsumo,by=c("enc","folioviv","foliohog"))
Hogar <- Hogar %>% left_join(Alquiler,by=c("enc","folioviv","foliohog"))
Hogar[is.na(Hogar)] <- 0
Hogar <- Hogar %>% mutate(across(YA001:estim_tri,~ .x/tamhog))
Base <- Base %>% left_join(Hogar,by=c("enc","folioviv","foliohog"))
```

```
Base [is.na(Base)] <- 0
remove(Hogar,Autoconsumo,Alquiler)
```

Por último, se construyen las variables, tanto de ingreso corriente como de ingreso total (incluyendo remuneraciones en especie y autoconsumo), de acuerdo con la construcción propuesta en el estudio:

A. Ingresos del trabajo

Remuneraciones de los asalariados, monetarias y en especie, claves:

- X001 Sueldos, salarios, jornal y horas extras
- X002 Comisiones, propinas y destajo
- X003 Aguinaldo, incentivos, gratificaciones, premios y bonos
- X004 Primas vacacionales y otras prestaciones en efectivo
- X005 Reparto de utilidades
- X006 Ingresos por un trabajo secundario subordinado
- Más las siguientes remuneraciones en especie:
 - YE001 Alimentos
 - YE002 Alimentos para animales domésticos
 - YE003 Bebidas no alcohólicas
 - YE004 Bebidas alcohólicas
 - YE005 Alimentos y bebidas en paquete (despensas)
 - YE006 Alimentos y bebidas consumidas fuera del hogar
 - YE007 Tabaco
 - YE008 Despensa de alimentos que otorgan organizaciones privadas o de gobierno
 - YE009 Transporte público

B. Ingreso mixto

Claves:

- X007 Ingreso de cooperativas, sociedades y cuasisociedades
- X008 Ingreso de cooperativas, sociedades y cuasisociedades por un trabajo secundario
- X009 Ingresos por negocios del hogar de tipo industrial
- X010 Ingresos por negocios del hogar de tipo comercial
- X011 Ingresos por negocios del hogar de tipo servicios
- X012 Ingresos por negocios del hogar de tipo agrícolas
- X013 Ingresos por negocios del hogar de tipo pecuario, forestal, pesca y caza
- X014 Ingresos por negocios del hogar en un trabajo secundario
- Más las siguientes claves de autoconsumo:

- YA001-YA020
- YA022-YA033
- YA035-YA038

C. Renta de la propiedad

Claves:

- X016 Alquiler de tierras y terrenos
- X017 Alquiler de casas, edificios e inmuebles
- X018 Intereses provenientes de inversiones a plazo fijo
- X019 Intereses provenientes de cuentas de ahorro
- X020 Intereses provenientes de préstamos a terceros
- X021 Intereses provenientes de acciones, bonos y cédulas
- X022 Alquiler de marcas, patentes y derechos de autor
- X023 Otros ingresos por renta de la propiedad no considerados anteriormente

D. Otros ingresos

Claves:

- X015 Ingresos de otros trabajos (monetarios y no monetarios)
- X038 Ingresos de personas menores de 12 años

E. Transferencias

Claves:

- X024 Jubilaciones o pensiones
- X027 Becas provenientes de instituciones privadas o de organismos no gubernamentales
- X028 Becas provenientes del gobierno
- X029 Regalos o donativos de organizaciones no gubernamentales
- X030 Ingresos provenientes de otros países
- X031 Beneficios de los programas Progres y Oportunidades
- X032 Beneficios del programa Procampo
- X033 Beneficios del programa Adultos mayores
- X034 Beneficios del programa Alimentario
- X035 Beneficios del programa empleo temporal
- X036 Donativos del gobierno y beneficios de otros programas sociales
- Más los beneficios de los programas del gobierno federal actual:

- P109 Sembrando vida
- P114 Programa nacional de fertilizantes
- P115 Programa de desarrollo rural

F. Percepciones de capital

Claves:

- X039 Retiro de inversiones, ahorros, tandas, cajas de ahorro, entre otros
- X040 Herencias, dotes, loterías, juegos de azar y legados
- X041 Seguros de vida
- X042 Ingresos por préstamos
- X043 Ingresos por préstamos hipotecarios
- X044 Venta de monedas, metales preciosos, joyas y obras de arte, entre otros
- X045 Venta de acciones, bonos y cédulas
- X046 Venta de marcas, patentes y derechos de autor
- X047 Venta de casas, terrenos y condominios, entre otros
- X048 Venta de maquinaria, equipos y animales
- X049 Venta de vehículos y aparatos eléctricos
- X050 Otras percepciones financieras y de capital

```
Base <- Base %>%
  mutate(rem_esp=YE001+YE002+YE003+YE004+YE005+YE006+YE007+YE008+YE009) %>%
  mutate(pres_esp=YE010+YE011+YE012+YE013+YE014+YE015+YE016+YE017+YE018+YE019+
    YE020+YE021+YE022+YE023+YE024+YE025+YE026+YE027+YE028+YE029+YE030+
    YE031+YE032+YE033+YE034+YE035+YE036+YE037+YE038+YE039+YE040) %>%
  mutate(autocon=YA001+YA002+YA003+YA004+YA005+YA006+YA007+YA008+YA009+YA010+
    YA011+YA012+YA013+YA014+YA015+YA016+YA017+YA018+YA019+YA020+YA022+
    YA023+YA024+YA025+YA026+YA027+YA028+YA029+YA030+YA031+YA032+YA033+
    YA035+YA036+YA037+YA038) %>%
  mutate(trabajo=X001+X002+X003+X004+X005+X006+rem_esp) %>%
  mutate(trabajo_c=X001+X002+X003+X004+X005+X006) %>%
  mutate(especie=rem_esp) %>%
  mutate(mixto=X007+X008+X009+X010+X011+X012+X013+X014+autocon) %>%
  mutate(mixto_c=X007+X008+X009+X010+X011+X012+X013+X014) %>%
  mutate(renta=X016+X018+X019+X020+X021+X022+X023) %>%
  mutate(inmuebles=X017) %>%
  mutate(interres=X016+X018+X019+X020) %>%
  mutate(otros_trab=X015+X038) %>%
  mutate(ing_nac=trabajo+mixto+renta+inmuebles+otros_trab) %>%
  mutate(ing_nac_c=trabajo_c+mixto_c+renta+inmuebles+otros_trab) %>%
  mutate(jubila=X024) %>%
  mutate(trans_priv=X027+X029+X030) %>%
  mutate(trans_gob=X028+X031+X032+X033+X034+X035+X036+P109+P114+P115) %>%
  mutate(otros=X037) %>%
```

```

mutate(ing_disp=ing_nac+jubila+trans_priv+trans_gob+otros) %>%
mutate(ing_dispe=ing_disp+pres_esp) %>%
mutate(excedente=estim_tri) %>%
mutate(retiros=X039) %>%
mutate(herencia=if_else(enc<=1992,X050,X040)) %>%
mutate(seguros=X041) %>%
mutate(prestamos=X042+X043) %>%
mutate(ventas=X044+X045+X046+X047+X048+X049) %>%
mutate(otras_cap=if_else(enc<=1992,0,X050)) %>%
mutate(per_cap=retiros+herencia+seguros+prestamos+ventas+otras_cap)

```

Se guarda la base generada.

```

Base <- Base %>%
  relocate(c("tamhog","tamloc","factor","ing_nac","ing_nac_c","trabajo","trabajo_c",
    "especie","mixto","mixto_c","autocon","renta","inmuebles",
    "interes","otros_trab","ing_disp","jubila","trans_priv",
    "trans_gob","otros","ing_dispe","pres_esp","excedente","per_cap",
    "retiros","herencia","seguros","prestamos","ventas","otras_cap"),
    .after=clas_emp) %>%
  arrange(enc,folioviv,foliohog,numren)

```


XI. Procedimiento de ajuste de la información de ingreso de la ENIGH

El primer paso consiste en generar una tabla con conceptos de la ENIGH equivalentes a los del Sistema de Cuentas Nacionales (hasta donde la información lo permite), para estimar las cantidades que se deben distribuir para ajustar la información por tipo de ingreso.

```
load("BasePersonas.RData")
Base %>% group_by(enc) %>%
  summarise(Personas=sum(factor),
            Ingreso_nacional=sum(ing_nac*factor),
            Trabajo=sum(trabajo*factor),
            Mixto=sum((mixto+otros_trab)*factor),
            Renta=sum((renta+inmuebles)*factor),
            Interes=sum(interres*factor),
            Ingreso_disponible=sum(ing_disp*factor),
            Transferencias=sum((jubila+trans_priv+trans_gob+herencia)*factor),
            Otros=sum(otros*factor),
            Excedente=sum(excedente*factor))
```

Se seleccionan las variables requeridas para el ajuste

```
Base <- Base %>% select(enc:otras_cap)
```

A. Remuneración de los asalariados

Se aplican las cantidades a ajustar a cada tipo de ingreso. En el caso de las remuneraciones asalariadas y el ingreso mixto su asignación no es neutra a la distribución, es decir, se estima una “elasticidad” mayor a uno; conforme aumenta el ingreso se incrementa el subreporte. Para estimar la elasticidad se han calculado ponderadores que se aplicarán a cada ingreso y que irán creciendo conforme aumente el ingreso (elasticidad >1). Se han estimado los ponderadores del ingreso del subreporte con las siguientes fórmulas:

$$(1)Factor_i = \left[\frac{Y_i}{\sum_{x=i}^n Y_i} \right]^{1.75}$$

$$(2)Ponderador_i = \left[\frac{Factor_i}{\sum_{x=i}^n Factor_i} \right]$$

donde Y son los ingresos de los asalariados de cada persona (i). Es decir, se eleva a la potencia 1,75 la proporción que representa el ingreso de la persona (i) en el total, para obtener un factor. El ponderador final que se aplica a cada ingreso es igual al factor de cada ingreso (i), entre la suma de los factores.

```
# Cantidades que se deben agregar
r1984 <- 891937131
r1989 <- 14743783692
r1992 <- 32833581691
r1994 <- 45759409652
r1996 <- 81460026482
r1998 <- 138476803471
r2000 <- 168838786579
r2002 <- 208598564216
r2004 <- 267675204592
r2005 <- 289928772149
r2006 <- 297579931563
r2008 <- 333754623072
r2010 <- 372864539512
r2012 <- 451268577196
r2014 <- 469810710600
r2016 <- 502178844890
r2018 <- 571015857856
r2020 <- 705121070833

# Se estima factores
Base <- Base %>%
  group_by(enc) %>%
  mutate(trab_p=((trabajo*factor)/sum(trabajo*factor))^1.75) %>%
  mutate(trab_suma=sum(trab_p)) %>%
  mutate(trab_factor=trab_p/trab_suma)

# Se agrega
Base <- Base %>%
  mutate(trab_ajus=ifelse(enc==1984,trabajo+((trab_factor*r1984)/factor),0)) %>%
  mutate(trab_ajus=ifelse(enc==1989,trabajo+((trab_factor*r1989)/factor),trab_ajus))
%>%
  mutate(trab_ajus=ifelse(enc==1992,trabajo+((trab_factor*r1992)/factor),trab_ajus))
%>%
  mutate(trab_ajus=ifelse(enc==1994,trabajo+((trab_factor*r1994)/factor),trab_ajus))
%>%
  mutate(trab_ajus=ifelse(enc==1996,trabajo+((trab_factor*r1996)/factor),trab_ajus))
%>%
  mutate(trab_ajus=ifelse(enc==1998,trabajo+((trab_factor*r1998)/factor),trab_ajus))
%>%
  mutate(trab_ajus=ifelse(enc==2000,trabajo+((trab_factor*r2000)/factor),trab_ajus))
%>%
  mutate(trab_ajus=ifelse(enc==2002,trabajo+((trab_factor*r2002)/factor),trab_ajus))
%>%
  mutate(trab_ajus=ifelse(enc==2004,trabajo+((trab_factor*r2004)/factor),trab_ajus))
```

```
%>%
  mutate(trab_ajus=ifelse(enc==2005,trabajo+((trab_factor*r2005)/factor),trab_ajus))
%>%
  mutate(trab_ajus=ifelse(enc==2006,trabajo+((trab_factor*r2006)/factor),trab_ajus))
%>%
  mutate(trab_ajus=ifelse(enc==2008,trabajo+((trab_factor*r2008)/factor),trab_ajus))
%>%
  mutate(trab_ajus=ifelse(enc==2010,trabajo+((trab_factor*r2010)/factor),trab_ajus))
%>%
  mutate(trab_ajus=ifelse(enc==2012,trabajo+((trab_factor*r2012)/factor),trab_ajus))
%>%
  mutate(trab_ajus=ifelse(enc==2014,trabajo+((trab_factor*r2014)/factor),trab_ajus))
%>%
  mutate(trab_ajus=ifelse(enc==2016,trabajo+((trab_factor*r2016)/factor),trab_ajus))
%>%
  mutate(trab_ajus=ifelse(enc==2018,trabajo+((trab_factor*r2018)/factor),trab_ajus))
%>%
  mutate(trab_ajus=ifelse(enc==2020,trabajo+((trab_factor*r2020)/factor),trab_ajus))
```

B. Ingreso mixto

Para el ingreso mixto se aplica el mismo procedimiento descrito para las remuneraciones asalariadas, es decir, se asume una elasticidad >1.

```
# Cantidades que se deben agregar
i1984 <- 682024708
i1989 <- 12593217149
i1992 <- 25432899129
i1994 <- 44729402277
i1996 <- 94158894140
i1998 <- 134446052792
i2000 <- 201995417009
i2002 <- 222836653694
i2004 <- 323498819713
i2005 <- 334962333978
i2006 <- 371778801528
i2008 <- 422181242019
i2010 <- 608725874034
i2012 <- 652219118482
i2014 <- 783860546737
i2016 <- 898051256220
i2018 <- 1036027311365
i2020 <- 983500166990
# Se estima factores
Base <- Base %>%
  group_by(enc) %>%
  mutate(mix_p=((mixto+otros_trab)*factor)/sum((mixto+otros_trab)*factor))^1.75 %>%
  mutate(mix_suma=sum(mix_p)) %>%
  mutate(mix_factor=mix_p/mix_suma)
# Se agrega
Base <- Base %>%
  mutate(mix_ajus=ifelse(enc==1984,mixto+otros_trab+(mix_factor*i1984)/factor,0)) %>%
  mutate(mix_ajus=ifelse(enc==1989,mixto+otros_trab+(mix_factor*i1989)/factor,mix_ajus)) %>%
  mutate(mix_ajus=ifelse(enc==1992,mixto+otros_trab+(mix_factor*i1992)/factor,mix_aju
```

```

s)) %>%
  mutate(mix_ajus=ifelse(enc==1994,mixto+otros_trab+(mix_factor*i1994)/factor,mix_aju
s)) %>%
  mutate(mix_ajus=ifelse(enc==1996,mixto+otros_trab+(mix_factor*i1996)/factor,mix_aju
s)) %>%
  mutate(mix_ajus=ifelse(enc==1998,mixto+otros_trab+(mix_factor*i1998)/factor,mix_aju
s)) %>%
  mutate(mix_ajus=ifelse(enc==2000,mixto+otros_trab+(mix_factor*i2000)/factor,mix_aju
s)) %>%
  mutate(mix_ajus=ifelse(enc==2002,mixto+otros_trab+(mix_factor*i2002)/factor,mix_aju
s)) %>%
  mutate(mix_ajus=ifelse(enc==2004,mixto+otros_trab+(mix_factor*i2004)/factor,mix_aju
s)) %>%
  mutate(mix_ajus=ifelse(enc==2005,mixto+otros_trab+(mix_factor*i2005)/factor,mix_aju
s)) %>%
  mutate(mix_ajus=ifelse(enc==2006,mixto+otros_trab+(mix_factor*i2006)/factor,mix_aju
s)) %>%
  mutate(mix_ajus=ifelse(enc==2008,mixto+otros_trab+(mix_factor*i2008)/factor,mix_aju
s)) %>%
  mutate(mix_ajus=ifelse(enc==2010,mixto+otros_trab+(mix_factor*i2010)/factor,mix_aju
s)) %>%
  mutate(mix_ajus=ifelse(enc==2012,mixto+otros_trab+(mix_factor*i2012)/factor,mix_aju
s)) %>%
  mutate(mix_ajus=ifelse(enc==2014,mixto+otros_trab+(mix_factor*i2014)/factor,mix_aju
s)) %>%
  mutate(mix_ajus=ifelse(enc==2016,mixto+otros_trab+(mix_factor*i2016)/factor,mix_aju
s)) %>%
  mutate(mix_ajus=ifelse(enc==2018,mixto+otros_trab+(mix_factor*i2018)/factor,mix_aju
s)) %>%
  mutate(mix_ajus=ifelse(enc==2020,mixto+otros_trab+(mix_factor*i2020)/factor,mix_aju
s))

```

C. Renta de la propiedad

En la renta de la propiedad y las transferencias se distribuyen entre las personas que declararon tener estos ingresos, es decir, en estos casos se asume, de manera conservadora (principalmente en el caso de la renta de la propiedad), una elasticidad igual a uno, proporcional al ingreso.

```

# Cantidades que se deben agregar
p1984 <- 1312160922
p1989 <- 25233905513
p1992 <- 38789238183
p1994 <- 79560779487
p1996 <- 150071748550
p1998 <- 225179584914
p2000 <- 308405000936
p2002 <- 348994465894
p2004 <- 433576140981
p2005 <- 480635201669
p2006 <- 539343051408
p2008 <- 631242076643
p2010 <- 663039741160
p2012 <- 765239721688
p2014 <- 868749869585
p2016 <- 955891613248

```

```

p2018 <- 1092576768432
p2020 <- 1083524242759
# Se estima factores
Base <- Base %>%
  group_by(enc) %>%
  mutate(renta_factor=((renta+inmuebles)*factor/sum((renta+inmuebles)*factor)))
# Se agrega
Base <- Base %>%
  mutate(renta_ajus=ifelse(enc==1984,renta+inmuebles+(renta_factor*p1984)/factor,0))
%>%
  mutate(renta_ajus=ifelse(enc==1989,renta+inmuebles+(renta_factor*p1989)/factor,rent
a_ajus)) %>%
  mutate(renta_ajus=ifelse(enc==1992,renta+inmuebles+(renta_factor*p1992)/factor,rent
a_ajus)) %>%
  mutate(renta_ajus=ifelse(enc==1994,renta+inmuebles+(renta_factor*p1994)/factor,rent
a_ajus)) %>%
  mutate(renta_ajus=ifelse(enc==1996,renta+inmuebles+(renta_factor*p1996)/factor,rent
a_ajus)) %>%
  mutate(renta_ajus=ifelse(enc==1998,renta+inmuebles+(renta_factor*p1998)/factor,rent
a_ajus)) %>%
  mutate(renta_ajus=ifelse(enc==2000,renta+inmuebles+(renta_factor*p2000)/factor,rent
a_ajus)) %>%
  mutate(renta_ajus=ifelse(enc==2002,renta+inmuebles+(renta_factor*p2002)/factor,rent
a_ajus)) %>%
  mutate(renta_ajus=ifelse(enc==2004,renta+inmuebles+(renta_factor*p2004)/factor,rent
a_ajus)) %>%
  mutate(renta_ajus=ifelse(enc==2005,renta+inmuebles+(renta_factor*p2005)/factor,rent
a_ajus)) %>%
  mutate(renta_ajus=ifelse(enc==2006,renta+inmuebles+(renta_factor*p2006)/factor,rent
a_ajus)) %>%
  mutate(renta_ajus=ifelse(enc==2008,renta+inmuebles+(renta_factor*p2008)/factor,rent
a_ajus)) %>%
  mutate(renta_ajus=ifelse(enc==2010,renta+inmuebles+(renta_factor*p2010)/factor,rent
a_ajus)) %>%
  mutate(renta_ajus=ifelse(enc==2012,renta+inmuebles+(renta_factor*p2012)/factor,rent
a_ajus)) %>%
  mutate(renta_ajus=ifelse(enc==2014,renta+inmuebles+(renta_factor*p2014)/factor,rent
a_ajus)) %>%
  mutate(renta_ajus=ifelse(enc==2016,renta+inmuebles+(renta_factor*p2016)/factor,rent
a_ajus)) %>%
  mutate(renta_ajus=ifelse(enc==2018,renta+inmuebles+(renta_factor*p2018)/factor,rent
a_ajus)) %>%
  mutate(renta_ajus=ifelse(enc==2020,renta+inmuebles+(renta_factor*p2020)/factor,rent
a_ajus))

```

Además, se ajustan los intereses, en virtud de que serán necesarios al momento de estimar el impuesto sobre la renta.

```

# Cantidades que se deben agregar
s1984 <- 109884829
s1989 <- 1481268140
s1992 <- 11744443684
s1994 <- 5338295480
s1996 <- 17114539723
s1998 <- 11691977162
s2000 <- 10458837183

```

```

s2002 <- 6042118933
s2004 <- 10425155143
s2005 <- 21532227531
s2006 <- 26810042535
s2008 <- 28721897679
s2010 <- 21518814311
s2012 <- 29179386449
s2014 <- 31118653893
s2016 <- 43919729894
s2018 <- 64726597330
s2020 <- 68921571053
# Se estima factores
Base <- Base %>%
  group_by(enc) %>%
  mutate(interés_factor=(interés*factor)/sum(interés*factor))
# Se agrega
Base <- Base %>%
  mutate(interés_ajus=ifelse(enc==1984,interés+(interés_factor*s1984)/factor,0)) %>%
  mutate(interés_ajus=ifelse(enc==1989,interés+(interés_factor*s1989)/factor,interés_ajus)) %>%
  mutate(interés_ajus=ifelse(enc==1992,interés+(interés_factor*s1992)/factor,interés_ajus)) %>%
  mutate(interés_ajus=ifelse(enc==1994,interés+(interés_factor*s1994)/factor,interés_ajus)) %>%
  mutate(interés_ajus=ifelse(enc==1996,interés+(interés_factor*s1996)/factor,interés_ajus)) %>%
  mutate(interés_ajus=ifelse(enc==1998,interés+(interés_factor*s1998)/factor,interés_ajus)) %>%
  mutate(interés_ajus=ifelse(enc==2000,interés+(interés_factor*s2000)/factor,interés_ajus)) %>%
  mutate(interés_ajus=ifelse(enc==2002,interés+(interés_factor*s2002)/factor,interés_ajus)) %>%
  mutate(interés_ajus=ifelse(enc==2004,interés+(interés_factor*s2004)/factor,interés_ajus)) %>%
  mutate(interés_ajus=ifelse(enc==2005,interés+(interés_factor*s2005)/factor,interés_ajus)) %>%
  mutate(interés_ajus=ifelse(enc==2006,interés+(interés_factor*s2006)/factor,interés_ajus)) %>%
  mutate(interés_ajus=ifelse(enc==2008,interés+(interés_factor*s2008)/factor,interés_ajus)) %>%
  mutate(interés_ajus=ifelse(enc==2010,interés+(interés_factor*s2010)/factor,interés_ajus)) %>%
  mutate(interés_ajus=ifelse(enc==2012,interés+(interés_factor*s2012)/factor,interés_ajus)) %>%
  mutate(interés_ajus=ifelse(enc==2014,interés+(interés_factor*s2014)/factor,interés_ajus)) %>%
  mutate(interés_ajus=ifelse(enc==2016,interés+(interés_factor*s2016)/factor,interés_ajus)) %>%
  mutate(interés_ajus=ifelse(enc==2018,interés+(interés_factor*s2018)/factor,interés_ajus)) %>%
  mutate(interés_ajus=ifelse(enc==2020,interés+(interés_factor*s2020)/factor,interés_ajus))

```

Transferencias


```

# Cantidades que se deben agregar
t1984 <- 9311963
t1989 <- 2408866390
t1992 <- 7767737033
t1994 <- 6620607604
t1996 <- 13523879564
t1998 <- 26415828177
t2000 <- 27478492070
t2002 <- 41839123561
t2004 <- 103457841998
t2005 <- 118425945002
t2006 <- 127701177042
t2008 <- 163167393072
t2010 <- 183207921513
t2012 <- 274937251449
t2014 <- 365477959938
t2016 <- 419323937757
t2018 <- 534710209251
t2020 <- 667977336500

# Se estima factores
Base <- Base %>%
  group_by(enc) %>%
  mutate(trans=jubila+trans_priv+trans_gob+herencia) %>%
  mutate(trans_factor=(trans*factor)/(sum(trans*factor)))

# Se agrega
Base <- Base %>%
  mutate(trans_ajus=ifelse(enc==1984,trans+(trans_factor*t1984)/factor,trans)) %>%
  mutate(trans_ajus=ifelse(enc==1989,trans+(trans_factor*t1989)/factor,trans_ajus)) %
>%
  mutate(trans_ajus=ifelse(enc==1992,trans+(trans_factor*t1992)/factor,trans_ajus)) %
>%
  mutate(trans_ajus=ifelse(enc==1994,trans+(trans_factor*t1994)/factor,trans_ajus)) %
>%
  mutate(trans_ajus=ifelse(enc==1996,trans+(trans_factor*t1996)/factor,trans_ajus)) %
>%
  mutate(trans_ajus=ifelse(enc==1998,trans+(trans_factor*t1998)/factor,trans_ajus)) %
>%
  mutate(trans_ajus=ifelse(enc==2000,trans+(trans_factor*t2000)/factor,trans_ajus)) %
>%
  mutate(trans_ajus=ifelse(enc==2002,trans+(trans_factor*t2002)/factor,trans_ajus)) %
>%
  mutate(trans_ajus=ifelse(enc==2004,trans+(trans_factor*t2004)/factor,trans_ajus)) %
>%
  mutate(trans_ajus=ifelse(enc==2005,trans+(trans_factor*t2005)/factor,trans_ajus)) %
>%
  mutate(trans_ajus=ifelse(enc==2006,trans+(trans_factor*t2006)/factor,trans_ajus)) %
>%
  mutate(trans_ajus=ifelse(enc==2008,trans+(trans_factor*t2008)/factor,trans_ajus)) %
>%
  mutate(trans_ajus=ifelse(enc==2010,trans+(trans_factor*t2010)/factor,trans_ajus)) %
>%
  mutate(trans_ajus=ifelse(enc==2012,trans+(trans_factor*t2012)/factor,trans_ajus)) %
>%
  mutate(trans_ajus=ifelse(enc==2014,trans+(trans_factor*t2014)/factor,trans_ajus)) %
>%

```

```
mutate(trans_ajus=ifelse(enc==2016,trans+(trans_factor*t2016)/factor,trans_ajus)) %
>%
mutate(trans_ajus=ifelse(enc==2018,trans+(trans_factor*t2018)/factor,trans_ajus)) %
>%
mutate(trans_ajus=ifelse(enc==2020,trans+(trans_factor*t2020)/factor,trans_ajus))
```

Se genera el cuadro de control

```
Base %>% group_by(enc) %>%
  summarise(trab_ajus=sum(trab_ajus*factor),
            mix_ajus=sum(mix_ajus*factor),
            renta_ajus=sum(renta_ajus*factor),
            excedente=sum(excedente*factor),
            interes_ajus=sum(interres_ajus*factor),
            trans_ajus=sum(trans_ajus*factor))
```

Cuadro 23
Ingreso disponible ajustado: cuadro de control

enc	trab_ajus	mix_ajus	renta_ajus	excedente	interes_ajus	trans_ajus
1984	2 111 191 500	1 313 398 865	1 383 192 276	279 421 159	149 284 441	250 176 687
1989	40 532 565 250	25 649 917 749	26 762 655 595	7 819 081 183	2 507 472 804	5 975 409 969
1992	92 505 313 250	53 781 698 982	40 267 056 565	20 612 681 210	12 333 869 761	15 313 085 765
1994	127 490 678 250	76 069 701 901	81 476 635 591	27 584 020 507	5 916 519 750	15 775 976 500
1996	186 247 438 000	140 394 776 345	153 503 235 905	32 577 292 500	18 191 333 500	31 606 063 250
1998	301 403 126 250	213 086 503 067	230 824 381 581	44 561 992 602	13 821 766 500	52 237 942 000
2000	437 863 619 250	309 132 941 435	315 299 355 284	71 834 498 032	11 503 913 750	74 504 497 250
2002	518 412 260 750	342 407 306 866	358 137 614 481	75 819 974 654	6 908 263 750	93 827 599 251
2004	637 181 468 500	447 562 446 000	448 672 148 744	89 179 966 006	12 012 117 500	170 482 895 001
2005	681 301 640 000	487 592 880 250	495 410 626 724	92 403 070 776	23 810 323 751	184 322 901 751
2006	741 772 396 000	533 472 519 500	553 348 774 215	104 171 370 035	28 606 020 251	213 334 737 001
2008	858 633 236 500	623 051 335 500	648 590 391 757	112 245 943 993	32 936 330 251	261 443 073 751
2010	932 827 153 750	764 306 463 000	679 598 210 605	136 635 938 146	25 464 719 251	298 674 223 001
2012	1 082 473 054 750	860 808 748 750	783 427 241 517	145 006 771 233	33 245 328 750	427 040 387 251
2014	1 204 559 290 750	954 049 386 500	883 414 981 703	158 263 131 547	35 259 771 751	512 087 897 000
2016	1 345 617 122 750	1 179 255 240 500	974 760 695 593	175 588 713 657	48 279 870 501	604 065 228 500
2018	1 543 117 150 500	1 312 644 071 750	1 113 578 789 226	195 882 657 274	71 364 974 500	740 336 574 001
2020	1 670 965 935 000	1 249 519 021 750	1 103 782 644 419	234 819 318 581	74 851 098 500	929 962 881 001

Fuente: Elaboración propia.

D. Imputación de los impuestos

La estimación de los impuestos al ingreso se lleva a cabo con las cifras ajustadas y con las tablas de la Ley del Impuesto sobre la Renta, para los diversos años en México. Se debe considerar esta estimación como una aproximación. La forma de calcular los impuestos sobre la renta en México es compleja y ha cambiado en el transcurso de los años. De la misma manera, existe la posibilidad de deducir gastos del pago de impuestos y, lamentablemente, hay evasión fiscal.

El procedimiento que se ha seguido, en lo general, es el siguiente. Se aplican las tablas del ISR a las cifras ajustadas, bajo el supuesto de que todos pagan sus impuestos. El resultado obtenido se compara con la cifra registrada en el Sistema de Cuentas Nacionales (rubro D.51 Impuestos sobre ingreso, II.2 Cuenta de distribución secundaria, del sector Hogares, S.14). La diferencia se resta al cálculo del impuesto, para obtener una cifra equivalente a la contabilidad nacional.

```
# Se agrega la tabla ISR
tabla_isr <- read.csv("Bases/TablaISR.csv")
tabla_isr <- tabla_isr %>% mutate(enc=as.numeric(enc))
Base <- Base %>% left_join(tabla_isr,by="enc")
remove(tabla_isr)
```

E. Estimación del ingreso acumulable

En el caso de las remuneraciones asalariadas, se ha disminuido su monto (multiplicado por el 85%), para deducir los ingresos del trabajo no gravados, y al ingreso mixto se le ha restado el autoconsumo. En virtud de que no toda la renta de la propiedad se acumula al ingreso, para efectos del pago de impuestos (los dividendos han tenido un procedimiento diferente en los diversos años, por ejemplo), se han agregado solo los intereses y las rentas.

```
Base <- Base %>%
  mutate(grupo_1=if_else(ocupa==1&(convenio==2|convenio==3|convenio==4),1,2)) %>%
  mutate(grupo_2=if_else(ocupa==3,1,2))
Base <- Base %>%
  mutate(acum_1=if_else(grupo_1==1&trab_ajus>0,trab_ajus*0.85,0)) %>%
  mutate(acum_2=if_else(grupo_2==1&mix_ajus-autocon>0,mix_ajus-autocon,0)) %>%
  mutate(acum_3=if_else(interres_ajus>0,interres_ajus,0)) %>%
  mutate(acum=(acum_1+acum_2+acum_3)*4)
```

Se imputa el impuesto sobre la renta:

```
# 1984 (28 rangos)
Base <- Base %>%
  mutate(isr_1=if_else(enc==1984&acum>=lim_1&acum<lim_2,cuota_1+(acum-lim_1)*excede_1,0)) %>%
  mutate(isr_1=if_else(enc==1984&acum>=lim_2&acum<lim_3,cuota_2+(acum-lim_2)*excede_2,isr_1)) %>%
  mutate(isr_1=if_else(enc==1984&acum>=lim_3&acum<lim_4,cuota_3+(acum-lim_3)*excede_3,isr_1)) %>%
  mutate(isr_1=if_else(enc==1984&acum>=lim_4&acum<lim_5,cuota_4+(acum-lim_4)*excede_4,isr_1)) %>%
  mutate(isr_1=if_else(enc==1984&acum>=lim_5&acum<lim_6,cuota_5+(acum-lim_5)*excede_5,isr_1)) %>%
  mutate(isr_1=if_else(enc==1984&acum>=lim_6&acum<lim_7,cuota_6+(acum-lim_6)*excede_6,isr_1)) %>%
  mutate(isr_1=if_else(enc==1984&acum>=lim_7&acum<lim_8,cuota_7+(acum-lim_7)*excede_7,isr_1)) %>%
  mutate(isr_1=if_else(enc==1984&acum>=lim_8&acum<lim_9,cuota_8+(acum-lim_8)*excede_8,isr_1)) %>%
  mutate(isr_1=if_else(enc==1984&acum>=lim_9&acum<lim_10,cuota_9+(acum-lim_9)*excede_9,isr_1)) %>%
  mutate(isr_1=if_else(enc==1984&acum>=lim_10&acum<lim_11,cuota_10+(acum-lim_10)*excede_10,isr_1)) %>%
  mutate(isr_1=if_else(enc==1984&acum>=lim_11&acum<lim_12,cuota_11+(acum-lim_11)*excede_11,isr_1)) %>%
  mutate(isr_1=if_else(enc==1984&acum>=lim_12&acum<lim_13,cuota_12+(acum-lim_12)*excede_12,isr_1)) %>%
  mutate(isr_1=if_else(enc==1984&acum>=lim_13&acum<lim_14,cuota_13+(acum-lim_13)*excede_13,isr_1)) %>%
  mutate(isr_1=if_else(enc==1984&acum>=lim_14&acum<lim_15,cuota_14+(acum-lim_14)*excede_14,isr_1)) %>%
```

```

    mutate(isr_1=if_else(enc==1984&acum>=lim_15&acum<lim_16,cuota_15+(acum-lim_15)*excede_15,isr_1)) %>%
    mutate(isr_1=if_else(enc==1984&acum>=lim_16&acum<lim_17,cuota_16+(acum-lim_16)*excede_16,isr_1)) %>%
    mutate(isr_1=if_else(enc==1984&acum>=lim_17&acum<lim_18,cuota_17+(acum-lim_17)*excede_17,isr_1)) %>%
    mutate(isr_1=if_else(enc==1984&acum>=lim_18&acum<lim_19,cuota_18+(acum-lim_18)*excede_18,isr_1)) %>%
    mutate(isr_1=if_else(enc==1984&acum>=lim_19&acum<lim_20,cuota_19+(acum-lim_19)*excede_19,isr_1)) %>%
    mutate(isr_1=if_else(enc==1984&acum>=lim_20&acum<lim_21,cuota_20+(acum-lim_20)*excede_20,isr_1)) %>%
    mutate(isr_1=if_else(enc==1984&acum>=lim_21&acum<lim_22,cuota_21+(acum-lim_21)*excede_21,isr_1)) %>%
    mutate(isr_1=if_else(enc==1984&acum>=lim_22&acum<lim_23,cuota_22+(acum-lim_22)*excede_22,isr_1)) %>%
    mutate(isr_1=if_else(enc==1984&acum>=lim_23&acum<lim_24,cuota_23+(acum-lim_23)*excede_23,isr_1)) %>%
    mutate(isr_1=if_else(enc==1984&acum>=lim_24&acum<lim_25,cuota_24+(acum-lim_24)*excede_24,isr_1)) %>%
    mutate(isr_1=if_else(enc==1984&acum>=lim_25&acum<lim_26,cuota_25+(acum-lim_25)*excede_25,isr_1)) %>%
    mutate(isr_1=if_else(enc==1984&acum>=lim_26&acum<lim_27,cuota_26+(acum-lim_26)*excede_26,isr_1)) %>%
    mutate(isr_1=if_else(enc==1984&acum>=lim_27&acum<lim_28,cuota_27+(acum-lim_27)*excede_27,isr_1)) %>%
    mutate(isr_1=if_else(enc==1984&acum>=lim_28,cuota_28+(acum-lim_28)*excede_28,isr_1))
  )
# 1989 (6 rangos)
Base <- Base %>%
  mutate(isr_1=if_else(enc==1989&acum>=lim_1&acum<lim_2,cuota_1+(acum-lim_1)*excede_1,isr_1)) %>%
  mutate(isr_1=if_else(enc==1989&acum>=lim_2&acum<lim_3,cuota_2+(acum-lim_2)*excede_2,isr_1)) %>%
  mutate(isr_1=if_else(enc==1989&acum>=lim_3&acum<lim_4,cuota_3+(acum-lim_3)*excede_3,isr_1)) %>%
  mutate(isr_1=if_else(enc==1989&acum>=lim_4&acum<lim_5,cuota_4+(acum-lim_4)*excede_4,isr_1)) %>%
  mutate(isr_1=if_else(enc==1989&acum>=lim_5&acum<lim_6,cuota_5+(acum-lim_5)*excede_5,isr_1)) %>%
  mutate(isr_1=if_else(enc==1989&acum>=lim_6,cuota_6+(acum-lim_6)*excede_6,isr_1))
# 1992 a 1998 (10 rangos)
Base <- Base %>%
  mutate(isr_1=if_else((enc>=1992&enc<=1998)&acum>=lim_1&acum<lim_2,cuota_1+(acum-lim_1)*excede_1,isr_1)) %>%
  mutate(isr_1=if_else((enc>=1992&enc<=1998)&acum>=lim_2&acum<lim_3,cuota_2+(acum-lim_2)*excede_2,isr_1)) %>%
  mutate(isr_1=if_else((enc>=1992&enc<=1998)&acum>=lim_3&acum<lim_4,cuota_3+(acum-lim_3)*excede_3,isr_1)) %>%
  mutate(isr_1=if_else((enc>=1992&enc<=1998)&acum>=lim_4&acum<lim_5,cuota_4+(acum-lim_4)*excede_4,isr_1)) %>%
  mutate(isr_1=if_else((enc>=1992&enc<=1998)&acum>=lim_5&acum<lim_6,cuota_5+(acum-lim_5)*excede_5,isr_1)) %>%
  mutate(isr_1=if_else((enc>=1992&enc<=1998)&acum>=lim_6&acum<lim_7,cuota_6+(acum-lim_6)*excede_6,isr_1)) %>%

```

```

mutate(isr_1=if_else((enc>=1992&enc<=1998)&acum>=lim_7&acum<lim_8,cuota_7+(acum-lim_7)*excede_7,isr_1)) %>%
mutate(isr_1=if_else((enc>=1992&enc<=1998)&acum>=lim_8&acum<lim_9,cuota_8+(acum-lim_8)*excede_8,isr_1)) %>%
mutate(isr_1=if_else((enc>=1992&enc<=1998)&acum>=lim_9&acum<lim_10,cuota_9+(acum-lim_9)*excede_9,isr_1)) %>%
mutate(isr_1=if_else((enc>=1992&enc<=1998)&acum>=lim_10,cuota_10+(acum-lim_10)*excede_10,isr_1))
# 2000 (13 rangos)
Base <- Base %>%
mutate(isr_1=if_else(enc==2000&acum>=lim_1&acum<lim_2,cuota_1+(acum-lim_1)*excede_1,isr_1)) %>%
mutate(isr_1=if_else(enc==2000&acum>=lim_2&acum<lim_3,cuota_2+(acum-lim_2)*excede_2,isr_1)) %>%
mutate(isr_1=if_else(enc==2000&acum>=lim_3&acum<lim_4,cuota_3+(acum-lim_3)*excede_3,isr_1)) %>%
mutate(isr_1=if_else(enc==2000&acum>=lim_4&acum<lim_5,cuota_4+(acum-lim_4)*excede_4,isr_1)) %>%
mutate(isr_1=if_else(enc==2000&acum>=lim_5&acum<lim_6,cuota_5+(acum-lim_5)*excede_5,isr_1)) %>%
mutate(isr_1=if_else(enc==2000&acum>=lim_6&acum<lim_7,cuota_6+(acum-lim_6)*excede_6,isr_1)) %>%
mutate(isr_1=if_else(enc==2000&acum>=lim_7&acum<lim_8,cuota_7+(acum-lim_7)*excede_7,isr_1)) %>%
mutate(isr_1=if_else(enc==2000&acum>=lim_8&acum<lim_9,cuota_8+(acum-lim_8)*excede_8,isr_1)) %>%
mutate(isr_1=if_else(enc==2000&acum>=lim_9&acum<lim_10,cuota_9+(acum-lim_9)*excede_9,isr_1)) %>%
mutate(isr_1=if_else(enc==2000&acum>=lim_10&acum<lim_11,cuota_10+(acum-lim_10)*excede_10,isr_1)) %>%
mutate(isr_1=if_else(enc==2000&acum>=lim_11&acum<lim_12,cuota_11+(acum-lim_11)*excede_11,isr_1)) %>%
mutate(isr_1=if_else(enc==2000&acum>=lim_12&acum<lim_13,cuota_12+(acum-lim_12)*excede_12,isr_1)) %>%
mutate(isr_1=if_else(enc==2000&acum>=lim_13,cuota_13+(acum-lim_13)*excede_13,isr_1))
# 2002 (9 rangos)
Base <- Base %>%
mutate(isr_1=if_else(enc==2002&acum>=lim_1&acum<lim_2,cuota_1+(acum-lim_1)*excede_1,isr_1)) %>%
mutate(isr_1=if_else(enc==2002&acum>=lim_2&acum<lim_3,cuota_2+(acum-lim_2)*excede_2,isr_1)) %>%
mutate(isr_1=if_else(enc==2002&acum>=lim_3&acum<lim_4,cuota_3+(acum-lim_3)*excede_3,isr_1)) %>%
mutate(isr_1=if_else(enc==2002&acum>=lim_4&acum<lim_5,cuota_4+(acum-lim_4)*excede_4,isr_1)) %>%
mutate(isr_1=if_else(enc==2002&acum>=lim_5&acum<lim_6,cuota_5+(acum-lim_5)*excede_5,isr_1)) %>%
mutate(isr_1=if_else(enc==2002&acum>=lim_6&acum<lim_7,cuota_6+(acum-lim_6)*excede_6,isr_1)) %>%
mutate(isr_1=if_else(enc==2002&acum>=lim_7&acum<lim_8,cuota_7+(acum-lim_7)*excede_7,isr_1)) %>%
mutate(isr_1=if_else(enc==2002&acum>=lim_8&acum<lim_9,cuota_8+(acum-lim_8)*excede_8,isr_1)) %>%
mutate(isr_1=if_else(enc==2002&acum>=lim_9,cuota_9+(acum-lim_9)*excede_9,isr_1))
# 2004 al 2012 (8 rangos)

```

```

Base <- Base %>%
  mutate(isr_1=if_else((enc>=2004&enc<=2012)&acum>=lim_1&acum<lim_2,cuota_1+(acum-lim_1)*excede_1,isr_1)) %>%
  mutate(isr_1=if_else((enc>=2004&enc<=2012)&acum>=lim_2&acum<lim_3,cuota_2+(acum-lim_2)*excede_2,isr_1)) %>%
  mutate(isr_1=if_else((enc>=2004&enc<=2012)&acum>=lim_3&acum<lim_4,cuota_3+(acum-lim_3)*excede_3,isr_1)) %>%
  mutate(isr_1=if_else((enc>=2004&enc<=2012)&acum>=lim_4&acum<lim_5,cuota_4+(acum-lim_4)*excede_4,isr_1)) %>%
  mutate(isr_1=if_else((enc>=2004&enc<=2012)&acum>=lim_5&acum<lim_6,cuota_5+(acum-lim_5)*excede_5,isr_1)) %>%
  mutate(isr_1=if_else((enc>=2004&enc<=2012)&acum>=lim_6&acum<lim_7,cuota_6+(acum-lim_6)*excede_6,isr_1)) %>%
  mutate(isr_1=if_else((enc>=2004&enc<=2012)&acum>=lim_7&acum<lim_8,cuota_7+(acum-lim_7)*excede_7,isr_1)) %>%
  mutate(isr_1=if_else((enc>=2004&enc<=2012)&acum>=lim_8,cuota_8+(acum-lim_8)*excede_8,isr_1))
# 2014 al 2020 (11 rangos)
Base <- Base %>%
  mutate(isr_1=if_else((enc>=2014&enc<=2020)&acum>=lim_1&acum<lim_2,cuota_1+(acum-lim_1)*excede_1,isr_1)) %>%
  mutate(isr_1=if_else((enc>=2014&enc<=2020)&acum>=lim_2&acum<lim_3,cuota_2+(acum-lim_2)*excede_2,isr_1)) %>%
  mutate(isr_1=if_else((enc>=2014&enc<=2020)&acum>=lim_3&acum<lim_4,cuota_3+(acum-lim_3)*excede_3,isr_1)) %>%
  mutate(isr_1=if_else((enc>=2014&enc<=2020)&acum>=lim_4&acum<lim_5,cuota_4+(acum-lim_4)*excede_4,isr_1)) %>%
  mutate(isr_1=if_else((enc>=2014&enc<=2020)&acum>=lim_5&acum<lim_6,cuota_5+(acum-lim_5)*excede_5,isr_1)) %>%
  mutate(isr_1=if_else((enc>=2014&enc<=2020)&acum>=lim_6&acum<lim_7,cuota_6+(acum-lim_6)*excede_6,isr_1)) %>%
  mutate(isr_1=if_else((enc>=2014&enc<=2020)&acum>=lim_7&acum<lim_8,cuota_7+(acum-lim_7)*excede_7,isr_1)) %>%
  mutate(isr_1=if_else((enc>=2014&enc<=2020)&acum>=lim_8&acum<lim_9,cuota_8+(acum-lim_8)*excede_8,isr_1)) %>%
  mutate(isr_1=if_else((enc>=2014&enc<=2020)&acum>=lim_9&acum<lim_10,cuota_9+(acum-lim_9)*excede_9,isr_1)) %>%
  mutate(isr_1=if_else((enc>=2014&enc<=2020)&acum>=lim_10&acum<lim_11,cuota_9+(acum-lim_10)*excede_10,isr_1)) %>%
  mutate(isr_1=if_else((enc>=2014&enc<=2020)&acum>=lim_11,cuota_11+(acum-lim_11)*excede_11,isr_1))

```

F. Estimación de la cantidad a ajustar

Al aplicar las tablas del impuesto sobre la renta a los ingresos acumulables de la encuesta, se obtiene una cantidad de pago de impuestos mayor a la registrada en cuentas nacionales. La diferencia se debe a la informalidad y evasión de impuestos. La cantidad extra se resta a los impuestos imputados, con un procedimiento similar al llevado a cabo al momento de ajustar la información de ingresos.

```

# Cantidad para ajustar
Base %>% filter(isr_1>0) %>%
  group_by(enc) %>%
  summarise(Personas=sum(factor),
            Base=sum(acum_1*factor),

```



```

        isr_1=sum(isr_1*factor))
# Ajustamos los impuestos
i1984 <- 1660662057
i1989 <- 31724948682
i1992 <- 67052601633
i1994 <- 90669039924
i1996 <- 189602222941
i1998 <- 264145929647
i2000 <- 384075380793
i2002 <- 382032969210
i2004 <- 436017078886
i2005 <- 490214299237
i2006 <- 438661578256
i2008 <- 543570303748
i2010 <- 676933175468
i2012 <- 800303536580
i2014 <- 1129054358208
i2016 <- 1423267590387
i2018 <- 1171165457554
i2020 <- 1087561283306
# Se estima factores
Base <- Base %>%
  group_by(enc) %>%
  mutate(isr_factor=(isr_1*factor)/(sum(isr_1*factor)))
# Se agrega
Base <- Base %>%
  mutate(isr=ifelse(enc==1984,(isr_1-((isr_factor*i1984)/factor))/4,isr_1)) %>%
  mutate(isr=ifelse(enc==1989,(isr_1-((isr_factor*i1989)/factor))/4,isr_1)) %>%
  mutate(isr=ifelse(enc==1992,(isr_1-((isr_factor*i1992)/factor))/4,isr_1)) %>%
  mutate(isr=ifelse(enc==1994,(isr_1-((isr_factor*i1994)/factor))/4,isr_1)) %>%
  mutate(isr=ifelse(enc==1996,(isr_1-((isr_factor*i1996)/factor))/4,isr_1)) %>%
  mutate(isr=ifelse(enc==1998,(isr_1-((isr_factor*i1998)/factor))/4,isr_1)) %>%
  mutate(isr=ifelse(enc==2000,(isr_1-((isr_factor*i2000)/factor))/4,isr_1)) %>%
  mutate(isr=ifelse(enc==2002,(isr_1-((isr_factor*i2002)/factor))/4,isr_1)) %>%
  mutate(isr=ifelse(enc==2004,(isr_1-((isr_factor*i2004)/factor))/4,isr_1)) %>%
  mutate(isr=ifelse(enc==2005,(isr_1-((isr_factor*i2005)/factor))/4,isr_1)) %>%
  mutate(isr=ifelse(enc==2006,(isr_1-((isr_factor*i2006)/factor))/4,isr_1)) %>%
  mutate(isr=ifelse(enc==2008,(isr_1-((isr_factor*i2008)/factor))/4,isr_1)) %>%
  mutate(isr=ifelse(enc==2010,(isr_1-((isr_factor*i2010)/factor))/4,isr_1)) %>%
  mutate(isr=ifelse(enc==2012,(isr_1-((isr_factor*i2012)/factor))/4,isr_1)) %>%
  mutate(isr=ifelse(enc==2014,(isr_1-((isr_factor*i2014)/factor))/4,isr_1)) %>%
  mutate(isr=ifelse(enc==2016,(isr_1-((isr_factor*i2016)/factor))/4,isr_1)) %>%
  mutate(isr=ifelse(enc==2018,(isr_1-((isr_factor*i2018)/factor))/4,isr_1)) %>%
  mutate(isr=ifelse(enc==2020,(isr_1-((isr_factor*i2020)/factor))/4,isr_1))

```

Se genera el cuadro de control

```

# Cuadro de control
Base %>%
  group_by(enc) %>%
  summarise(Personas=sum(factor),
            Base=sum(acum*factor),
            isr_1=sum(isr_1*factor),
            isr=sum(isr*factor)) %>%
  gt() %>%
  fmt_number(c(2:5),decimals = 0) %>%

```



```
tab_style(cell_text(align = "right"),
  locations = cells_body(columns = everything(), rows = everything())) %>%
tab_style(cell_text(align = "center"),
  locations = cells_column_labels(columns = everything()))
```

Cuadro 24
Estimación de los impuestos: cuadro de control

enc	Personas	Base	isr_1	isr
1984	75 972 257	10 532 683 519	2 318 341 851	164 419 949
1989	78 739 029	202 090 392 310	44 177 109 794	3 113 040 278
1992	86 900 545	491 618 403 154	93 012 200 242	6 489 899 652
1994	89 773 052	636 858 750 377	123 540 520 924	8 217 870 250
1996	92 695 009	1 122 409 061 132	235 959 984 941	11 589 440 500
1998	95 261 153	1 673 481 375 579	335 034 754 647	17 722 206 250
2000	98 310 615	2 407 476 016 460	490 898 961 793	26 705 895 250
2002	100 854 320	2 779 561 863 044	537 016 692 210	38 745 930 750
2004	102 988 791	3 410 896 681 859	664 264 730 886	57 061 913 000
2005	103 934 163	3 796 379 925 766	721 219 998 237	57 751 424 750
2006	108 578 347	4 060 577 776 326	705 785 829 256	66 781 062 750
2008	111 611 544	4 470 725 073 896	876 498 883 748	83 232 145 000
2010	114 559 931	5 034 273 066 653	1 052 618 350 468	93 921 293 750
2012	117 284 429	5 798 337 015 146	1 264 651 187 580	116 086 912 750
2014	119 906 312	6 731 911 196 017	1 687 882 764 208	139 707 101 500
2016	122 643 890	7 962 508 133 731	2 037 908 145 387	153 660 138 750
2018	125 091 790	8 746 085 378 119	2 102 282 958 554	232 779 375 250
2020	126 760 856	9 014 157 746 999	2 140 181 020 306	263 154 934 250

Fuente: Elaboración propia.

G. Otros impuestos

Siguiendo el mismo procedimiento se ajustan los otros impuestos, correspondientes al rubro de rubro D.59 Otros impuestos corrientes, II.2 Cuenta de distribución secundaria, del sector Hogares, S.14. En virtud de que se trata de impuestos al activo (riqueza), se imputará su valor con base en el ingreso nacional ajustado.

```
# Calculamos variables de ingreso nacional ajustado
Base <- Base %>%
  mutate(ing_nac_ajus=trab_ajus+mix_ajus+renta_ajus)
# Cantidades a distribuir por hogar
pr1984 <- 115292757
pr1989 <- 1899344758
pr1992 <- 3640146795
pr1994 <- 4445129000
pr1996 <- 4234329000
pr1998 <- 8842178000
pr2000 <- 12331388000
pr2002 <- 18081853000
pr2004 <- 13031005000
pr2005 <- 12371415000
pr2006 <- 14357946000
pr2008 <- 19334966000
pr2010 <- 39326469000
pr2012 <- 49939694000
pr2014 <- 20071598000
pr2016 <- 15385040000
pr2018 <- 18095178000
pr2020 <- 18697964000
```

```
# Se estima factores
Base <- Base %>%
  mutate(otros_factor=(ing_nac_ajus*factor)/sum(ing_nac_ajus*factor))
# Se estima otros impuestos
Base <- Base %>%
  mutate(otros_imp=ifelse(enc==1984,((otros_factor*pr1984)/factor)/4,0)) %>%
  mutate(otros_imp=ifelse(enc==1989,((otros_factor*pr1989)/factor)/4,otros_imp)) %>%
  mutate(otros_imp=ifelse(enc==1992,((otros_factor*pr1992)/factor)/4,otros_imp)) %>%
  mutate(otros_imp=ifelse(enc==1994,((otros_factor*pr1994)/factor)/4,otros_imp)) %>%
  mutate(otros_imp=ifelse(enc==1996,((otros_factor*pr1996)/factor)/4,otros_imp)) %>%
  mutate(otros_imp=ifelse(enc==1998,((otros_factor*pr1998)/factor)/4,otros_imp)) %>%
  mutate(otros_imp=ifelse(enc==2000,((otros_factor*pr2000)/factor)/4,otros_imp)) %>%
  mutate(otros_imp=ifelse(enc==2002,((otros_factor*pr2002)/factor)/4,otros_imp)) %>%
  mutate(otros_imp=ifelse(enc==2004,((otros_factor*pr2004)/factor)/4,otros_imp)) %>%
  mutate(otros_imp=ifelse(enc==2005,((otros_factor*pr2005)/factor)/4,otros_imp)) %>%
  mutate(otros_imp=ifelse(enc==2006,((otros_factor*pr2006)/factor)/4,otros_imp)) %>%
  mutate(otros_imp=ifelse(enc==2008,((otros_factor*pr2008)/factor)/4,otros_imp)) %>%
  mutate(otros_imp=ifelse(enc==2010,((otros_factor*pr2010)/factor)/4,otros_imp)) %>%
  mutate(otros_imp=ifelse(enc==2012,((otros_factor*pr2012)/factor)/4,otros_imp)) %>%
  mutate(otros_imp=ifelse(enc==2014,((otros_factor*pr2014)/factor)/4,otros_imp)) %>%
  mutate(otros_imp=ifelse(enc==2016,((otros_factor*pr2016)/factor)/4,otros_imp)) %>%
  mutate(otros_imp=ifelse(enc==2018,((otros_factor*pr2018)/factor)/4,otros_imp)) %>%
  mutate(otros_imp=ifelse(enc==2020,((otros_factor*pr2020)/factor)/4,otros_imp))
```

Se genera el cuadro de control:

```
# Cuadro de control
Base %>% group_by(enc) %>%
  summarise(Personas=sum(factor),
            Base=sum(ing_nac_ajus*factor),
            Otros_impuestos=sum(otros_imp*factor)) %>%
  gt() %>%
  fmt_number(c(2:4),decimals = 0) %>%
  tab_style(cell_text(align = "right"),
            locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(align = "center"),
            locations = cells_column_labels(columns = everything()))
```

Cuadro 25
Estimación de otros impuestos: cuadro de control

enc	Personas	Base	Otros impuestos
1984	75 972 257	4 807 782 640	28 823 189
1989	78 739 029	92 945 138 593	474 836 190
1992	86 900 545	186 554 068 797	910 036 699
1994	89 773 052	285 037 015 742	1 111 282 250
1996	92 695 009	480 145 450 250	1 058 582 250
1998	95 261 153	745 314 010 898	2 210 544 500
2000	98 310 615	1 062 295 915 969	3 082 847 000
2002	100 854 320	1 218 957 182 096	4 520 463 250
2004	102 988 791	1 533 416 063 244	3 257 751 250
2005	103 934 163	1 664 305 146 974	3 092 853 750
2006	108 578 347	1 828 593 689 715	3 589 486 500
2008	111 611 544	2 130 274 963 757	4 833 741 500
2010	114 559 931	2 376 731 827 355	9 831 617 250
2012	117 284 429	2 726 709 045 017	12 484 923 500
2014	119 906 312	3 042 023 658 952	5 017 899 500
2016	122 643 890	3 499 633 058 842	3 846 260 000
2018	125 091 790	3 969 340 011 477	4 523 794 500
2020	126 760 856	4 024 267 601 169	4 674 491 000

Fuente: Elaboración propia.

Se calcula el ingreso disponible ajustado

```
Base <- Base %>%
  mutate(ing_disp_ajus=ing_nac_ajus+trans_ajus-isr-otros_imp+otros)
```

H. Base a nivel de personas

```
# Base a nivel de personas
Base <- Base %>%
  select(enc, folioviv, foliohog, numren, sexo, edad, educa, pea, ocupa, sector, grupo,
    convenio, gremio, clas_emp, tamhog, tamloc, factor, ing_nac, trabajo, especie,
    mixto, autocon, renta, inmuebles, interes, excedente, otros_trab,
    ing_nac_ajus, trab_ajus, mix_ajus, renta_ajus, interes_ajus, ing_disp, trans,
    jubila, trans_priv, trans_gob, otros, ing_disp_ajus, trans_ajus, isr, otros_imp)
```

Se calculan los percentiles

```
# Ingreso nacional
Base<- Base %>% group_by(enc) %>%
  arrange(enc, ing_nac) %>%
  mutate(facum=cumsum(factor)) %>%
  mutate(decil_n=ifelse(facum>sum(factor)*.1,2,1)) %>%
  mutate(decil_n=ifelse(facum>sum(factor)*.2,3,decil_n)) %>%
  mutate(decil_n=ifelse(facum>sum(factor)*.3,4,decil_n)) %>%
  mutate(decil_n=ifelse(facum>sum(factor)*.4,5,decil_n)) %>%
  mutate(decil_n=ifelse(facum>sum(factor)*.5,6,decil_n)) %>%
  mutate(decil_n=ifelse(facum>sum(factor)*.6,7,decil_n)) %>%
  mutate(decil_n=ifelse(facum>sum(factor)*.7,8,decil_n)) %>%
  mutate(decil_n=ifelse(facum>sum(factor)*.8,9,decil_n)) %>%
  mutate(decil_n=ifelse(facum>sum(factor)*.9,10,decil_n)) %>%
  mutate(ventil_n=ifelse(facum>sum(factor)*.05,2,1)) %>%
  mutate(ventil_n=ifelse(facum>sum(factor)*.10,3,ventil_n)) %>%
  mutate(ventil_n=ifelse(facum>sum(factor)*.15,4,ventil_n)) %>%
  mutate(ventil_n=ifelse(facum>sum(factor)*.20,5,ventil_n)) %>%
  mutate(ventil_n=ifelse(facum>sum(factor)*.25,6,ventil_n)) %>%
  mutate(ventil_n=ifelse(facum>sum(factor)*.30,7,ventil_n)) %>%
  mutate(ventil_n=ifelse(facum>sum(factor)*.35,8,ventil_n)) %>%
  mutate(ventil_n=ifelse(facum>sum(factor)*.40,9,ventil_n)) %>%
  mutate(ventil_n=ifelse(facum>sum(factor)*.45,10,ventil_n)) %>%
  mutate(ventil_n=ifelse(facum>sum(factor)*.50,11,ventil_n)) %>%
  mutate(ventil_n=ifelse(facum>sum(factor)*.55,12,ventil_n)) %>%
  mutate(ventil_n=ifelse(facum>sum(factor)*.60,13,ventil_n)) %>%
  mutate(ventil_n=ifelse(facum>sum(factor)*.65,14,ventil_n)) %>%
  mutate(ventil_n=ifelse(facum>sum(factor)*.70,15,ventil_n)) %>%
  mutate(ventil_n=ifelse(facum>sum(factor)*.75,16,ventil_n)) %>%
  mutate(ventil_n=ifelse(facum>sum(factor)*.80,17,ventil_n)) %>%
  mutate(ventil_n=ifelse(facum>sum(factor)*.85,18,ventil_n)) %>%
  mutate(ventil_n=ifelse(facum>sum(factor)*.90,19,ventil_n)) %>%
  mutate(ventil_n=ifelse(facum>sum(factor)*.95,20,ventil_n)) %>%
  mutate(centil_n=ifelse(facum>sum(factor)*.01,2,1)) %>%
  mutate(centil_n=ifelse(facum>sum(factor)*.02,3,centil_n)) %>%
  mutate(centil_n=ifelse(facum>sum(factor)*.03,4,centil_n)) %>%
  mutate(centil_n=ifelse(facum>sum(factor)*.04,5,centil_n)) %>%
  mutate(centil_n=ifelse(facum>sum(factor)*.05,6,centil_n)) %>%
  mutate(centil_n=ifelse(facum>sum(factor)*.06,7,centil_n)) %>%
  mutate(centil_n=ifelse(facum>sum(factor)*.07,8,centil_n)) %>%
```

[illegible]

```

mutate(centil_n=ifelse(facum>sum(factor)*.63,64,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.64,65,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.65,66,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.66,67,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.67,68,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.68,69,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.69,70,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.70,71,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.71,72,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.72,73,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.73,74,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.74,75,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.75,76,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.76,77,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.77,78,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.78,79,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.79,80,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.80,81,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.81,82,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.82,83,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.83,84,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.84,85,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.85,86,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.86,87,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.87,88,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.88,89,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.89,90,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.90,91,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.91,92,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.92,93,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.93,94,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.94,95,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.95,96,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.96,97,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.97,98,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.98,99,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.99,100,centil_n))
# Ingreso nacional ajustado
Base<- Base %>% group_by(enc) %>%
  arrange(enc,ing_nac_ajus) %>%
  mutate(facum=cumsum(factor)) %>%
  mutate(decil_na=ifelse(facum>sum(factor)*.1,2,1)) %>%
  mutate(decil_na=ifelse(facum>sum(factor)*.2,3,decil_na)) %>%
  mutate(decil_na=ifelse(facum>sum(factor)*.3,4,decil_na)) %>%
  mutate(decil_na=ifelse(facum>sum(factor)*.4,5,decil_na)) %>%
  mutate(decil_na=ifelse(facum>sum(factor)*.5,6,decil_na)) %>%
  mutate(decil_na=ifelse(facum>sum(factor)*.6,7,decil_na)) %>%
  mutate(decil_na=ifelse(facum>sum(factor)*.7,8,decil_na)) %>%
  mutate(decil_na=ifelse(facum>sum(factor)*.8,9,decil_na)) %>%
  mutate(decil_na=ifelse(facum>sum(factor)*.9,10,decil_na)) %>%
  mutate(ventil_na=ifelse(facum>sum(factor)*.05,2,1)) %>%
  mutate(ventil_na=ifelse(facum>sum(factor)*.10,3,ventil_na)) %>%
  mutate(ventil_na=ifelse(facum>sum(factor)*.15,4,ventil_na)) %>%
  mutate(ventil_na=ifelse(facum>sum(factor)*.20,5,ventil_na)) %>%
  mutate(ventil_na=ifelse(facum>sum(factor)*.25,6,ventil_na)) %>%

```



```

mutate(ventil_na=ifelse(facum>sum(factor)*.30,7,ventil_na)) %>%
mutate(ventil_na=ifelse(facum>sum(factor)*.35,8,ventil_na)) %>%
mutate(ventil_na=ifelse(facum>sum(factor)*.40,9,ventil_na)) %>%
mutate(ventil_na=ifelse(facum>sum(factor)*.45,10,ventil_na)) %>%
mutate(ventil_na=ifelse(facum>sum(factor)*.50,11,ventil_na)) %>%
mutate(ventil_na=ifelse(facum>sum(factor)*.55,12,ventil_na)) %>%
mutate(ventil_na=ifelse(facum>sum(factor)*.60,13,ventil_na)) %>%
mutate(ventil_na=ifelse(facum>sum(factor)*.65,14,ventil_na)) %>%
mutate(ventil_na=ifelse(facum>sum(factor)*.70,15,ventil_na)) %>%
mutate(ventil_na=ifelse(facum>sum(factor)*.75,16,ventil_na)) %>%
mutate(ventil_na=ifelse(facum>sum(factor)*.80,17,ventil_na)) %>%
mutate(ventil_na=ifelse(facum>sum(factor)*.85,18,ventil_na)) %>%
mutate(ventil_na=ifelse(facum>sum(factor)*.90,19,ventil_na)) %>%
mutate(ventil_na=ifelse(facum>sum(factor)*.95,20,ventil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.01,2,1)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.02,3,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.03,4,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.04,5,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.05,6,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.06,7,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.07,8,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.08,9,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.09,10,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.10,11,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.11,12,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.12,13,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.13,14,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.14,15,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.15,16,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.16,17,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.17,18,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.18,19,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.19,20,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.20,21,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.21,22,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.22,23,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.23,24,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.24,25,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.25,26,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.36,27,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.27,28,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.28,29,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.29,30,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.30,31,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.31,32,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.32,33,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.33,34,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.34,35,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.35,36,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.36,37,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.37,38,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.38,39,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.39,40,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.40,41,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.41,42,centil_na)) %>%

```

[illegible]


```

mutate(centil_na=ifelse(facum>sum(factor)*.97,98,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.98,99,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.99,100,centil_na))
# Ingreso disponible
Base<- Base %>% group_by(enc) %>%
  arrange(enc,ing_disp) %>%
  mutate(facum=cumsum(factor)) %>%
  mutate(decil_d=ifelse(facum>sum(factor)*.1,2,1)) %>%
  mutate(decil_d=ifelse(facum>sum(factor)*.2,3,decil_d)) %>%
  mutate(decil_d=ifelse(facum>sum(factor)*.3,4,decil_d)) %>%
  mutate(decil_d=ifelse(facum>sum(factor)*.4,5,decil_d)) %>%
  mutate(decil_d=ifelse(facum>sum(factor)*.5,6,decil_d)) %>%
  mutate(decil_d=ifelse(facum>sum(factor)*.6,7,decil_d)) %>%
  mutate(decil_d=ifelse(facum>sum(factor)*.7,8,decil_d)) %>%
  mutate(decil_d=ifelse(facum>sum(factor)*.8,9,decil_d)) %>%
  mutate(decil_d=ifelse(facum>sum(factor)*.9,10,decil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.05,2,1)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.10,3,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.15,4,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.20,5,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.25,6,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.30,7,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.35,8,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.40,9,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.45,10,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.50,11,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.55,12,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.60,13,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.65,14,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.70,15,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.75,16,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.80,17,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.85,18,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.90,19,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.95,20,ventil_d)) %>%
  mutate(centil_d=ifelse(facum>sum(factor)*.01,2,1)) %>%
  mutate(centil_d=ifelse(facum>sum(factor)*.02,3,centil_d)) %>%
  mutate(centil_d=ifelse(facum>sum(factor)*.03,4,centil_d)) %>%
  mutate(centil_d=ifelse(facum>sum(factor)*.04,5,centil_d)) %>%
  mutate(centil_d=ifelse(facum>sum(factor)*.05,6,centil_d)) %>%
  mutate(centil_d=ifelse(facum>sum(factor)*.06,7,centil_d)) %>%
  mutate(centil_d=ifelse(facum>sum(factor)*.07,8,centil_d)) %>%
  mutate(centil_d=ifelse(facum>sum(factor)*.08,9,centil_d)) %>%
  mutate(centil_d=ifelse(facum>sum(factor)*.09,10,centil_d)) %>%
  mutate(centil_d=ifelse(facum>sum(factor)*.10,11,centil_d)) %>%
  mutate(centil_d=ifelse(facum>sum(factor)*.11,12,centil_d)) %>%
  mutate(centil_d=ifelse(facum>sum(factor)*.12,13,centil_d)) %>%
  mutate(centil_d=ifelse(facum>sum(factor)*.13,14,centil_d)) %>%
  mutate(centil_d=ifelse(facum>sum(factor)*.14,15,centil_d)) %>%
  mutate(centil_d=ifelse(facum>sum(factor)*.15,16,centil_d)) %>%
  mutate(centil_d=ifelse(facum>sum(factor)*.16,17,centil_d)) %>%
  mutate(centil_d=ifelse(facum>sum(factor)*.17,18,centil_d)) %>%
  mutate(centil_d=ifelse(facum>sum(factor)*.18,19,centil_d)) %>%
  mutate(centil_d=ifelse(facum>sum(factor)*.19,20,centil_d)) %>%
  mutate(centil_d=ifelse(facum>sum(factor)*.20,21,centil_d)) %>%

```

[illegible]

```

mutate(centil_d=ifelse(facum>sum(factor)*.76,77,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.77,78,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.78,79,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.79,80,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.80,81,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.81,82,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.82,83,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.83,84,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.84,85,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.85,86,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.86,87,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.87,88,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.88,89,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.89,90,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.90,91,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.91,92,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.92,93,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.93,94,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.94,95,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.95,96,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.96,97,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.97,98,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.98,99,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.99,100,centil_d))

# Ingreso disponible ajustado
Base<- Base %>% group_by(enc) %>%
  arrange(enc,ing_disp_ajus) %>%
  mutate(facum=cumsum(factor)) %>%
  mutate(decil_da=ifelse(facum>sum(factor)*.1,2,1)) %>%
  mutate(decil_da=ifelse(facum>sum(factor)*.2,3,decil_da)) %>%
  mutate(decil_da=ifelse(facum>sum(factor)*.3,4,decil_da)) %>%
  mutate(decil_da=ifelse(facum>sum(factor)*.4,5,decil_da)) %>%
  mutate(decil_da=ifelse(facum>sum(factor)*.5,6,decil_da)) %>%
  mutate(decil_da=ifelse(facum>sum(factor)*.6,7,decil_da)) %>%
  mutate(decil_da=ifelse(facum>sum(factor)*.7,8,decil_da)) %>%
  mutate(decil_da=ifelse(facum>sum(factor)*.8,9,decil_da)) %>%
  mutate(decil_da=ifelse(facum>sum(factor)*.9,10,decil_da)) %>%
  mutate(ventil_da=ifelse(facum>sum(factor)*.05,2,1)) %>%
  mutate(ventil_da=ifelse(facum>sum(factor)*.10,3,ventil_da)) %>%
  mutate(ventil_da=ifelse(facum>sum(factor)*.15,4,ventil_da)) %>%
  mutate(ventil_da=ifelse(facum>sum(factor)*.20,5,ventil_da)) %>%
  mutate(ventil_da=ifelse(facum>sum(factor)*.25,6,ventil_da)) %>%
  mutate(ventil_da=ifelse(facum>sum(factor)*.30,7,ventil_da)) %>%
  mutate(ventil_da=ifelse(facum>sum(factor)*.35,8,ventil_da)) %>%
  mutate(ventil_da=ifelse(facum>sum(factor)*.40,9,ventil_da)) %>%
  mutate(ventil_da=ifelse(facum>sum(factor)*.45,10,ventil_da)) %>%
  mutate(ventil_da=ifelse(facum>sum(factor)*.50,11,ventil_da)) %>%
  mutate(ventil_da=ifelse(facum>sum(factor)*.55,12,ventil_da)) %>%
  mutate(ventil_da=ifelse(facum>sum(factor)*.60,13,ventil_da)) %>%
  mutate(ventil_da=ifelse(facum>sum(factor)*.65,14,ventil_da)) %>%
  mutate(ventil_da=ifelse(facum>sum(factor)*.70,15,ventil_da)) %>%
  mutate(ventil_da=ifelse(facum>sum(factor)*.75,16,ventil_da)) %>%
  mutate(ventil_da=ifelse(facum>sum(factor)*.80,17,ventil_da)) %>%
  mutate(ventil_da=ifelse(facum>sum(factor)*.85,18,ventil_da)) %>%
  mutate(ventil_da=ifelse(facum>sum(factor)*.90,19,ventil_da)) %>%

```

[illegible]


```

mutate(centil_da=ifelse(facum>sum(factor)*.55,56,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.56,57,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.57,58,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.58,59,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.59,60,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.60,61,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.61,62,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.62,63,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.63,64,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.64,65,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.65,66,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.66,67,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.67,68,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.68,69,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.69,70,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.70,71,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.71,72,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.72,73,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.73,74,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.74,75,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.75,76,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.76,77,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.77,78,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.78,79,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.79,80,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.80,81,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.81,82,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.82,83,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.83,84,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.84,85,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.85,86,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.86,87,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.87,88,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.88,89,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.89,90,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.90,91,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.91,92,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.92,93,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.93,94,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.94,95,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.95,96,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.96,97,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.97,98,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.98,99,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.99,100,centil_da))

```

I. Base a nivel de hogares

```

# A nivel de hogares
Hogar <- Base %>% group_by(enc,folioviv,foliohog) %>%
  summarise(sexo=first(sexo,order_by=numren),
            edad=first(edad,order_by=numren),
            educa=first(educ,order_by=numren),
            ocupa=first(ocupa,order_by=numren),

```

```

sector=first(sector,order_by=numren),
grupo=first(grupo,order_by=numren),
convenio=first(convenio,order_by=numren),
gremio=first(gremio,order_by=numren),
clas_emp=first(clas_emp,order_by=numren),
tamhog=mean(tamhog),
tamloc=mean(tamloc),
factor=mean(factor),
ing_nac=sum(ing_nac),
trabajo=sum(trabajo),
especie=sum(especie),
mixto=sum(mixto),
autocon=sum(autocon),
renta=sum(renta),
inmuebles=sum(inmuebles),
excedente=sum(excedente),
otros_trab=sum(otros_trab),
ing_nac_ajus=sum(ing_nac_ajus),
trab_ajus=sum(trab_ajus),
mix_ajus=sum(mix_ajus),
renta_ajus=sum(renta_ajus),
interes_ajus=sum(interес_ajus),
ing_disp=sum(ing_disp),
trans=sum(trans),
jubila=sum(jubila),
trans_priv=sum(trans_priv),
trans_gob=sum(trans_gob),
otros=sum(otros),
ing_disp_ajus=sum(ing_disp_ajus),
trans_ajus=sum(trans_ajus),
isr=sum(isr),
otros_imp=sum(otros_imp))
remove(Base)

```

Se calculan los percentiles

```

# Ingreso nacional
Hogar<- Hogar %>% group_by(enc) %>%
  arrange(enc,ing_nac) %>%
  mutate(facum=cumsum(factor)) %>%
  mutate(decil_n=ifelse(facum>sum(factor)*.1,2,1)) %>%
  mutate(decil_n=ifelse(facum>sum(factor)*.2,3,decil_n)) %>%
  mutate(decil_n=ifelse(facum>sum(factor)*.3,4,decil_n)) %>%
  mutate(decil_n=ifelse(facum>sum(factor)*.4,5,decil_n)) %>%
  mutate(decil_n=ifelse(facum>sum(factor)*.5,6,decil_n)) %>%
  mutate(decil_n=ifelse(facum>sum(factor)*.6,7,decil_n)) %>%
  mutate(decil_n=ifelse(facum>sum(factor)*.7,8,decil_n)) %>%
  mutate(decil_n=ifelse(facum>sum(factor)*.8,9,decil_n)) %>%
  mutate(decil_n=ifelse(facum>sum(factor)*.9,10,decil_n)) %>%
  mutate(ventil_n=ifelse(facum>sum(factor)*.05,2,1)) %>%
  mutate(ventil_n=ifelse(facum>sum(factor)*.10,3,ventil_n)) %>%
  mutate(ventil_n=ifelse(facum>sum(factor)*.15,4,ventil_n)) %>%
  mutate(ventil_n=ifelse(facum>sum(factor)*.20,5,ventil_n)) %>%
  mutate(ventil_n=ifelse(facum>sum(factor)*.25,6,ventil_n)) %>%
  mutate(ventil_n=ifelse(facum>sum(factor)*.30,7,ventil_n)) %>%
  mutate(ventil_n=ifelse(facum>sum(factor)*.35,8,ventil_n)) %>%

```

```

mutate(ventil_n=ifelse(facum>sum(factor)*.40,9,ventil_n)) %>%
mutate(ventil_n=ifelse(facum>sum(factor)*.45,10,ventil_n)) %>%
mutate(ventil_n=ifelse(facum>sum(factor)*.50,11,ventil_n)) %>%
mutate(ventil_n=ifelse(facum>sum(factor)*.55,12,ventil_n)) %>%
mutate(ventil_n=ifelse(facum>sum(factor)*.60,13,ventil_n)) %>%
mutate(ventil_n=ifelse(facum>sum(factor)*.65,14,ventil_n)) %>%
mutate(ventil_n=ifelse(facum>sum(factor)*.70,15,ventil_n)) %>%
mutate(ventil_n=ifelse(facum>sum(factor)*.75,16,ventil_n)) %>%
mutate(ventil_n=ifelse(facum>sum(factor)*.80,17,ventil_n)) %>%
mutate(ventil_n=ifelse(facum>sum(factor)*.85,18,ventil_n)) %>%
mutate(ventil_n=ifelse(facum>sum(factor)*.90,19,ventil_n)) %>%
mutate(ventil_n=ifelse(facum>sum(factor)*.95,20,ventil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.01,2,1)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.02,3,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.03,4,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.04,5,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.05,6,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.06,7,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.07,8,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.08,9,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.09,10,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.10,11,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.11,12,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.12,13,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.13,14,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.14,15,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.15,16,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.16,17,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.17,18,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.18,19,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.19,20,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.20,21,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.21,22,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.22,23,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.23,24,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.24,25,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.25,26,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.36,27,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.27,28,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.28,29,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.29,30,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.30,31,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.31,32,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.32,33,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.33,34,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.34,35,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.35,36,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.36,37,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.37,38,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.38,39,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.39,40,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.40,41,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.41,42,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.42,43,centil_n)) %>%
mutate(centil_n=ifelse(facum>sum(factor)*.43,44,centil_n)) %>%

```


[illegible]

```

mutate(centil_n=ifelse(facum>sum(factor)*.99,100,centil_n))
# Ingreso nacional ajustado
Hogar <- Hogar %>% group_by(enc) %>%
  arrange(enc,ing_nac_ajus) %>%
  mutate(facum=cumsum(factor)) %>%
  mutate(decil_na=ifelse(facum>sum(factor)*.1,2,1)) %>%
  mutate(decil_na=ifelse(facum>sum(factor)*.2,3,decil_na)) %>%
  mutate(decil_na=ifelse(facum>sum(factor)*.3,4,decil_na)) %>%
  mutate(decil_na=ifelse(facum>sum(factor)*.4,5,decil_na)) %>%
  mutate(decil_na=ifelse(facum>sum(factor)*.5,6,decil_na)) %>%
  mutate(decil_na=ifelse(facum>sum(factor)*.6,7,decil_na)) %>%
  mutate(decil_na=ifelse(facum>sum(factor)*.7,8,decil_na)) %>%
  mutate(decil_na=ifelse(facum>sum(factor)*.8,9,decil_na)) %>%
  mutate(decil_na=ifelse(facum>sum(factor)*.9,10,decil_na)) %>%
  mutate(ventil_na=ifelse(facum>sum(factor)*.05,2,1)) %>%
  mutate(ventil_na=ifelse(facum>sum(factor)*.10,3,ventil_na)) %>%
  mutate(ventil_na=ifelse(facum>sum(factor)*.15,4,ventil_na)) %>%
  mutate(ventil_na=ifelse(facum>sum(factor)*.20,5,ventil_na)) %>%
  mutate(ventil_na=ifelse(facum>sum(factor)*.25,6,ventil_na)) %>%
  mutate(ventil_na=ifelse(facum>sum(factor)*.30,7,ventil_na)) %>%
  mutate(ventil_na=ifelse(facum>sum(factor)*.35,8,ventil_na)) %>%
  mutate(ventil_na=ifelse(facum>sum(factor)*.40,9,ventil_na)) %>%
  mutate(ventil_na=ifelse(facum>sum(factor)*.45,10,ventil_na)) %>%
  mutate(ventil_na=ifelse(facum>sum(factor)*.50,11,ventil_na)) %>%
  mutate(ventil_na=ifelse(facum>sum(factor)*.55,12,ventil_na)) %>%
  mutate(ventil_na=ifelse(facum>sum(factor)*.60,13,ventil_na)) %>%
  mutate(ventil_na=ifelse(facum>sum(factor)*.65,14,ventil_na)) %>%
  mutate(ventil_na=ifelse(facum>sum(factor)*.70,15,ventil_na)) %>%
  mutate(ventil_na=ifelse(facum>sum(factor)*.75,16,ventil_na)) %>%
  mutate(ventil_na=ifelse(facum>sum(factor)*.80,17,ventil_na)) %>%
  mutate(ventil_na=ifelse(facum>sum(factor)*.85,18,ventil_na)) %>%
  mutate(ventil_na=ifelse(facum>sum(factor)*.90,19,ventil_na)) %>%
  mutate(ventil_na=ifelse(facum>sum(factor)*.95,20,ventil_na)) %>%
  mutate(centil_na=ifelse(facum>sum(factor)*.01,2,1)) %>%
  mutate(centil_na=ifelse(facum>sum(factor)*.02,3,centil_na)) %>%
  mutate(centil_na=ifelse(facum>sum(factor)*.03,4,centil_na)) %>%
  mutate(centil_na=ifelse(facum>sum(factor)*.04,5,centil_na)) %>%
  mutate(centil_na=ifelse(facum>sum(factor)*.05,6,centil_na)) %>%
  mutate(centil_na=ifelse(facum>sum(factor)*.06,7,centil_na)) %>%
  mutate(centil_na=ifelse(facum>sum(factor)*.07,8,centil_na)) %>%
  mutate(centil_na=ifelse(facum>sum(factor)*.08,9,centil_na)) %>%
  mutate(centil_na=ifelse(facum>sum(factor)*.09,10,centil_na)) %>%
  mutate(centil_na=ifelse(facum>sum(factor)*.10,11,centil_na)) %>%
  mutate(centil_na=ifelse(facum>sum(factor)*.11,12,centil_na)) %>%
  mutate(centil_na=ifelse(facum>sum(factor)*.12,13,centil_na)) %>%
  mutate(centil_na=ifelse(facum>sum(factor)*.13,14,centil_na)) %>%
  mutate(centil_na=ifelse(facum>sum(factor)*.14,15,centil_na)) %>%
  mutate(centil_na=ifelse(facum>sum(factor)*.15,16,centil_na)) %>%
  mutate(centil_na=ifelse(facum>sum(factor)*.16,17,centil_na)) %>%
  mutate(centil_na=ifelse(facum>sum(factor)*.17,18,centil_na)) %>%
  mutate(centil_na=ifelse(facum>sum(factor)*.18,19,centil_na)) %>%
  mutate(centil_na=ifelse(facum>sum(factor)*.19,20,centil_na)) %>%
  mutate(centil_na=ifelse(facum>sum(factor)*.20,21,centil_na)) %>%
  mutate(centil_na=ifelse(facum>sum(factor)*.21,22,centil_na)) %>%
  mutate(centil_na=ifelse(facum>sum(factor)*.22,23,centil_na)) %>%

```

[illegible]

```

mutate(centil_na=ifelse(facum>sum(factor)*.78,79,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.79,80,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.80,81,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.81,82,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.82,83,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.83,84,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.84,85,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.85,86,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.86,87,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.87,88,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.88,89,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.89,90,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.90,91,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.91,92,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.92,93,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.93,94,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.94,95,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.95,96,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.96,97,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.97,98,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.98,99,centil_na)) %>%
mutate(centil_na=ifelse(facum>sum(factor)*.99,100,centil_na))
# Ingreso disponible
Hogar <- Hogar %>% group_by(enc) %>%
  arrange(enc,ing_disp) %>%
  mutate(facum=cumsum(factor)) %>%
  mutate(decil_d=ifelse(facum>sum(factor)*.1,2,1)) %>%
  mutate(decil_d=ifelse(facum>sum(factor)*.2,3,decil_d)) %>%
  mutate(decil_d=ifelse(facum>sum(factor)*.3,4,decil_d)) %>%
  mutate(decil_d=ifelse(facum>sum(factor)*.4,5,decil_d)) %>%
  mutate(decil_d=ifelse(facum>sum(factor)*.5,6,decil_d)) %>%
  mutate(decil_d=ifelse(facum>sum(factor)*.6,7,decil_d)) %>%
  mutate(decil_d=ifelse(facum>sum(factor)*.7,8,decil_d)) %>%
  mutate(decil_d=ifelse(facum>sum(factor)*.8,9,decil_d)) %>%
  mutate(decil_d=ifelse(facum>sum(factor)*.9,10,decil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.05,2,1)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.10,3,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.15,4,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.20,5,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.25,6,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.30,7,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.35,8,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.40,9,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.45,10,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.50,11,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.55,12,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.60,13,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.65,14,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.70,15,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.75,16,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.80,17,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.85,18,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.90,19,ventil_d)) %>%
  mutate(ventil_d=ifelse(facum>sum(factor)*.95,20,ventil_d)) %>%
  mutate(centil_d=ifelse(facum>sum(factor)*.01,2,1)) %>%

```


[illegible]

```

mutate(centil_d=ifelse(facum>sum(factor)*.57,58,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.58,59,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.59,60,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.60,61,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.61,62,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.62,63,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.63,64,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.64,65,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.65,66,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.66,67,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.67,68,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.68,69,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.69,70,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.70,71,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.71,72,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.72,73,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.73,74,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.74,75,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.75,76,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.76,77,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.77,78,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.78,79,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.79,80,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.80,81,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.81,82,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.82,83,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.83,84,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.84,85,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.85,86,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.86,87,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.87,88,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.88,89,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.89,90,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.90,91,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.91,92,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.92,93,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.93,94,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.94,95,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.95,96,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.96,97,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.97,98,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.98,99,centil_d)) %>%
mutate(centil_d=ifelse(facum>sum(factor)*.99,100,centil_d))
# Ingreso disponible ajustado
Hogar <- Hogar %>% group_by(enc) %>%
  arrange(enc,ing_disp_ajus) %>%
  mutate(facum=cumsum(factor)) %>%
  mutate(decil_da=ifelse(facum>sum(factor)*.1,2,1)) %>%
  mutate(decil_da=ifelse(facum>sum(factor)*.2,3,decil_da)) %>%
  mutate(decil_da=ifelse(facum>sum(factor)*.3,4,decil_da)) %>%
  mutate(decil_da=ifelse(facum>sum(factor)*.4,5,decil_da)) %>%
  mutate(decil_da=ifelse(facum>sum(factor)*.5,6,decil_da)) %>%
  mutate(decil_da=ifelse(facum>sum(factor)*.6,7,decil_da)) %>%
  mutate(decil_da=ifelse(facum>sum(factor)*.7,8,decil_da)) %>%
  mutate(decil_da=ifelse(facum>sum(factor)*.8,9,decil_da)) %>%

```

```

mutate(decil_da=ifelse(facum>sum(factor)*.9,10,decil_da)) %>%
mutate(ventil_da=ifelse(facum>sum(factor)*.05,2,1)) %>%
mutate(ventil_da=ifelse(facum>sum(factor)*.10,3,ventil_da)) %>%
mutate(ventil_da=ifelse(facum>sum(factor)*.15,4,ventil_da)) %>%
mutate(ventil_da=ifelse(facum>sum(factor)*.20,5,ventil_da)) %>%
mutate(ventil_da=ifelse(facum>sum(factor)*.25,6,ventil_da)) %>%
mutate(ventil_da=ifelse(facum>sum(factor)*.30,7,ventil_da)) %>%
mutate(ventil_da=ifelse(facum>sum(factor)*.35,8,ventil_da)) %>%
mutate(ventil_da=ifelse(facum>sum(factor)*.40,9,ventil_da)) %>%
mutate(ventil_da=ifelse(facum>sum(factor)*.45,10,ventil_da)) %>%
mutate(ventil_da=ifelse(facum>sum(factor)*.50,11,ventil_da)) %>%
mutate(ventil_da=ifelse(facum>sum(factor)*.55,12,ventil_da)) %>%
mutate(ventil_da=ifelse(facum>sum(factor)*.60,13,ventil_da)) %>%
mutate(ventil_da=ifelse(facum>sum(factor)*.65,14,ventil_da)) %>%
mutate(ventil_da=ifelse(facum>sum(factor)*.70,15,ventil_da)) %>%
mutate(ventil_da=ifelse(facum>sum(factor)*.75,16,ventil_da)) %>%
mutate(ventil_da=ifelse(facum>sum(factor)*.80,17,ventil_da)) %>%
mutate(ventil_da=ifelse(facum>sum(factor)*.85,18,ventil_da)) %>%
mutate(ventil_da=ifelse(facum>sum(factor)*.90,19,ventil_da)) %>%
mutate(ventil_da=ifelse(facum>sum(factor)*.95,20,ventil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.01,2,1)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.02,3,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.03,4,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.04,5,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.05,6,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.06,7,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.07,8,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.08,9,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.09,10,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.10,11,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.11,12,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.12,13,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.13,14,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.14,15,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.15,16,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.16,17,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.17,18,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.18,19,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.19,20,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.20,21,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.21,22,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.22,23,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.23,24,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.24,25,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.25,26,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.36,27,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.27,28,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.28,29,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.29,30,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.30,31,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.31,32,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.32,33,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.33,34,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.34,35,centil_da)) %>%
mutate(centil_da=ifelse(facum>sum(factor)*.35,36,centil_da)) %>%

```


[illegible]

```
mutate(centil_da=ifelse(facum>sum(factor)*.91,92,centil_da)) %>%  
mutate(centil_da=ifelse(facum>sum(factor)*.92,93,centil_da)) %>%  
mutate(centil_da=ifelse(facum>sum(factor)*.93,94,centil_da)) %>%  
mutate(centil_da=ifelse(facum>sum(factor)*.94,95,centil_da)) %>%  
mutate(centil_da=ifelse(facum>sum(factor)*.95,96,centil_da)) %>%  
mutate(centil_da=ifelse(facum>sum(factor)*.96,97,centil_da)) %>%  
mutate(centil_da=ifelse(facum>sum(factor)*.97,98,centil_da)) %>%  
mutate(centil_da=ifelse(facum>sum(factor)*.98,99,centil_da)) %>%  
mutate(centil_da=ifelse(facum>sum(factor)*.99,100,centil_da))
```

XII. México: Encuesta Nacional sobre las Finanzas de los Hogares

Librerías requeridas

```
library(tidyverse)
library(gt)
library(dineq)
library(DescTools)
library(GiniWegNeg)
```

A. Base de 2019

Se abre la base de la Encuesta Nacional sobre las Finanzas de los Hogares:

```
Base <- read.csv("Bases/tconcentradora.csv")
colnames(Base) <- tolower(colnames(Base))
Base <- Base %>%
  mutate(across(everything(), as.numeric))
```

Se calculan las variables de riqueza con base en la siguiente construcción de variables:

Activos físicos:

- Valor de venta de vivienda principal (val_vpal)
- Valor de venta de la vivienda secundaria (vivienda, terreno, construcción industrial, bodega, tienda, oficina, local y edificio comercial) (val_vsec)
- Valor de venta de menaje (televisión, refrigerador, lavadora, muebles, bicicletas y otros artículos de valor) (val_menaje)

- Valor de venta de vehículos (automóvil, camioneta, motocicleta, lancha, avioneta, entre otros) (val_vehic)

Activos financieros:

- Monto de cuenta de ahorro o cheques (v_ctachqs),
- Monto de cuenta de depósitos a plazo fijo o de fondos de inversión (v_prvinvr), y
- Monto de cuentas de ahorro informal (v_otroaf).

Pasivos financieros:

- Monto de deuda de tarjeta departamental o bancaria (mto_tcrd),
- Monto de deuda de crédito de nómina o personal (mto_nmpe),
- Monto de deuda de otros créditos (mto_rest),
- Monto de crédito de vivienda principal (mnto_vpal),
- Monto de crédito de vivienda secundaria (mnto_vsec), y
- Monto de deuda de crédito de automotores (mto_aumo).

```
Base <- Base %>%
  mutate(act_nofin=val_vpal+val_vsec+val_menaje+val_vehic) %>%
  mutate(act_fin=v_ctachqs+v_prvinvr+v_otroaf) %>%
  mutate(activos=act_nofin+act_fin) %>%
  mutate(deuda_corto=mto_tcrd+mto_nmpe+mto_rest) %>%
  mutate(deuda_largo=mnto_vpal+mnto_vsec+mto_aumo) %>%
  mutate(deuda=deuda_corto+deuda_largo) %>%
  mutate(riqueza=act_nofin+act_fin-deuda)
```

Se genera un cuadro con cifras para el ajuste. Se genera un cuadro de riqueza y su desglose para control y para ajuste de cuentas nacionales:

```
Base %>%
  summarise(Hogares=sum(fac_hog),
            Riqueza=sum(riqueza*fac_hog),
            Activos=sum(activos*fac_hog),
            Fisicos=sum(act_nofin*fac_hog),
            Financieros=sum(act_fin*fac_hog),
            Pasivos=sum(deuda*fac_hog)) %>%
  gt() %>% tab_header(title = "Riqueza y su desglose") %>%
  fmt_number(c("Hogares", "Riqueza", "Activos", "Fisicos", "Financieros", "Pasivos"),
            decimals = 0) %>%
  tab_style(cell_text(align = "right"),
            locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(align = "center"),
            locations = cells_column_labels(columns = everything()))
```

Cuadro 26
Riqueza y su desglose

Hogares	Riqueza	Activos	Físicos	Financieros	Pasivos
36 644 680	22 543 571 814 171	24 163 602 965 093	23 755 636 187 870	407 966 777 223	1 620 031 150 922

Fuente: Elaboración propia.

Ajuste de la información. Se lleva a cabo el ajuste a la información con base en las cifras de las cuentas nacionales.

```
fisic <- 21552106184130
finan <- 16434609555777
pasiv <- 2399443853078
Base <- Base %>%
  mutate(fisic_p=(act_nofin*fac_hog)/sum(act_nofin*fac_hog)) %>%
  mutate(finan_p=((act_fin*fac_hog)/sum(act_fin*fac_hog))^1.75)/
    sum(((act_fin*fac_hog)/sum(act_fin*fac_hog))^1.75)) %>%
  mutate(pasiv_p=(deuda*fac_hog)/sum(deuda*fac_hog))
Base <- Base %>%
  mutate(act_nofin_ajus=act_nofin+(fisic_p*fisic)/fac_hog) %>%
  mutate(act_fin_ajus=act_fin+(finan_p*finan)/fac_hog) %>%
  mutate(deuda_ajus=deuda+(pasiv_p*pasiv)/fac_hog) %>%
  mutate(riqueza_ajus=act_nofin_ajus+act_fin_ajus-deuda_ajus) %>%
  mutate(activos_ajus=act_nofin_ajus+act_fin_ajus)
```

Se genera un cuadro para comparar los resultados con cuentas nacionales.

```
Base %>%
  summarise(Hogares=sum(fac_hog),
    Riqueza=sum(riqueza_ajus*fac_hog),
    Activos=sum(activos_ajus*fac_hog),
    Fisicos=sum(act_nofin_ajus*fac_hog),
    Financieros=sum(act_fin_ajus*fac_hog),
    Pasivos=sum(deuda_ajus*fac_hog)) %>%
  gt() %>% tab_header(title = "Riqueza y su desglose") %>%
  fmt_number(c("Hogares", "Riqueza", "Activos", "Fisicos", "Financieros", "Pasivos"),
    decimals = 0) %>%
  tab_style(cell_text(aligned = "right"),
    locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(aligned = "center"),
    locations = cells_column_labels(columns = everything()))
```

Cuadro 27
Riqueza ajustada y su desglose

Hogares	Riqueza	Activos	Físicos	Financieros	Pasivos
36 644 680	58 130 843 701 000	62 150 318 705 000	45 307 742 372 000	16 842 576 333 000	4 019 475 004 000

Fuente: Elaboración propia.

Se generan los percentiles de la riqueza neta.

```
Base <- Base %>% arrange(riqueza) %>%
  mutate(facum=cumsum(fac_hog)) %>%
  mutate(decil=ifelse(facum>sum(fac_hog)*.1,2,1)) %>%
  mutate(decil=ifelse(facum>sum(fac_hog)*.2,3,decil)) %>%
  mutate(decil=ifelse(facum>sum(fac_hog)*.3,4,decil)) %>%
```

```

mutate(decil=ifelse(facum>sum(fac_hog)*.4,5,decil)) %>%
mutate(decil=ifelse(facum>sum(fac_hog)*.5,6,decil)) %>%
mutate(decil=ifelse(facum>sum(fac_hog)*.6,7,decil)) %>%
mutate(decil=ifelse(facum>sum(fac_hog)*.7,8,decil)) %>%
mutate(decil=ifelse(facum>sum(fac_hog)*.8,9,decil)) %>%
mutate(decil=ifelse(facum>sum(fac_hog)*.9,10,decil)) %>%
mutate(ventil=ifelse(facum>sum(fac_hog)*.05,2,1)) %>%
mutate(ventil=ifelse(facum>sum(fac_hog)*.10,3,ventil)) %>%
mutate(ventil=ifelse(facum>sum(fac_hog)*.15,4,ventil)) %>%
mutate(ventil=ifelse(facum>sum(fac_hog)*.20,5,ventil)) %>%
mutate(ventil=ifelse(facum>sum(fac_hog)*.25,6,ventil)) %>%
mutate(ventil=ifelse(facum>sum(fac_hog)*.30,7,ventil)) %>%
mutate(ventil=ifelse(facum>sum(fac_hog)*.35,8,ventil)) %>%
mutate(ventil=ifelse(facum>sum(fac_hog)*.40,9,ventil)) %>%
mutate(ventil=ifelse(facum>sum(fac_hog)*.45,10,ventil)) %>%
mutate(ventil=ifelse(facum>sum(fac_hog)*.50,11,ventil)) %>%
mutate(ventil=ifelse(facum>sum(fac_hog)*.55,12,ventil)) %>%
mutate(ventil=ifelse(facum>sum(fac_hog)*.60,13,ventil)) %>%
mutate(ventil=ifelse(facum>sum(fac_hog)*.65,14,ventil)) %>%
mutate(ventil=ifelse(facum>sum(fac_hog)*.70,15,ventil)) %>%
mutate(ventil=ifelse(facum>sum(fac_hog)*.75,16,ventil)) %>%
mutate(ventil=ifelse(facum>sum(fac_hog)*.80,17,ventil)) %>%
mutate(ventil=ifelse(facum>sum(fac_hog)*.85,18,ventil)) %>%
mutate(ventil=ifelse(facum>sum(fac_hog)*.90,19,ventil)) %>%
mutate(ventil=ifelse(facum>sum(fac_hog)*.95,20,ventil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.01,2,1)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.02,3,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.03,4,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.04,5,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.05,6,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.06,7,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.07,8,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.08,9,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.09,10,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.10,11,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.11,12,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.12,13,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.13,14,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.14,15,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.15,16,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.16,17,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.17,18,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.18,19,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.19,20,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.20,21,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.21,22,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.22,23,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.23,24,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.24,25,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.25,26,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.26,27,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.27,28,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.28,29,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.29,30,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.30,31,centil)) %>%

```


[illegible]


```

mutate(centil=ifelse(facum>sum(fac_hog)*.86,87,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.87,88,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.88,89,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.89,90,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.90,91,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.91,92,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.92,93,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.93,94,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.94,95,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.95,96,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.96,97,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.97,98,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.98,99,centil)) %>%
mutate(centil=ifelse(facum>sum(fac_hog)*.99,100,centil))

```

Se generan los percentiles de la riqueza neta ajustada.

```

Base <- Base %>% arrange(riqueza_ajus) %>%
mutate(facum=cumsum(fac_hog)) %>%
mutate(decil_a=ifelse(facum>sum(fac_hog)*.1,2,1)) %>%
mutate(decil_a=ifelse(facum>sum(fac_hog)*.2,3,decil_a)) %>%
mutate(decil_a=ifelse(facum>sum(fac_hog)*.3,4,decil_a)) %>%
mutate(decil_a=ifelse(facum>sum(fac_hog)*.4,5,decil_a)) %>%
mutate(decil_a=ifelse(facum>sum(fac_hog)*.5,6,decil_a)) %>%
mutate(decil_a=ifelse(facum>sum(fac_hog)*.6,7,decil_a)) %>%
mutate(decil_a=ifelse(facum>sum(fac_hog)*.7,8,decil_a)) %>%
mutate(decil_a=ifelse(facum>sum(fac_hog)*.8,9,decil_a)) %>%
mutate(decil_a=ifelse(facum>sum(fac_hog)*.9,10,decil_a)) %>%
mutate(ventil_a=ifelse(facum>sum(fac_hog)*.05,2,1)) %>%
mutate(ventil_a=ifelse(facum>sum(fac_hog)*.10,3,ventil_a)) %>%
mutate(ventil_a=ifelse(facum>sum(fac_hog)*.15,4,ventil_a)) %>%
mutate(ventil_a=ifelse(facum>sum(fac_hog)*.20,5,ventil_a)) %>%
mutate(ventil_a=ifelse(facum>sum(fac_hog)*.25,6,ventil_a)) %>%
mutate(ventil_a=ifelse(facum>sum(fac_hog)*.30,7,ventil_a)) %>%
mutate(ventil_a=ifelse(facum>sum(fac_hog)*.35,8,ventil_a)) %>%
mutate(ventil_a=ifelse(facum>sum(fac_hog)*.40,9,ventil_a)) %>%
mutate(ventil_a=ifelse(facum>sum(fac_hog)*.45,10,ventil_a)) %>%
mutate(ventil_a=ifelse(facum>sum(fac_hog)*.50,11,ventil_a)) %>%
mutate(ventil_a=ifelse(facum>sum(fac_hog)*.55,12,ventil_a)) %>%
mutate(ventil_a=ifelse(facum>sum(fac_hog)*.60,13,ventil_a)) %>%
mutate(ventil_a=ifelse(facum>sum(fac_hog)*.65,14,ventil_a)) %>%
mutate(ventil_a=ifelse(facum>sum(fac_hog)*.70,15,ventil_a)) %>%
mutate(ventil_a=ifelse(facum>sum(fac_hog)*.75,16,ventil_a)) %>%
mutate(ventil_a=ifelse(facum>sum(fac_hog)*.80,17,ventil_a)) %>%
mutate(ventil_a=ifelse(facum>sum(fac_hog)*.85,18,ventil_a)) %>%
mutate(ventil_a=ifelse(facum>sum(fac_hog)*.90,19,ventil_a)) %>%
mutate(ventil_a=ifelse(facum>sum(fac_hog)*.95,20,ventil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.01,2,1)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.02,3,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.03,4,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.04,5,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.05,6,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.06,7,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.07,8,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.08,9,centil_a)) %>%

```

[illegible]

```

mutate(centil_a=ifelse(facum>sum(fac_hog)*.64,65,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.65,66,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.66,67,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.67,68,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.68,69,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.69,70,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.70,71,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.71,72,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.72,73,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.73,74,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.74,75,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.75,76,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.76,77,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.77,78,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.78,79,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.79,80,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.80,81,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.81,82,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.82,83,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.83,84,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.84,85,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.85,86,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.86,87,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.87,88,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.88,89,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.89,90,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.90,91,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.91,92,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.92,93,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.93,94,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.94,95,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.95,96,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.96,97,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.97,98,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.98,99,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(fac_hog)*.99,100,centil_a))

```

Se generan los cuadros de riqueza neta (sin ajuste), por deciles:

```

Base %>% group_by(decil) %>%
  summarise(Hogares=sum(fac_hog),
            Riqueza=sum(riqueza*fac_hog),
            Activos=sum(activos*fac_hog),
            Fisicos=sum(act_nofin*fac_hog),
            Financieros=sum(act_fin*fac_hog),
            Pasivos=sum(deuda*fac_hog)) %>%
  gt() %>% tab_header(title = "Riqueza neta (sin ajuste), por deciles") %>%
  fmt_number(c("Hogares", "Riqueza", "Activos", "Fisicos", "Financieros", "Pasivos"),
            decimals = 0) %>%
  tab_style(cell_text(align = "right"),
            locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(align = "center"),
            locations = cells_column_labels(columns = everything()))

```

Cuadro 28
Riqueza neta (sin ajuste), por deciles

Decil	Hogares	Riqueza	Activos	Físicos	Financieros	Pasivos
I	3 663 464	-123 299 014 285	118 990 679 236	114 575 311 575	4 415 367 661	242 289 693 521
II	3 664 293	33 627 758 241	60 097 858 033	56 463 357 050	3 634 500 983	26 470 099 792
III	3 663 192	108 549 318 689	173 270 385 091	165 063 492 886	8 206 892 205	64 721 066 402
IV	3 664 680	292 515 677 197	381 776 860 760	368 118 736 280	13 658 124 480	89 261 183 563
V	3 664 754	635 173 150 513	782 302 743 885	766 714 139 344	15 588 604 541	147 129 593 372
VI	3 661 226	1 055 244 821 047	1 231 639 199 678	1 215 740 887 926	15 898 311 752	176 394 378 631
VII	3 668 438	1 692 380 391 335	1 849 024 063 530	1 823 746 223 845	25 277 839 685	156 643 672 195
VIII	3 665 364	2 487 402 692 572	2 672 621 609 005	2 636 631 591 171	35 990 017 834	185 218 916 433
IX	3 662 102	3 809 585 391 850	4 026 828 640 939	3 984 151 129 060	42 677 511 879	217 243 249 089
X	3 667 167	12 552 391 627 012	12 867 050 924 936	12 624 431 318 733	242 619 606 203	314 659 297 924

Fuente: Elaboración propia.

Cuadro de riqueza neta (sin ajuste), del decil X:

```
Base %>% filter(centil>90) %>%
  group_by(centil) %>%
  summarise(Hogares=sum(fac_hog),
            Riqueza=sum(riqueza*fac_hog),
            Activos=sum(activos*fac_hog),
            Fisicos=sum(act_nofin*fac_hog),
            Financieros=sum(act_fin*fac_hog),
            Pasivos=sum(deuda*fac_hog)) %>%
  gt() %>% tab_header(title = "Riqueza neta (sin ajuste), del decil X") %>%
  fmt_number(c("Hogares", "Riqueza", "Activos", "Fisicos", "Financieros", "Pasivos"),
             decimals = 0) %>%
  tab_style(cell_text(aligned = "right"),
            locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(aligned = "center"),
            locations = cells_column_labels(columns = everything()))
```

Cuadro 29
Riqueza neta (sin ajuste), del decil X

centil	Hogares	Riqueza	Activos	Físicos	Financieros	Pasivos
91	368 839	531 252 023 094	561 021 112 130	554 262 345 500	6 758 766 630	29 769 089 036
92	365 405	564 442 018 123	578 806 757 446	576 190 682 000	2 616 075 446	14 364 739 323
93	365 878	614 292 075 407	640 627 873 414	632 896 016 900	7 731 856 514	26 335 798 007
94	367 756	679 509 077 548	718 171 901 426	712 495 951 900	5 675 949 526	38 662 823 878
95	365 802	740 997 032 114	757 673 842 300	753 509 684 600	4 164 157 700	16 676 810 186
96	366 973	810 175 221 618	827 200 468 168	815 877 005 968	11 323 462 200	17 025 246 550
97	364 762	946 647 266 017	976 258 521 458	966 079 023 000	10 179 498 458	29 611 255 441
98	367 453	1 159 415 820 929	1 205 777 253 322	1 181 034 411 000	24 742 842 322	46 361 432 393
99	364 230	1 556 674 987 165	1 605 658 505 933	1 559 356 075 080	46 302 430 853	48 983 518 768
100	370 069	4 948 986 104 997	4 995 854 689 339	4 872 730 122 785	123 124 566 554	46 868 584 342

Fuente: Elaboración propia.

Cuadro de riqueza neta ajustada, por deciles:

```
Base %>% group_by(decil_a) %>%
  summarise(Hogares=sum(fac_hog),
            Riqueza=sum(riqueza_ajus*fac_hog),
            Activos=sum(activos_ajus*fac_hog),
            Fisicos=sum(act_nofin_ajus*fac_hog),
            Financieros=sum(act_fin_ajus*fac_hog),
            Pasivos=sum(deuda_ajus*fac_hog)) %>%
  gt() %>% tab_header(title = "Riqueza neta ajustada, por deciles") %>%
```

```
fmt_number(c("Hogares","Riqueza","Activos","Físicos","Financieros","Pasivos"),
           decimals = 0) %>%
tab_style(cell_text(align = "right"),
           locations = cells_body(columns = everything(), rows = everything())) %>%
tab_style(cell_text(align = "center"),
           locations = cells_column_labels(columns = everything()))
```

Cuadro 30
Riqueza neta ajustada, por deciles

decil a	Hogares	Riqueza	Activos	Físicos	Financieros	Pasivos
I	3 658 099	-418 753 826 016	532 601 896 905	522 379 021 319	10 222 875 585	951 355 722 921
II	3 670 026	49 014 847 311	128 249 744 083	119 513 965 371	8 735 778 712	79 234 896 771
III	3 664 860	179 315 368 806	270 989 408 572	259 511 139 433	11 478 269 139	91 674 039 766
IV	3 660 712	508 137 126 005	766 087 960 005	742 626 651 927	23 461 308 078	257 950 833 999
V	3 667 659	1 136 742 228 529	1 484 872 254 184	1 448 595 418 554	36 276 835 629	348 130 025 654
VI	3 665 037	1 937 720 283 752	2 290 778 254 753	2 257 812 273 701	32 965 981 053	353 057 971 001
VII	3 658 942	3 144 768 575 354	3 535 322 645 474	3 488 938 744 918	46 383 900 556	390 554 070 120
VIII	3 666 697	4 699 281 323 620	5 076 894 694 841	4 993 295 068 284	83 599 626 557	377 613 371 222
IX	3 667 169	7 262 537 875 374	7 720 087 769 759	7 564 307 553 472	155 780 216 288	457 549 894 385
X	3 665 479	39 632 079 898 264	40 344 434 076 424	23 910 762 535 021	16 433 671 541 403	712 354 178 160

Fuente: Elaboración propia.

Cuadro de riqueza neta ajustada, del decil X:

```
Base %>% filter(centil_a>90) %>%
group_by(centil_a) %>%
summarise(Hogares=sum(fac_hog),
           Riqueza=sum(riqueza_ajus*fac_hog),
           Activos=sum(activos_ajus*fac_hog),
           Físicos=sum(act_nofin_ajus*fac_hog),
           Financieros=sum(act_fin_ajus*fac_hog),
           Pasivos=sum(deuda_ajus*fac_hog)) %>%
gt() %>% tab_header(title = "Riqueza neta ajustada, decil X") %>%
fmt_number(c("Hogares","Riqueza","Activos","Físicos","Financieros","Pasivos"),
           decimals = 0) %>%
tab_style(cell_text(align = "right"),
           locations = cells_body(columns = everything(), rows = everything())) %>%
tab_style(cell_text(align = "center"),
           locations = cells_column_labels(columns = everything()))
```

Cuadro 31
Riqueza neta ajustada, decil X

centil a	Hogares	Riqueza	Activos	Físicos	Financieros	Pasivos
91	367 226	1 018 440 758 105	1 065 587 512 260	1 054 577 491 113	11 010 021 147	47 146 754 155
92	361 164	1 068 903 459 905	1 129 719 902 314	1 117 485 188 955	12 234 713 360	60 816 442 409
93	371 215	1 203 805 876 973	1 264 283 580 620	1 227 250 270 022	37 033 310 599	60 477 703 648
94	366 868	1 307 607 604 385	1 370 254 529 658	1 328 432 756 113	41 821 773 545	62 646 925 272
95	366 617	1 427 282 299 556	1 452 672 997 857	1 442 483 067 731	10 189 930 126	25 390 698 301
96	361 700	1 558 579 149 496	1 614 782 526 599	1 488 614 633 054	126 167 893 546	56 203 377 104
97	371 288	1 861 214 185 348	1 930 866 940 232	1 868 151 590 123	62 715 350 110	69 652 754 885
98	365 675	2 253 449 938 940	2 361 413 316 273	2 254 942 985 452	106 470 330 821	107 963 377 333
99	366 091	3 249 319 857 169	3 337 157 619 361	3 152 187 237 953	184 970 381 409	87 837 762 193
100	367 635	24 683 476 768 388	24 817 695 151 248	8 976 637 314 507	15 841 057 836 741	134 218 382 860

Fuente: Elaboración propia.

Cuadro de riqueza neta (sin ajuste) promedio por hogar, por deciles:

```
Base %>% group_by(decil) %>%
  summarise(Hogares=sum(fac_hog),
            Riqueza=weighted.mean(riqueza,fac_hog),
            Activos=weighted.mean(activos,fac_hog),
            Fisicos=weighted.mean(act_nofin,fac_hog),
            Financieros=weighted.mean(act_fin,fac_hog),
            Pasivos=weighted.mean(deuda,fac_hog)) %>%
  gt() %>% tab_header(title = "Riqueza neta promedio (sin Ajuste) por decil") %>%
  fmt_number(c("Hogares","Riqueza","Activos","Fisicos","Financieros","Pasivos"),
            decimals = 0) %>%
  tab_style(cell_text(align = "right"),
            locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(align = "center"),
            locations = cells_column_labels(columns = everything()))
```

Cuadro 32
Riqueza neta promedio (sin ajuste) por decil

decil	Hogares	Riqueza	Activos	Físicos	Financieros	Pasivos
I	3 663 464	-33 656	32 480	31 275	1 205	66 137
II	3 664 293	9 177	16 401	15 409	992	7 224
III	3 663 192	29 632	47 300	45 060	2 240	17 668
IV	3 664 680	79 820	104 177	100 450	3 727	24 357
V	3 664 754	173 319	213 467	209 213	4 254	40 147
VI	3 661 226	288 222	336 401	332 058	4 342	48 179
VII	3 668 438	461 335	504 036	497 145	6 891	42 700
VIII	3 665 364	678 624	729 156	719 337	9 819	50 532
IX	3 662 102	1 040 273	1 099 595	1 087 941	11 654	59 322
X	3 667 167	3 422 912	3 508 717	3 442 557	66 160	85 804

Fuente: Elaboración propia.

Cuadro de riqueza neta (sin ajuste) promedio por hogar, del decil X:

```
Base %>% filter(centil>90) %>%
  group_by(centil) %>%
  summarise(Hogares=sum(fac_hog),
            Riqueza=weighted.mean(riqueza,fac_hog),
            Activos=weighted.mean(activos,fac_hog),
            Fisicos=weighted.mean(act_nofin,fac_hog),
            Financieros=weighted.mean(act_fin,fac_hog),
            Pasivos=weighted.mean(deuda,fac_hog)) %>%
  gt() %>% tab_header(title = "Riqueza neta promedio (sin ajuste) decil X") %>%
  fmt_number(c("Hogares","Riqueza","Activos","Fisicos","Financieros","Pasivos"),
            decimals = 0) %>%
  tab_style(cell_text(align = "right"),
            locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(align = "center"),
            locations = cells_column_labels(columns = everything()))
```

Cuadro 33
Riqueza neta promedio (sin ajuste) decil X

centil	Hogares	Riqueza	Activos	Físicos	Financieros	Pasivos
91	368 839	1 440 336	1 521 046	1 502 722	18 324	80 710
92	365 405	1 544 703	1 584 014	1 576 855	7 159	39 312
93	365 878	1 678 953	1 750 933	1 729 801	21 132	71 980
94	367 756	1 847 717	1 952 849	1 937 415	15 434	105 132
95	365 802	2 025 678	2 071 268	2 059 884	11 384	45 590
96	366 973	2 207 724	2 254 118	2 223 262	30 856	46 394
97	364 762	2 595 246	2 676 426	2 648 519	27 907	81 180
98	367 453	3 155 277	3 281 446	3 214 110	67 336	126 170
99	364 230	4 273 879	4 408 364	4 281 240	127 124	134 485
100	370 069	13 373 144	13 499 792	13 167 085	332 707	126 648

Fuente: Elaboración propia.

Cuadro de riqueza neta ajustada promedio por hogar, por deciles:

```
Base %>% group_by(decil_a) %>%
  summarise(Hogares=sum(fac_hog),
            Riqueza=weighted.mean(riqueza_ajus,fac_hog),
            Activos=weighted.mean(activos_ajus,fac_hog),
            Fisicos=weighted.mean(act_nofin_ajus,fac_hog),
            Financieros=weighted.mean(act_fin_ajus,fac_hog),
            Pasivos=weighted.mean(deuda_ajus,fac_hog)) %>%
  gt() %>% tab_header(title = "Riqueza neta ajustada promedio por decil") %>%
  fmt_number(c("Hogares", "Riqueza", "Activos", "Fisicos", "Financieros", "Pasivos"),
            decimals = 0) %>%
  tab_style(cell_text(aligned = "right"),
            locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(aligned = "center"),
            locations = cells_column_labels(columns = everything()))
```

Cuadro 34
Riqueza neta ajustada promedio por decil

decil a	Hogares	Riqueza	Activos	Físicos	Financieros	Pasivos
I	3 658 099	-114 473	145 595	142 801	2 795	260 068
II	3 670 026	13 355	34 945	32 565	2 380	21 590
III	3 664 860	48 928	73 943	70 811	3 132	25 014
IV	3 660 712	138 808	209 273	202 864	6 409	70 465
V	3 667 659	309 937	404 856	394 965	9 891	94 919
VI	3 665 037	528 704	625 036	616 041	8 995	96 331
VII	3 658 942	859 475	966 214	953 538	12 677	106 740
VIII	3 666 697	1 281 612	1 384 596	1 361 796	22 800	102 985
IX	3 667 169	1 980 421	2 105 190	2 062 710	42 480	124 769
X	3 665 479	10 812 251	11 006 593	6 523 230	4 483 363	194 341

Fuente: Elaboración propia.

Cuadro de riqueza neta ajustada promedio por hogar del decil X:

```
Base %>% filter(centil_a>90) %>%
  group_by(centil_a) %>%
  summarise(Hogares=sum(fac_hog),
            Riqueza=weighted.mean(riqueza_ajus,fac_hog),
            Activos=weighted.mean(activos_ajus,fac_hog),
            Fisicos=weighted.mean(act_nofin_ajus,fac_hog),
            Financieros=weighted.mean(act_fin_ajus,fac_hog),
```



```

Pasivos=weighted.mean(deuda_ajus,fac_hog)) %>%
gt() %>% tab_header(title = "Riqueza neta ajustada del decil X") %>%
fmt_number(c("Hogares","Riqueza","Activos","Físicos","Financieros","Pasivos"),
  decimals = 0) %>%
tab_style(cell_text(aligned = "right"),
  locations = cells_body(columns = everything(), rows = everything())) %>%
tab_style(cell_text(aligned = "center"),
  locations = cells_column_labels(columns = everything()))

```

Cuadro 35
Riqueza neta ajustada promedio del decil X

centil a	Hogares	Riqueza	Activos	Físicos	Financieros	Pasivos
91	367 226	2 773 335	2 901 721	2 871 740	29 982	128 386
92	361 164	2 959 607	3 127 997	3 094 121	33 876	168 390
93	371 215	3 242 880	3 405 799	3 306 036	99 762	162 918
94	366 868	3 564 245	3 735 007	3 621 010	113 997	170 761
95	366 617	3 893 115	3 962 372	3 934 578	27 794	69 257
96	361 700	4 309 038	4 464 425	4 115 606	348 819	155 387
97	371 288	5 012 858	5 200 456	5 031 543	168 913	187 598
98	365 675	6 162 439	6 457 683	6 166 522	291 161	295 244
99	366 091	8 875 716	9 115 651	8 610 393	505 258	239 934
100	367 635	67 141 259	67 506 345	24 417 254	43 089 091	365 086

Fuente: Elaboración propia.

Cálculo de coeficientes e índices de desigualdad. Coeficiente de Gini (cifras sin ajuste):

```

Base %>%
summarise(Gini_Riqueza_Neta_CTR=as.numeric(Gini_CTR_BS(riqueza,fac_hog)),
  Gini_Riqueza_Neta_RSV=as.numeric(Gini_RSV(riqueza,fac_hog)),
  Gini_Activos=Gini(activos,fac_hog),
  Gini_Físicos=Gini(act_nofin,fac_hog),
  Gini_Financieros=Gini(act_fin,fac_hog),
  Gini_Pasivos=Gini(deuda,fac_hog)) %>%
gt() %>% tab_header(title = "Coeficiente de Gini (cifras sin ajuste)") %>%
fmt_number(c("Gini_Riqueza_Neta_CTR","Gini_Riqueza_Neta_RSV","Gini_Activos",
  "Gini_Físicos","Gini_Financieros","Gini_Pasivos"),decimals = 5) %>%
tab_style(cell_text(aligned = "right"),
  locations = cells_body(columns = everything(), rows = everything())) %>%
tab_style(cell_text(aligned = "center"),
  locations = cells_column_labels(columns = everything()))

```

Cuadro 36
Coeficiente de Gini (cifras sin ajuste)

Gini_Riqueza_Neta_CTR	Gini_Riqueza_Neta_RSV	Gini_Activos	Gini_Físicos	Gini_Financieros	Gini_Pasivos
0,72218	0,71601	0,69760	0,69821	0,94005	0,88050

Fuente: Elaboración propia.

Coeficiente de Gini (cifras ajustadas):

```

Base %>%
summarise(Gini_Riqueza_Neta_CTR=as.numeric(Gini_CTR_BS(riqueza_ajus,fac_hog)),
  Gini_Riqueza_Neta_RSV=as.numeric(Gini_RSV(riqueza_ajus,fac_hog)),
  Gini_Activos=Gini(activos_ajus,fac_hog),
  Gini_Físicos=Gini(act_nofin_ajus,fac_hog),
  Gini_Financieros=Gini(act_fin_ajus,fac_hog),

```

```

Gini_Pasivos=Gini(deuda_ajus,fac_hog)) %>%
gt() %>% tab_header(title = "Coeficiente de Gini (cifras con ajuste)") %>%
fmt_number(c("Gini_Riqueza_Neta_CTR", "Gini_Riqueza_Neta_RSV", "Gini_Activos",
             "Gini_Físicos", "Gini_Financieros", "Gini_Pasivos"),
           decimals = 5) %>%
tab_style(cell_text(align = "right"),
          locations = cells_body(columns = everything(), rows = everything())) %>%
tab_style(cell_text(align = "center"),
          locations = cells_column_labels(columns = everything()))

```

Cuadro 37
Coeficiente de Gini (cifras con ajuste)

Gini_Riqueza_Neta_CTR	Gini_Riqueza_Neta_RSV	Gini_Activos	Gini_Físicos	Gini_Financieros	Gini_Pasivos
0,80464	0,79629	0,77360	0,69821	0,99688	0,88050

Fuente: Elaboración propia.

Índice de Theil (cifras sin ajuste)

```

Base %>%
summarise(Theil_Riqueza=theil.wtd(riqueza,fac_hog),
           Theil_Activos=theil.wtd(activos,fac_hog),
           Theil_Físicos=theil.wtd(act_nofin,fac_hog),
           Theil_Financieros=theil.wtd(act_fin,fac_hog),
           Theil_Pasivos=theil.wtd(deuda,fac_hog)) %>%
gt() %>% tab_header(title = "Índice de Theil (cifras sin ajuste)") %>%
fmt_number(c("Theil_Riqueza", "Theil_Activos", "Theil_Físicos", "Theil_Financieros",
             "Theil_Pasivos"),
           decimals = 5) %>%
tab_style(cell_text(align = "right"),
          locations = cells_body(columns = everything(), rows = everything())) %>%
tab_style(cell_text(align = "center"),
          locations = cells_column_labels(columns = everything()))

```

Cuadro 38
Índice de Theil (cifras sin ajuste)

Theil_Riqueza	Theil_Activos	Theil_Físicos	Theil_Financieros	Theil_Pasivos
1,12876	1,09647	1,08761	2,36895	1,28861

Fuente: Elaboración propia.

Índice de Theil (cifras con ajuste)

```

Base %>%
summarise(Theil_Riqueza=theil.wtd(riqueza_ajus,fac_hog),
           Theil_Activos=theil.wtd(activos_ajus,fac_hog),
           Theil_Físicos=theil.wtd(act_nofin_ajus,fac_hog),
           Theil_Financieros=theil.wtd(act_fin_ajus,fac_hog),
           Theil_Pasivos=theil.wtd(deuda_ajus,fac_hog)) %>%
gt() %>% tab_header(title = "Índice de Theil (cifras con ajuste)") %>%
fmt_number(c("Theil_Riqueza", "Theil_Activos", "Theil_Físicos", "Theil_Financieros",
             "Theil_Pasivos"),
           decimals = 5) %>%
tab_style(cell_text(align = "right"),
          locations = cells_body(columns = everything(), rows = everything())) %>%

```

```
tab_style(cell_text(align = "center"),  
          locations = cells_column_labels(columns = everything()))
```

Cuadro 39
Índice de Theil (cifras con ajuste)

Theil_Riqueza	Theil_Activos	Theil_Físicos	Theil_Financieros	Theil_Pasivos
2,62198	2,50410	1,08761	7,14932	1,28861

Fuente: Elaboración propia.

XIII. Chile: Encuesta Financiera de Hogares

Librerías requeridas:

```
library(haven)
library(tidyverse)
library(gt)
library(dineq)
library(DescTools)
library(GiniWegNeg)
```

A. Base de 2007

Se abre la base de datos de 2007:

```
efh2007 <- read_dta("Bases/EFH_2007.dta")
efh2007 <- as_tibble(efh2007)
```

Construcción de variables

Se constuyen las variables de riqueza.

Se ha considerado, como parte de los activos físicos a:

- Vivienda principal (vp),
- Segunda propiedad inmueble y otras propiedades (otp), y
- Valor de los activos automotrices del hogar (a_auto).

Como activos y pasivos financieros a:

- Activos con retorno fijo: cuentas de ahorro, depósitos a plazo y bonos (a_fijo),
- Activos con retorno variable: acciones, inversiones en fondos mutuos, participación en sociedades o fondos de inversión e inversiones en otros instrumentos de renta variable (a_var),

- Deuda asociada a la vivienda principal (dhip_vp),
- Deuda asociada a otras propiedades (dhip_otp),
- Créditos automotrices (dauto),
- Deuda con casas comerciales (dtcc),
- Préstamos de consumo en financieras o casas comerciales (dfin),
- Préstamos de consumo bancario (dcbco),
- Créditos sociales: cajas de compensación y cooperativas (dsocial),
- Deudas educacionales (deduc),
- Deuda de tarjetas de crédito y líneas de crédito bancarias (dtbco), y
- Otras deudas (dotros).

```
efh2007 <- efh2007 %>%
  mutate(a_fisico=otp+a_auto+vp) %>%
  mutate(deuda=dtcc+dfin+dauto+dsocial+deduc+dotros+dhip_vp+dhip_otp+dtbco+dcbco)
# Depuramos base
efh2007 <- efh2007 %>% drop_na(a_fisico,a_var,a_fijo,deuda)
```

Se depura la base de datos

Los campos que tienen datos perdidos, los cuales se eliminan para llevar a cabo los cálculos.

```
efh2007 <- efh2007 %>% drop_na(a_fisico,a_var,a_fijo,deuda)
```

Se estima la cifra de riqueza neta

```
efh2007 <- efh2007 %>%
  mutate(riqueza=a_fisico+a_var+a_fijo-deuda)
```

Se calculan los percentiles

Se divide la población en deciles y percentiles (1 a 100).

```
efh2007 <- efh2007 %>%
  group_by(imp) %>% arrange(riqueza) %>%
  mutate(facum=cumsum(factor)) %>%
  mutate(decil=ifelse(facum>sum(factor)*.1,2,1)) %>%
  mutate(decil=ifelse(facum>sum(factor)*.2,3,decil)) %>%
  mutate(decil=ifelse(facum>sum(factor)*.3,4,decil)) %>%
  mutate(decil=ifelse(facum>sum(factor)*.4,5,decil)) %>%
  mutate(decil=ifelse(facum>sum(factor)*.5,6,decil)) %>%
  mutate(decil=ifelse(facum>sum(factor)*.6,7,decil)) %>%
  mutate(decil=ifelse(facum>sum(factor)*.7,8,decil)) %>%
  mutate(decil=ifelse(facum>sum(factor)*.8,9,decil)) %>%
  mutate(decil=ifelse(facum>sum(factor)*.9,10,decil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.01,2,1)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.02,3,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.03,4,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.04,5,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.05,6,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.06,7,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.07,8,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.08,9,centil)) %>%
```

[illegible]


```

mutate(centil=ifelse(facum>sum(factor)*.64,65,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.65,66,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.66,67,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.67,68,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.68,69,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.69,70,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.70,71,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.71,72,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.72,73,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.73,74,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.74,75,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.75,76,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.76,77,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.77,78,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.78,79,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.79,80,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.80,81,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.81,82,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.82,83,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.83,84,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.84,85,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.85,86,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.86,87,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.87,88,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.88,89,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.89,90,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.90,91,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.91,92,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.92,93,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.93,94,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.94,95,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.95,96,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.96,97,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.97,98,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.98,99,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.99,100,centil))

```

1. Número de registros en la Encuesta Financiera de Hogares

Número de registros en la base de datos:

```

efh2007 %>% group_by(decil,imp) %>%
  summarise(n=n()) %>%
  pivot_wider(names_from = decil,values_from = n) %>%
  gt() %>% tab_header(title = "Número de registros por decil") %>%
  tab_spanner(label = "Deciles",columns = c(2:11)) %>%
  fmt_number(1:10,decimals = 0) %>%
  tab_style(cell_text(align = "right"),
    locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(align = "center"),
    locations = cells_column_labels(columns = everything()))

`summarise()` has grouped output by 'decil'. You can override using the
`.groups` argument.

```

Cuadro 40
Chile: número de registros por base y decil, 2007

imp	Deciles									
	1	2	3	4	5	6	7	8	9	10
0	310	270	257	193	178	229	217	289	313	587
1	450	321	339	256	231	289	290	373	437	842
2	453	326	319	267	231	296	291	372	438	835
3	454	328	322	261	236	294	285	370	438	840
4	448	326	331	258	242	295	287	365	438	838
5	449	330	329	263	233	291	288	369	445	831
6	444	323	342	253	235	294	285	367	448	837
7	444	326	330	262	235	289	294	378	434	836
8	446	315	340	264	231	294	286	372	442	838
9	451	328	323	265	238	292	282	374	441	834
10	439	332	338	259	232	295	290	369	442	832
11	443	325	331	261	235	293	288	372	439	841
12	457	324	325	263	237	293	283	372	442	832
13	442	319	339	264	239	285	293	373	440	834
14	442	321	337	264	233	292	289	372	443	835
15	456	324	327	255	232	294	293	377	430	840
16	447	315	341	262	234	288	289	371	440	841
17	439	329	338	260	232	290	289	368	454	829
18	442	320	339	263	235	291	286	370	448	834
19	437	332	337	259	234	289	289	377	439	835
20	445	330	328	264	231	294	290	368	440	838
21	447	323	340	254	236	292	283	388	435	830
22	430	331	339	264	233	296	285	380	445	825
23	439	337	322	265	234	294	288	372	439	838
24	451	324	327	267	235	292	285	368	449	830
25	448	329	326	264	237	287	286	375	446	830
26	444	323	343	254	234	289	292	380	432	837
27	443	328	331	265	232	291	291	371	444	832
28	446	316	338	262	236	297	285	378	439	831
29	440	322	343	257	234	295	286	378	436	837
30	442	326	332	261	245	293	285	373	445	826

Fuente: Elaboración propia.

Población con factores de expansión aplicados:

```
efh2007 %>% group_by(decil,imp) %>%
  summarise(P=sum(factor)) %>%
  pivot_wider(names_from = decil,values_from = P) %>%
  gt() %>% tab_header(title = "Hogares por decil") %>%
  tab_spanner(label = "Deciles",columns = c(2:11)) %>%
  fmt_number(1:10,decimals = 0) %>%
  tab_style(cell_text(align = "right"),
    locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(align = "center"),
    locations = cells_column_labels(columns = everything()))

`summarise()` has grouped output by 'decil'. You can override using the
`.groups` argument.
```



```
fmt_number(c("a_fisico", "a_fijo", "a_var", "deuda"), decimals = 0) %>%
tab_style(cell_text(aligned = "right"),
  locations = cells_body(columns = everything(), rows = everything())) %>%
tab_style(cell_text(aligned = "center"),
  locations = cells_column_labels(columns = everything()))
```

Cuadro 42
Chile: montos en activos físicos y financieros, y deuda, 2007
(En pesos chilenos)

imp	a fisico	a fijo	a var	deuda
0	74 655 348 858 373	1 016 647 089 027	1 746 521 313 300	8 268 427 703 308
1	102 452 337 754 883	1 604 353 818 311	3 265 900 874 084	12 269 343 551 308
2	103 863 458 391 282	1 817 957 070 483	3 240 532 305 642	12 263 935 430 290
3	102 628 464 126 671	1 471 577 002 491	2 970 051 034 437	12 157 862 319 608
4	102 081 509 751 782	1 497 874 718 720	3 897 505 756 228	12 161 257 212 348
5	102 921 233 758 594	1 625 564 478 828	3 296 406 710 829	12 068 311 057 479
6	101 972 730 538 206	1 765 994 681 739	3 038 102 337 765	12 185 742 702 381
7	103 402 972 294 651	1 830 265 121 421	3 584 903 311 978	12 282 594 617 543
8	102 430 619 634 728	1 399 783 911 904	3 195 171 536 456	12 262 102 112 120
9	102 665 934 076 265	1 643 038 406 438	2 996 918 480 142	12 196 984 244 858
10	103 076 387 538 572	1 480 386 435 471	3 709 209 088 277	12 249 418 781 104
11	102 440 543 224 676	1 399 813 623 852	3 356 982 849 855	12 251 644 460 477
12	103 003 958 943 324	1 477 022 011 965	2 944 847 048 143	12 437 361 414 720
13	102 494 022 904 416	1 470 892 298 774	2 994 670 557 755	12 479 374 402 487
14	103 358 454 417 860	1 620 669 204 450	3 317 528 997 373	12 336 222 588 029
15	101 782 128 590 267	1 454 333 249 293	3 143 916 157 174	12 208 546 492 853
16	102 212 835 330 236	1 466 521 882 116	3 267 255 944 846	12 496 571 684 726
17	102 127 416 067 554	1 859 392 057 739	3 002 606 860 945	12 468 854 604 279
18	101 996 755 491 038	1 843 235 302 016	3 079 758 629 104	12 474 524 657 318
19	102 087 847 229 853	1 436 992 917 474	2 988 706 479 241	12 317 439 368 202
20	102 399 176 362 047	1 637 646 839 106	3 046 845 443 860	12 324 282 636 184
21	103 381 025 783 421	1 488 820 229 424	3 490 510 411 608	12 220 502 537 549
22	103 310 289 080 642	1 571 798 877 621	3 049 284 490 184	12 358 242 387 501
23	102 336 818 733 280	1 508 992 318 736	3 024 157 214 270	12 172 582 609 148
24	101 653 831 536 550	1 838 827 952 212	3 065 194 885 694	12 092 700 229 143
25	102 431 130 752 409	1 445 791 111 062	3 350 824 200 055	12 313 198 765 785
26	102 395 395 200 607	1 706 800 678 926	3 394 692 382 574	12 202 644 606 053
27	102 767 126 459 088	1 605 797 777 696	3 425 220 559 779	12 289 615 623 672
28	102 342 284 831 557	1 704 043 885 019	3 084 564 663 350	12 420 406 827 601
29	102 081 587 196 854	1 441 494 490 095	3 343 842 559 391	12 114 256 709 397
30	102 156 748 437 465	1 463 315 064 285	2 848 522 472 295	12 340 409 761 903

Fuente: Elaboración propia.

Se comparan estas cantidades con las cifras de cuentas nacionales, se estiman los factores de ajuste y se agregan a la base.

```
fac_ajus <- read.csv("Bases/factores_ajustes2007.csv")
efh2007 <- left_join(efh2007, fac_ajus, by="imp")
remove(fac_ajus)
```

Se aplican los factores estimados con una elasticidad mayor a uno en el caso de los activos financieros.

```
efh2007 <- efh2007 %>% group_by(imp) %>%
  mutate(a_fijo_p = (((a_fijo*factor)/sum(a_fijo*factor))^1.1)/
    sum(((a_fijo*factor)/sum(a_fijo*factor))^1.1)) %>%
  mutate(a_var_p = (((a_var*factor)/sum(a_var*factor))^1.2)/
    sum(((a_var*factor)/sum(a_var*factor))^1.2)) %>%
  mutate(deuda_p = (deuda*factor)/sum(deuda*factor))
efh2007 <- efh2007 %>%
  mutate(a_fisico_a = a_fisico) %>%
```

```
mutate(a_fijo_a=a_fijo+(a_fijo_p*c_fijo)/factor) %>%
mutate(a_var_a=a_var+(a_var_p*c_var)/factor) %>%
mutate(deuda_a=deuda+(deuda_p*c_deuda)/factor)
```

Se genera el cuadro de control

Se generan las cifras por tipo de activo para confrontarlas con las equivalentes de cuentas nacionales.

```
efh2007 %>% group_by(imp) %>%
  summarise(a_fisico_a=sum(a_fisico_a*factor),
            a_fijo_a=sum(a_fijo_a*factor),
            a_var_a=sum(a_var_a*factor),
            deuda_a=sum(deuda_a*factor)) %>%
  gt() %>% tab_header(title = "Cifras ajustadas de la encuesta",
                    subtitle = "Pesos chilenos") %>%
  fmt_number(c("a_fisico_a", "a_fijo_a", "a_var_a", "deuda_a"), decimals = 0) %>%
  tab_style(cell_text(aligned = "right"),
            locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(aligned = "center"),
            locations = cells_column_labels(columns = everything()))
```

Cuadro 43
Chile: cifras ajustadas de la encuesta, 2007
(En pesos chilenos)

imp	a fisico a	a fijo a	a var a	deuda a
0	74 655 348 858 373	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
1	102 452 337 754 883	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
2	103 863 458 391 282	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
3	102 628 464 126 671	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
4	102 081 509 751 782	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
5	102 921 233 758 594	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
6	101 972 730 538 206	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
7	103 402 972 294 651	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
8	102 430 619 634 728	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
9	102 665 934 076 265	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
10	103 076 387 538 572	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
11	102 440 543 224 676	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
12	103 003 958 943 324	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
13	102 494 022 904 416	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
14	103 358 454 417 860	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
15	101 782 128 590 267	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
16	102 212 835 330 236	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
17	102 127 416 067 554	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
18	101 996 755 491 038	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
19	102 087 847 229 853	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
20	102 399 176 362 047	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
21	103 381 025 783 421	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
22	103 310 289 080 642	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
23	102 336 818 733 280	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
24	101 653 831 536 550	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
25	102 431 130 752 409	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
26	102 395 395 200 607	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
27	102 767 126 459 088	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
28	102 342 284 831 557	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
29	102 081 587 196 854	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200
30	102 156 748 437 465	14 959 606 069 050	48 786 933 053 250	26 180 733 423 200

Fuente: Elaboración propia.

Se calcula la riqueza ajustada.

```
efh2007 <- efh2007 %>%
  mutate(riqueza_a=a_fisico+a_var_a+a_fijo_a-deuda_a)
```

Se calculan los percentiles

Se divide entre percentiles de riqueza ajustada.

```
efh2007 <- efh2007 %>%
  group_by(imp) %>% arrange(riqueza_a) %>%
  mutate(facum=cumsum(factor)) %>%
  mutate(decil_a=ifelse(facum>sum(factor)*.1,2,1)) %>%
  mutate(decil_a=ifelse(facum>sum(factor)*.2,3,decil_a)) %>%
  mutate(decil_a=ifelse(facum>sum(factor)*.3,4,decil_a)) %>%
  mutate(decil_a=ifelse(facum>sum(factor)*.4,5,decil_a)) %>%
  mutate(decil_a=ifelse(facum>sum(factor)*.5,6,decil_a)) %>%
  mutate(decil_a=ifelse(facum>sum(factor)*.6,7,decil_a)) %>%
  mutate(decil_a=ifelse(facum>sum(factor)*.7,8,decil_a)) %>%
  mutate(decil_a=ifelse(facum>sum(factor)*.8,9,decil_a)) %>%
  mutate(decil_a=ifelse(facum>sum(factor)*.9,10,decil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.01,2,1)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.02,3,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.03,4,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.04,5,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.05,6,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.06,7,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.07,8,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.08,9,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.09,10,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.10,11,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.11,12,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.12,13,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.13,14,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.14,15,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.15,16,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.16,17,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.17,18,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.18,19,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.19,20,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.20,21,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.21,22,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.22,23,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.23,24,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.24,25,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.25,26,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.26,27,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.27,28,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.28,29,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.29,30,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.30,31,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.31,32,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.32,33,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.33,34,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.34,35,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.35,36,centil_a)) %>%
```


[illegible]


```
mutate(centil_a=ifelse(facum>sum(factor)*.91,.92,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.92,.93,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.93,.94,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.94,.95,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.95,.96,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.96,.97,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.97,.98,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.98,.99,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.99,100,centil_a))
```

3. Riqueza neta por decil (datos sin ajuste)

Se generan los datos para el cuadro 5.7:

```
# Cuadro 5.7 Riqueza por decil
efh2007 %>% filter(imp>0) %>%
  group_by(imp,decil) %>%
  summarise(Hogares=sum(factor),
            riqueza=sum(riqueza*factor),
            activos=sum((a_fisico+a_fijo+a_var)*factor),
            a_fisico=sum(a_fisico*factor),
            a_finan=sum((a_fijo+a_var)*factor),
            deuda=sum(deuda*factor)) %>%
  group_by(decil) %>%
  summarise(Hogares=mean(Hogares)/1000,
            Riqueza=mean(riqueza)/1000,
            Activos_Totales=mean(activos)/1000,
            Activos_Físicos=mean(a_fisico)/1000,
            Activos_Financieros=mean(a_finan)/1000,
            Deuda=mean(deuda)/1000) %>%
  gt() %>% tab_header(title = "Riqueza por decil",
                    subtitle = "Hogares y miles de pesos chilenos") %>%
  fmt_number(c("Hogares", "Riqueza", "Activos_Totales", "Activos_Físicos",
              "Activos_Financieros", "Deuda"), decimals = 0) %>%
  tab_style(cell_text(align = "right"),
            locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(align = "center"),
            locations = cells_column_labels(columns = everything()))

`summarise()` has grouped output by 'imp'. You can override using the `.groups`
argument.
```

Cuadro 44
Chile: riqueza por decil, 2007
(En hogares y miles de pesos chilenos)

decil	Hogares	Riqueza	Activos Totales	Activos Físicos	Activos Financieros	Deuda
I	384	-1 388 686 807	1 086 576 136	1 063 623 082	22 953 054	2 475 262 943
II	385	-12 650 605	35 476 556	34 771 930	704 625	48 127 161
III	384	394 710 861	1 058 431 381	1 024 208 394	34 222 987	663 720 520
IV	384	1 782 286 620	2 600 161 212	2 543 297 168	56 864 044	817 874 592
V	385	3 232 974 280	4 159 188 085	4 128 750 371	30 437 714	926 213 805
VI	385	4 705 706 729	5 828 020 243	5 771 303 917	56 716 327	1 122 313 515
VII	385	6 339 601 110	7 168 353 691	7 103 661 203	64 692 488	828 752 580
VIII	385	9 064 146 517	10 096 383 298	9 834 825 080	261 558 219	1 032 236 781
IX	385	14 461 334 453	15 665 606 889	15 266 441 529	399 165 360	1 204 272 436
X	386	56 481 634 232	59 643 424 379	55 770 951 475	3 872 472 905	3 161 790 148

Fuente: Elaboración propia.

Se generan datos desglosados del décimo decil:

```
efh2007 %>% filter(imp>0&centil>90) %>%
  group_by(imp,centil) %>%
  summarise(Hogares=sum(factor),
            riqueza=sum(riqueza*factor),
            activos=sum((a_fisico+a_fijo+a_var)*factor),
            a_fisico=sum(a_fisico*factor),
            a_finan=sum((a_fijo+a_var)*factor),
            deuda=sum(deuda*factor)) %>%
  group_by(centil) %>%
  summarise(Hogares=mean(Hogares),
            Riqueza=mean(riqueza)/1000,
            Activos_Totales=mean(activos)/1000,
            Activos_Fisicos=mean(a_fisico)/1000,
            Activos_Financieros=mean(a_finan)/1000,
            Deuda=mean(deuda)/1000) %>%
  gt() %>% tab_header(title = "Riqueza del decil X",
                    subtitle = "Hogares y miles de pesos chilenos") %>%
  fmt_number(c("Hogares", "Riqueza", "Activos_Totales", "Activos_Fisicos",
              "Activos_Financieros", "Deuda"), decimals = 0) %>%
  tab_style(cell_text(aligned = "right"),
            locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(aligned = "center"),
            locations = cells_column_labels(columns = everything()))

`summarise()` has grouped output by 'imp'. You can override using the `.groups`
argument.
```

Cuadro 45
Chile: riqueza del decil X, 2007
(En hogares y miles de pesos chilenos)

centil	Hogares	Riqueza	Activos Totales	Activos Físicos	Activos Financieros	Deuda
91	38 780	2 068 032 667	2 196 727 599	2 123 910 388	72 817 212	128 694 932
92	38 408	2 283 287 582	2 500 455 162	2 363 415 257	137 039 905	217 167 581
93	38 272	2 553 160 812	2 790 924 697	2 613 055 239	177 869 458	237 763 886
94	38 722	2 826 724 375	3 041 871 314	2 901 905 959	139 965 355	215 146 939
95	38 676	3 227 259 530	3 509 164 129	3 399 101 939	110 062 190	281 904 599
96	38 261	3 766 515 722	4 087 401 545	3 820 205 189	267 196 355	320 885 823
97	37 844	4 747 653 258	5 139 658 959	4 800 147 273	339 511 686	392 005 700
98	39 473	6 262 679 398	6 580 434 437	6 153 281 945	427 152 493	317 755 039
99	38 489	8 482 897 566	8 956 792 596	8 140 733 024	816 059 573	473 895 030
100	38 678	20 263 423 323	20 839 993 942	19 455 195 263	1 384 798 679	576 570 619

Fuente: Elaboración propia.

4. Riqueza neta ajustada por decil

Se generan los datos para el cuadro AB.20:

```
efh2007 %>% filter(imp>0) %>%
  group_by(imp,decil_a) %>%
  summarise(Hogares=sum(factor),
            riqueza_a=sum(riqueza_a*factor),
            activos_a=sum((a_fisico_a+a_fijo_a+a_var_a)*factor),
            a_fisico_a=sum(a_fisico_a*factor),
            a_finan_a=sum((a_fijo_a+a_var_a)*factor),
            deuda_a=sum(deuda_a*factor)) %>%
```

```
group_by(decil_a) %>%
summarise(Hogares=mean(Hogares),
           Riqueza_a=mean(riqueza_a)/1000,
           Activos_Totales_a=mean(activos_a)/1000,
           Activos_Físicos_a=mean(a_fisico_a)/1000,
           Activos_Financieros_a=mean(a_finan_a)/1000,
           Deuda_a=mean(deuda_a)/1000) %>%
gt() %>% tab_header(title = "Riqueza ajustada por decil",
                    subtitle = "Hogares y miles de pesos chilenos") %>%
fmt_number(c("Hogares","Riqueza_a","Activos_Totales_a","Activos_Físicos_a",
             "Activos_Financieros_a","Deuda_a"),decimals = 0) %>%
tab_style(cell_text(aligned = "right"),
          locations = cells_body(columns = everything(), rows = everything())) %>%
tab_style(cell_text(aligned = "center"),
          locations = cells_column_labels(columns = everything()))

`summarise()` has grouped output by 'imp'. You can override using the `.groups`
argument.
```

Cuadro 46
Chile: riqueza ajustada por decil, 2007
(En hogares y miles de pesos chilenos)

decil_a	Hogares	Riqueza_a	Activos_Totales_a	Activos_Físicos_a	Activos_Financieros_a	Deuda_a
I	384 067	-6 135 650 588	5 734 263 926	5 572 423 765	161 840 160	11 869 914 513
II	384 507	-201 934 540	631 812 311	603 452 925	28 359 386	833 746 851
III	383 944	51 738 805	427 662 642	407 899 546	19 763 096	375 923 837
IV	385 338	1 073 449 232	2 674 675 807	2 521 932 708	152 743 099	1 601 226 575
V	384 941	2 565 282 901	3 741 051 528	3 617 318 725	123 732 803	1 175 768 627
VI	385 072	4 166 234 861	5 277 367 687	5 154 505 167	122 862 520	1 111 132 825
VII	384 978	5 959 936 993	6 949 757 758	6 757 888 464	191 869 295	989 820 765
VIII	384 826	8 846 636 712	10 213 206 476	9 734 546 082	478 660 394	1 366 569 763
IX	384 769	15 057 821 097	16 579 805 609	15 137 555 215	1 442 250 394	1 521 984 512
X	385 511	108 724 124 374	114 058 769 527	53 034 311 552	61 024 457 975	5 334 645 154

Fuente: Elaboración propia.

Se generan los datos desglosados del décimo decil:

```
efh2007 %>% filter(imp>0&centil_a>90) %>%
group_by(imp,centil_a) %>%
summarise(Hogares=sum(factor),
           riqueza_a=sum(riqueza_a*factor),
           activos_a=sum((a_fisico+a_fijo+a_var)*factor),
           a_fisico_a=sum(a_fisico_a*factor),
           a_finan_a=sum((a_fijo_a+a_var_a)*factor),
           deuda_a=sum(deuda_a*factor)) %>%
group_by(centil_a) %>%
summarise(Hogares=mean(Hogares),
           Riqueza_a=mean(riqueza_a)/1000,
           Activos_Totales_a=mean(activos_a)/1000,
           Activos_Físicos_a=mean(a_fisico_a)/1000,
           Activos_Financieros_a=mean(a_finan_a)/1000,
           Deuda_a=mean(deuda_a)/1000) %>%
gt() %>% tab_header(title = "Riqueza ajustada del decil X",
                    subtitle = "(En hogares y miles de pesos chilenos)") %>%
fmt_number(c("Hogares","Riqueza_a","Activos_Totales_a","Activos_Físicos_a",
             "Activos_Financieros_a","Deuda_a"),decimals = 0) %>%
tab_style(cell_text(aligned = "right"),
```

```

locations = cells_body(columns = everything(), rows = everything()) %>%
tab_style(cell_text(align = "center"),
locations = cells_column_labels(columns = everything()))

`summarise()` has grouped output by 'imp'. You can override using the `.groups`
argument.
```

Cuadro 47
Chile: riqueza ajustada del decil X, 2007
(En hogares y miles de pesos chilenos)

centil_a	Hogares	Riqueza_a	Activos_Totales_a	Activos_Físicos_a	Activos_Financieros_a	Deuda_a
91	38 886	2 313 113 929	2 437 370 947	2 409 942 319	239 370 905	336 199 294
92	37 668	2 528 952 459	2 581 507 079	2 556 564 360	211 719 353	239 331 254
93	38 769	2 915 104 612	2 887 579 477	2 841 601 494	421 825 898	348 322 779
94	37 762	3 267 404 885	3 201 320 082	3 146 356 630	507 903 099	386 854 844
95	39 675	4 091 849 878	3 794 414 036	3 703 772 539	888 007 323	499 929 984
96	38 281	5 115 214 329	4 615 032 371	4 495 510 992	1 217 507 986	597 804 649
97	38 793	6 740 537 527	5 902 887 983	5 763 997 033	1 417 869 458	441 328 965
98	38 229	10 206 740 989	6 832 920 310	6 429 690 704	4 609 695 402	832 645 117
99	38 633	19 177 589 294	10 271 298 959	9 506 431 264	10 377 161 293	706 003 264
100	38 816	52 367 616 472	14 989 136 114	12 180 444 218	41 133 397 260	946 225 005

Fuente: Elaboración propia.

Se estiman los coeficientes de desigualdad.

Para el caso de la riqueza neta se utiliza la propuesta de Raffinetti, Siletti y Vernizzi (2017), conocido como Gini RSV, que permite su estimación con valores negativos y sugieren aplicar su método cuando la proporción de hogares con valores negativos esté por arriba del 5%.

Gini cifras sin ajuste:

```

efh2007 %>% group_by(imp) %>%
  summarise(griqueza=as.numeric(Gini_RSV(riqueza,factor)),
            gactivos=Gini((a_fisico+a_fijo+a_var),factor),
            gfisico=Gini(a_fisico,factor),
            gfinanciero=Gini((a_fijo+a_var),factor),
            gdeuda=Gini(deuda,factor)) %>%
  summarise(Gini_riqueza=mean(griqueza),
            Gini_activos=mean(gactivos),
            Gini_físico=mean(gfisico),
            Gini_financiero=mean(gfinanciero),
            Gini_deuda=mean(gdeuda)) %>%
  gt() %>% tab_header(title = "Coeficiente de Gini") %>%
  fmt_number(c("Gini_riqueza","Gini_activos","Gini_físico",
              "Gini_financiero","Gini_deuda"),decimals = 6) %>%
  tab_style(cell_text(align = "right"),
            locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(align = "center"),
            locations = cells_column_labels(columns = everything()))
```

Cuadro 48
Chile: coeficiente de Gini, 2007

Gini_riqueza	Gini_activos	Gini_físico	Gini_financiero	Gini_deuda
0,723314	0,697136	0,692671	0,976000	0,858769

Fuente: Elaboración propia.

Gini con datos ajustados:

```
efh2007 %>% group_by(imp) %>%
  summarise(griqueza_a=as.numeric(Gini_RSV(riqueza_a,factor)),
            gactivos_a=Gini((a_fisico_a+a_fijo_a+a_var_a),factor),
            gfisico_a=Gini(a_fisico_a,factor),
            gfinanciero_a=Gini((a_fijo_a+a_var_a),factor),
            gdeuda_a=Gini(deuda_a,factor)) %>%
  summarise(Gini_riqueza_a=mean(griqueza_a),
            Gini_activos_a=mean(gactivos_a),
            Gini_fisico_a=mean(gfisico_a),
            Gini_financiero_a=mean(gfinanciero_a),
            Gini_deuda_a=mean(gdeuda_a)) %>%
  gt() %>% tab_header(title = "Coeficient de Gini (cifras ajustadas)") %>%
  fmt_number(c("Gini_riqueza_a","Gini_activos_a","Gini_fisico_a",
              "Gini_financiero_a","Gini_deuda_a"),decimals = 6) %>%
  tab_style(cell_text(align = "right"),
            locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(align = "center"),
            locations = cells_column_labels(columns = everything()))
```

Cuadro 49
Chile coeficiente de Gini (cifras ajustadas), 2007

Gini_riqueza_a	Gini_activos_a	Gini_físico_a	Gini_financiero_a	Gini_deuda_a
0,832447	0,785376	0,692671	0,980659	0,858769

Fuente: Elaboración propia.

Theil con datos sin ajustes:

```
efh2007 %>%
  summarise(triqueza=theil.wtd(riqueza,factor),
            tactivos=theil.wtd((a_fisico+a_fijo+a_var),factor),
            tfisico=theil.wtd(a_fisico,factor),
            tfinanciero=theil.wtd((a_fijo+a_var),factor),
            tdeuda=theil.wtd(deuda,factor)) %>%
  summarise(Theil_riqueza=mean(triqueza),
            Theil_activos=mean(tactivos),
            Theil_fisico=mean(tfisico),
            Theil_financiero=mean(tfinanciero),
            Theil_deuda=mean(tdeuda)) %>%
  gt() %>% tab_header(title = "Índice de Theil") %>%
  fmt_number(c("Theil_riqueza","Theil_activos","Theil_físico",
              "Theil_financiero","Theil_deuda"),decimals = 6) %>%
  tab_style(cell_text(align = "right"),
            locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(align = "center"),
            locations = cells_column_labels(columns = everything()))
```

Cuadro 50
Chile: índice de Theil, 2007

Theil_riqueza	Theil_activos	Theil_físico	Theil_financiero	Theil_deuda
0,907893	0,867005	0,824784	1,550956	1,311060

Fuente: Elaboración propia.

Theil con datos ajustados:

```
efh2007 %>%
  summarise(triqueza_a=theil.wtd(riqueza_a,factor),
            tactivos_a=theil.wtd((a_fisico_a+a_fijo_a+a_var_a),factor),
            tfisico_a=theil.wtd(a_fisico_a,factor),
            tfinanciero_a=theil.wtd((a_fijo_a+a_var_a),factor),
            tdeuda_a=theil.wtd(deuda_a,factor)) %>%
  summarise(Theil_riqueza_a=mean(triqueza_a),
            Theil_activos_a=mean(tactivos_a),
            Theil_fisico_a=mean(tfisico_a),
            Theil_financiero_a=mean(tfinanciero_a),
            Theil_deuda_a=mean(tdeuda_a)) %>%
  gt() %>% tab_header(title = "Índice de Theil (cifras ajustadas)") %>%
  fmt_number(c("Theil_riqueza_a","Theil_activos_a","Theil_fisico_a",
              "Theil_financiero_a","Theil_deuda_a"),decimals = 6) %>%
  tab_style(cell_text(align = "right"),
            locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(align = "center"),
            locations = cells_column_labels(columns = everything()))
```

Cuadro 51
Chile: índice de Theil (cifras ajustadas), 2007

Theil_riqueza_a	Theil_activos_a	Theil_fisico_a	Theil_financiero_a	Theil_deuda_a
1,529558	1,419923	0,824784	1,763140	1,311060

Fuente: Elaboración propia.

5. Pobreza de patrimonio

Se propone estimar la riqueza neta de patrimonio a partir del 50% de la media o mediana.

```
efh2007 <- efh2007 %>% group_by(imp) %>%
  mutate(relpov_m=if_else(riqueza_a<=(Quantile(riqueza_a,factor,probs=0.5)*0.5),factor,0)) %>%
  mutate(relpov_p=if_else(riqueza_a<=(Mean(riqueza_a,factor)*0.5),factor,0)) %>%
  mutate(relpov_f_m=if_else(a_fisico_a<=(Quantile(a_fisico_a,factor,probs=0.5)*0.5),factor,0)) %>%
  mutate(relpov_f_p=if_else(a_fisico_a<=(Mean(a_fisico_a,factor)*0.5),factor,0))
efh2007 %>% filter(imp>0) %>%
  group_by(imp) %>%
  summarise(hw=sum(factor),
            relpov_m=sum(relpov_m)/sum(factor),
            relpov_p=sum(relpov_p)/sum(factor),
            relpov_f_m=sum(relpov_f_m)/sum(factor),
            relpov_f_p=sum(relpov_f_p)/sum(factor)) %>%
  summarise(Hogares=mean(hw),
            Pobreza_m=mean(relpov_m),
            Pobreza_p=mean(relpov_p),
            Pobreza_f_m=mean(relpov_f_m),
            Pobreza_f_p=mean(relpov_f_p)) %>%
  gt() %>% tab_header(title = "Pobreza de patrimonio",
                    subtitle = "Porporción de hogares") %>%
  fmt_number(c("Pobreza_m","Pobreza_p","Pobreza_f_m","Pobreza_f_p"),
            decimals = 4) %>%
  tab_style(cell_text(align = "right"),
            locations = cells_body(columns = everything(), rows = everything())) %>%
```

```
tab_style(cell_text(align = "center"),
  locations = cells_column_labels(columns = everything()))
```

Cuadro 52
Chile: pobreza de patrimonio, 2007
(Proporción de hogares)

Hogares	Pobreza_m	Pobreza_p	Pobreza_f_m	Pobreza_f_p
3 847 952	0,3925	0,6975	0,3627	0,5224

Fuente: Elaboración propia.

B. Base de 2017

Se abre la base de datos de 2007 y se seleccionan las variables.

```
efh2017 <- read_dta("Bases/EFH2017_base_imputada.dta")
efh2017 <- as_tibble(efh2017)
efh2017 <- efh2017 %>%
  select(id,imp,factor,act_vp,act_otp,act_auto,act_otros,act_fin fija,act_ahcta,
    act_finvar,d_pcc,d_tcc,d_pbco,d_auto,d_caco,d_educ,d_otras,d_vp,d_otp,
    d_tbco,d_lbco)
```

Construcción de variables

Se construyen las variables de riqueza. Se ha considerado como parte de los activos físicos a:

- Vivienda principal (act_vp),
- Otras propiedades inmobiliarias (act_otp), y
- Valor de los activos automotrices del hogar (act_auto).
- Como activos y pasivos financieros a:
- Activos de renta fija: depósitos a plazo, bonos y ahorros (act_fin fija),
- Cuenta corriente (act_ahcta)
- Activos de renta variable: acciones, inversiones en fondos mutuos, participación en sociedades o fondos de inversión e inversiones en otros instrumentos de renta variable (act_finvar),
- Deuda asociada a la vivienda principal (d_vp),
- Deuda asociada a otras propiedades (d_otp),
- Créditos automotrices (d_auto),
- Préstamos de consumo en con casas comerciales (d_pcc),
- Deuda en tarjetas de crédito en casas comerciales (d_tcc),
- Préstamos de consumo bancario y en financieras (d_pbco),
- Créditos sociales: cajas de compensación y cooperativas (d_caco),
- Deudas educacionales (d_educ),
- Deuda de tarjetas de crédito bancarias (d_tbco),
- Deuda en líneas de crédito (d_lbco), y
- Otras deudas (d_otras).


```
efh2017 <- efh2017 %>%
  mutate(a_fisico=act_vp+act_otp+act_auto+act_otros) %>%
  mutate(a_fijo=act_fin fija+act_ahcta) %>%
  mutate(a_var=act_finvar) %>%
  mutate(deuda=d_pcc+d_tcc+d_pbco+d_auto+d_caco+d_educ+d_otras+
    d_vp+d_otp+d_tbco+d_lbco)
```

Se depura la base de datos. Se eliminan los datos perdidos de los campos para llevar a cabo los cálculos.

```
efh2017 <- efh2017 %>% drop_na(a_fisico,a_fijo,a_var,deuda)
```

Se estima la cifra de riqueza neta.

```
efh2017 <- efh2017 %>%
  mutate(riqueza=a_fisico+a_fijo+a_var-deuda)
```

Se calculan los percentiles. Se divide la población en deciles y percentiles (1 a 100).

```
efh2017 <- efh2017 %>%
  group_by(imp) %>% arrange(riqueza) %>%
  mutate(facum=cumsum(factor)) %>%
  mutate(decil=ifelse(facum>sum(factor)*.1,2,1)) %>%
  mutate(decil=ifelse(facum>sum(factor)*.2,3,decil)) %>%
  mutate(decil=ifelse(facum>sum(factor)*.3,4,decil)) %>%
  mutate(decil=ifelse(facum>sum(factor)*.4,5,decil)) %>%
  mutate(decil=ifelse(facum>sum(factor)*.5,6,decil)) %>%
  mutate(decil=ifelse(facum>sum(factor)*.6,7,decil)) %>%
  mutate(decil=ifelse(facum>sum(factor)*.7,8,decil)) %>%
  mutate(decil=ifelse(facum>sum(factor)*.8,9,decil)) %>%
  mutate(decil=ifelse(facum>sum(factor)*.9,10,decil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.01,2,1)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.02,3,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.03,4,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.04,5,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.05,6,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.06,7,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.07,8,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.08,9,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.09,10,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.10,11,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.11,12,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.12,13,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.13,14,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.14,15,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.15,16,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.16,17,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.17,18,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.18,19,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.19,20,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.20,21,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.21,22,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.22,23,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.23,24,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.24,25,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.25,26,centil)) %>%
  mutate(centil=ifelse(facum>sum(factor)*.36,27,centil)) %>%
```

[illegible]

```
mutate(centil=ifelse(facum>sum(factor)*.82,83,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.83,84,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.84,85,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.85,86,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.86,87,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.87,88,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.88,89,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.89,90,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.90,91,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.91,92,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.92,93,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.93,94,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.94,95,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.95,96,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.96,97,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.97,98,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.98,99,centil)) %>%
mutate(centil=ifelse(facum>sum(factor)*.99,100,centil))
```

1. Chile: número de registros en la Encuesta Financiera de Hogares

Número de registros en la base de datos:

```
efh2017 %>% group_by(decil,imp) %>%
  summarise(n=n()) %>%
  pivot_wider(names_from = decil,values_from = n) %>%
  gt() %>% tab_header(title = "Número de registros por decil") %>%
  tab_spanner(label = "Deciles",columns = c(2:11)) %>%
  fmt_number(1:10,decimals = 0) %>%
  tab_style(cell_text(align = "right"),
    locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(align = "center"),
    locations = cells_column_labels(columns = everything()))

`summarise()` has grouped output by 'decil'. You can override using the
`.groups` argument.
```

Cuadro 53
Chile: número de registros por base y decil, 2017

imp	Deciles									
	1	2	3	4	5	6	7	8	9	10
0	265	255	284	284	257	261	271	310	337	526
1	405	369	424	385	373	368	435	458	531	801
2	399	376	422	401	376	377	418	451	525	804
3	402	376	419	404	367	374	418	450	536	803
4	396	374	431	388	378	369	419	465	538	791
5	400	369	435	392	378	366	425	463	531	790
6	399	370	429	390	366	379	411	458	536	811
7	403	364	432	387	385	360	421	458	538	801
8	396	379	431	393	364	372	422	450	531	811
9	412	365	421	385	387	367	418	457	545	792
10	401	364	433	392	368	372	429	446	544	800
11	406	367	426	391	382	371	431	442	527	806
12	400	368	423	388	388	380	412	460	530	800
13	404	365	426	387	374	374	426	465	527	801
14	400	371	429	386	372	373	428	447	543	800
15	401	367	430	387	385	365	427	445	539	803
16	409	373	421	387	384	367	426	446	550	786
17	395	372	427	400	375	363	428	459	536	794

imp	Deciles									
	1	2	3	4	5	6	7	8	9	10
18	404	365	433	380	377	372	419	467	532	800
19	400	368	435	387	379	371	421	447	537	804
20	407	367	428	389	371	368	430	446	555	788
21	400	367	440	379	387	362	430	451	528	805
22	398	364	434	383	375	373	433	446	542	801
23	402	369	429	392	368	380	411	452	540	806
24	402	370	430	393	377	371	410	453	540	803
25	397	368	430	387	380	372	418	469	522	806
26	405	366	427	401	373	369	420	451	539	798
27	405	366	425	384	388	362	426	457	534	802
28	403	376	428	393	366	374	427	461	531	790
29	405	372	430	389	371	368	429	447	537	801
30	399	376	424	379	373	376	417	465	536	804

Fuente: Elaboración propia.

Población con factores de expansión aplicados:

```
efh2017 %>% group_by(decil,imp) %>%
  summarise(P=sum(factor)) %>%
  pivot_wider(names_from = decil,values_from = P) %>%
  gt() %>% tab_header(title = "Hogares por decil") %>%
  tab_spanner(label = "Deciles",columns = c(2:11)) %>%
  fmt_number(1:10,decimals = 0) %>%
  tab_style(cell_text(align = "right"),
    locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(align = "center"),
    locations = cells_column_labels(columns = everything()))

`summarise()` has grouped output by 'decil'. You can override using the
`.groups` argument.
```

Cuadro 54
Chile: hogares por base y decil, 2017

imp	Deciles									
	1	2	3	4	5	6	7	8	9	10
0	330 695	337 192	333 506	334 221	334 350	334 755	333 633	334 046	333 241	335 599
1	485 965	486 411	486 708	488 256	484 413	488 259	487 199	487 116	487 237	486 954
2	486 127	487 135	485 895	487 392	483 876	488 843	487 296	487 749	486 604	487 601
3	484 993	486 882	486 635	488 722	485 241	488 040	486 075	487 596	487 185	487 149
4	484 830	488 477	486 564	486 751	485 972	488 047	485 829	487 344	486 844	487 860
5	486 745	486 283	486 084	488 225	486 687	481 139	492 274	486 178	487 967	486 936
6	486 003	487 297	486 884	487 012	486 416	486 205	487 264	487 083	485 880	488 474
7	486 276	486 273	487 051	486 587	487 644	486 542	487 137	486 606	487 121	487 281
8	486 743	486 540	484 481	489 619	485 731	487 092	485 645	488 367	486 227	488 073
9	486 498	486 963	484 847	488 706	485 677	488 245	485 239	488 341	486 465	487 537
10	486 167	486 227	486 589	488 266	486 405	486 573	485 776	487 668	487 748	487 099
11	486 532	486 300	487 300	487 016	485 900	487 480	487 053	485 167	487 578	488 192
12	484 557	488 333	487 072	487 240	485 394	487 308	487 230	487 343	486 681	487 360
13	485 751	487 513	486 215	487 824	486 169	487 346	486 046	486 821	487 901	486 932
14	486 396	487 203	486 419	487 201	485 653	487 495	486 109	487 814	486 918	487 310
15	485 789	486 904	487 625	486 802	486 260	486 203	488 234	484 851	488 445	487 405
16	485 640	486 976	487 052	486 975	487 550	485 997	487 079	482 998	491 146	487 105
17	486 828	485 908	485 829	488 621	485 271	487 696	486 111	488 330	486 288	487 636
18	486 374	485 476	488 601	486 433	486 475	487 273	484 573	489 412	486 903	486 998
19	486 595	486 975	486 883	483 566	489 974	486 181	485 173	489 253	486 982	486 936
20	486 392	484 988	487 809	487 064	487 547	487 041	487 084	485 812	487 919	486 862
21	486 583	486 121	487 819	486 562	487 110	486 107	487 358	486 149	487 412	487 297
22	486 297	486 989	486 534	487 507	486 198	486 793	487 100	486 303	487 088	487 709
23	486 418	486 784	486 974	486 385	487 639	485 862	487 299	486 309	487 789	487 059

	Deciles									
imp	1	2	3	4	5	6	7	8	9	10
24	485 794	487 054	486 569	487 538	487 001	486 047	486 908	487 811	486 790	487006
25	485 208	488 365	486 497	487 205	486 541	487 107	486 094	486 963	487 642	486896
26	486 046	487 202	486 344	486 528	487 485	486 793	487 285	486 185	487 134	487516
27	486 602	485 673	487 931	484 178	489 313	486 668	486 910	487 341	486 792	487110
28	486 025	487 122	487 224	485 841	486 382	486 974	488 175	486 971	486 821	486983
29	485 530	488 110	486 854	486 645	485 957	486 987	487 514	486 464	487 211	487246
30	485 832	486 381	488 216	485 895	487 193	486 191	487 651	486 561	486 967	487631

Fuente: Elaboración propia.

2. Procedimiento de ajuste

El primer paso para el ajuste con la cifra de cuentas nacionales consiste en estimar los valores equivalentes de la encuesta.

```
efh2017 %>% group_by(imp) %>%
  summarise(a_fisico=sum(a_fisico*factor),
            a_fijo=sum(a_fijo*factor),
            a_var=sum(a_var*factor),
            deuda=sum(deuda*factor)) %>%
  gt() %>% tab_header(title = "Montos en activos físicos y financieros, y deuda",
                    subtitle = "(Pesos chilenos)") %>%
  fmt_number(c("a_fisico","a_fijo","a_var","deuda"),decimals = 0) %>%
  tab_style(cell_text(align = "right"),
            locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(align = "center"),
            locations = cells_column_labels(columns = everything()))
```

Cuadro 55
Chile: montos en activos físicos y financieros, y deuda, 2017
(En pesos chilenos)

imp	a fisico	a fijo	a var	deuda
0	186 269 337 126 628	7 465 879 066 000	8 099 010 098 000	31 417 710 344 562
1	310 580 458 769 162	12 046 145 655 660	15 995 140 705 200	53 843 190 437 565
2	308 396 223 993 014	11 754 404 309 938	14 707 006 667 715	54 009 895 347 464
3	308 793 720 150 624	12 347 061 829 738	15 260 537 250 260	54 202 209 334 016
4	309 676 631 372 472	12 363 787 622 038	15 150 616 748 390	54 062 364 453 093
5	310 439 447 961 288	12 157 151 117 950	15 236 992 865 975	53 853 816 700 212
6	307 385 837 478 287	12 225 070 534 087	15 283 040 209 465	54 278 316 750 709
7	309 544 527 637 396	11 612 906 712 815	16 413 842 008 093	53 826 017 143 021
8	307 899 653 877 906	11 771 935 763 738	14 650 747 661 015	53 996 698 047 571
9	309 638 414 187 041	11 982 137 434 497	15 716 541 256 735	54 496 873 215 575
10	308 369 488 445 852	12 814 138 048 203	14 916 687 404 199	54 410 188 060 706
11	309 648 163 286 531	11 527 232 698 638	14 494 600 182 424	54 895 171 864 195
12	310 210 906 029 189	12 186 656 152 938	15 145 283 013 201	55 112 825 796 323
13	309 133 792 729 554	12 217 482 265 938	14 959 647 094 323	54 702 857 162 895
14	307 598 769 683 521	12 389 396 329 538	14 343 104 722 290	54 884 122 739 542
15	308 187 550 483 178	11 961 937 963 238	14 543 354 679 650	54 063 954 007 975
16	310 086 912 445 105	13 005 127 101 638	15 327 634 827 439	54 546 662 817 857
17	309 914 400 264 771	12 306 566 923 172	15 222 661 095 803	54 370 476 271 371
18	310 211 473 916 561	12 162 400 352 738	15 370 194 913 720	54 373 866 984 120
19	308 736 338 843 972	12 124 917 114 837	15 464 338 556 620	54 758 624 574 007
20	311 555 005 925 857	12 626 560 025 214	17 712 240 663 931	54 713 920 635 464
21	307 891 621 737 371	11 698 247 653 014	15 852 638 831 715	54 684 466 981 148
22	307 883 905 492 592	11 869 414 442 978	14 288 671 542 660	54 668 702 448 554
23	308 067 888 275 744	12 810 690 417 313	14 158 437 150 586	54 712 606 988 177
24	307 939 219 664 412	12 306 394 652 338	13 860 221 946 848	53 662 292 700 680
25	307 064 928 685 682	11 687 694 034 722	14 966 567 782 943	54 095 750 387 035
26	309 158 864 721 974	12 765 123 466 170	14 889 011 956 195	54 516 634 708 160

imp	a fisico	a fijo	a var	deuda
27	307 631 776 795 647	11 870 678 605 738	14 304 791 296 437	54 202 844 527 331
28	310 767 844 889 453	12 154 426 073 246	15 953 512 902 523	54 163 897 266 975
29	310 291 820 457 793	11 669 546 959 738	14 691 482 506 036	53 941 098 709 106
30	308 370 359 501 921	12 376 295 890 738	15 393 171 513 521	54 018 650 693 739

Fuente: Elaboración propia.

Se compara esta cantidad con las cifras de cuentas nacionales, se estiman los factores de ajuste y se agregan a la base.

```
fac_ajus <- read.csv("Bases/factores_ajustes2017.csv")
efh2017 <- left_join(efh2017,fac_ajus,by="imp")
remove(fac_ajus)
```

Se aplican los factores estimados, con una elasticidad mayor a uno, en el caso de los activos financieros.

```
efh2017 <- efh2017 %>% group_by(imp) %>%
  mutate(a_fijo_p=((a_fijo*factor)/sum(a_fijo*factor))^1.1)/
  sum(((a_fijo*factor)/sum(a_fijo*factor))^1.1)) %>%
  mutate(a_var_p=((a_var*factor)/sum(a_var*factor))^1.2)/
  sum(((a_var*factor)/sum(a_var*factor))^1.2)) %>%
  mutate(deuda_p=(deuda*factor)/sum(deuda*factor))
efh2017 <- efh2017 %>%
  mutate(a_fisico_a=a_fisico) %>%
  mutate(a_fijo_a=a_fijo+(a_fijo_p*c_fijo)/factor) %>%
  mutate(a_var_a=a_var+(a_var_p*c_var)/factor) %>%
  mutate(deuda_a=deuda+(deuda_p*c_deuda)/factor)
```

Se genera el cuadro de control y las cifras por tipo de activo para confrontarlas con las equivalentes de cuentas nacionales.

```
efh2017 %>% group_by(imp) %>%
  summarise(a_fisico_a=sum(a_fisico*factor),
            a_fijo_a=sum(a_fijo_a*factor),
            a_var_a=sum(a_var_a*factor),
            deuda_a=sum(deuda_a*factor)) %>%
  gt() %>% tab_header(title = "Cifras ajustadas de la encuesta",
                    subtitle = "Pesos chilenos") %>%
  fmt_number(c("a_fisico_a","a_fijo_a","a_var_a","deuda_a"),decimals = 0) %>%
  tab_style(cell_text(align = "right"),
            locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(align = "center"),
            locations = cells_column_labels(columns = everything()))
```

Cuadro 56
Chile: cifras ajustadas de la encuesta, 2017
(En pesos chilenos)

imp	a fisico a	a fijo a	a var a	deuda a
0	186 269 337 126 628	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000
1	310 580 458 769 162	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000
2	308 396 223 993 014	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000
3	308 793 720 150 624	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000
4	309 676 631 372 472	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000
5	310 439 447 961 288	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000
6	307 385 837 478 287	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000
7	309 544 527 637 396	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000
8	307 899 653 877 906	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000
9	309 638 414 187 041	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000

imp	a_fisico_a	a_fijo_a	a_var_a	deuda_a
10	308 369 488 445 852	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000
11	309 648 163 286 531	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000
12	310 210 906 029 189	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000
13	309 133 792 729 554	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000
14	307 598 769 683 521	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000
15	308 187 550 483 178	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000
16	310 086 912 445 105	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000
17	309 914 400 264 771	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000
18	310 211 473 916 561	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000
19	308 736 338 843 972	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000
20	311 555 005 925 857	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000
21	307 891 621 737 371	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000
22	307 883 905 492 592	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000
23	308 067 888 275 744	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000
24	307 939 219 664 412	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000
25	307 064 928 685 682	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000
26	309 158 864 721 974	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000
27	307 631 776 795 647	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000
28	310 767 844 889 453	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000
29	310 291 820 457 793	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000
30	308 370 359 501 921	38 297 081 582 250	106 440 851 663 700	78 237 996 832 000

Fuente: Elaboración propia.

Se calcula la riqueza ajustada.

```
efh2017 <- efh2017 %>%
  mutate(riqueza_a=a_fisico_a+a_fijo_a+a_var_a-deuda_a)
```

Se calculan los percentiles y se divide entre percentiles de riqueza ajustada.

```
efh2017 <- efh2017 %>%
  group_by(imp) %>% arrange(riqueza_a) %>%
  mutate(facum=cumsum(factor)) %>%
  mutate(decil_a=ifelse(facum>sum(factor)*.1,2,1)) %>%
  mutate(decil_a=ifelse(facum>sum(factor)*.2,3,decil_a)) %>%
  mutate(decil_a=ifelse(facum>sum(factor)*.3,4,decil_a)) %>%
  mutate(decil_a=ifelse(facum>sum(factor)*.4,5,decil_a)) %>%
  mutate(decil_a=ifelse(facum>sum(factor)*.5,6,decil_a)) %>%
  mutate(decil_a=ifelse(facum>sum(factor)*.6,7,decil_a)) %>%
  mutate(decil_a=ifelse(facum>sum(factor)*.7,8,decil_a)) %>%
  mutate(decil_a=ifelse(facum>sum(factor)*.8,9,decil_a)) %>%
  mutate(decil_a=ifelse(facum>sum(factor)*.9,10,decil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.01,2,1)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.02,3,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.03,4,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.04,5,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.05,6,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.06,7,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.07,8,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.08,9,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.09,10,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.10,11,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.11,12,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.12,13,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.13,14,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.14,15,centil_a)) %>%
  mutate(centil_a=ifelse(facum>sum(factor)*.15,16,centil_a)) %>%
```


[illegible]

```

mutate(centil_a=ifelse(facum>sum(factor)*.71,72,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.72,73,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.73,74,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.74,75,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.75,76,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.76,77,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.77,78,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.78,79,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.79,80,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.80,81,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.81,82,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.82,83,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.83,84,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.84,85,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.85,86,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.86,87,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.87,88,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.88,89,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.89,90,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.90,91,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.91,92,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.92,93,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.93,94,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.94,95,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.95,96,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.96,97,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.97,98,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.98,99,centil_a)) %>%
mutate(centil_a=ifelse(facum>sum(factor)*.99,100,centil_a))

```

3. Riqueza neta por decil (datos sin ajuste)

Se generan los datos:

```

# Cuadro 5.7 Riqueza por decil
efh2017 %>% filter(imp>0) %>%
  group_by(imp,decil) %>%
  summarise(Hogares=sum(factor),
            riqueza=sum(riqueza*factor),
            activos=sum((a_fisico+a_fijo+a_var)*factor),
            a_fisico=sum(a_fisico*factor),
            a_finan=sum((a_fijo+a_var)*factor),
            deuda=sum(deuda*factor)) %>%
  group_by(decil) %>%
  summarise(Hogares=mean(Hogares)/1000,
            Riqueza=mean(riqueza)/1000,
            Activos_Totales=mean(activos)/1000,
            Activos_Físicos=mean(a_fisico)/1000,
            Activos_Financieros=mean(a_finan)/1000,
            Deuda=mean(deuda)) %>%
  gt() %>% tab_header(title = "Riqueza por decil",
                    subtitle = "(En hogares y miles de pesos chilenos)") %>%
  fmt_number(c("Hogares","Riqueza","Activos_Totales","Activos_Físicos",
              "Activos_Financieros","Deuda"),decimals = 0) %>%
  tab_style(cell_text(align = "right"),
            locations = cells_body(columns = everything(), rows = everything())) %>%

```

```
tab_style(cell_text(align = "center"),
          locations = cells_column_labels(columns = everything()))

`summarise()` has grouped output by 'imp'. You can override using the `.groups`
argument.
```

Cuadro 57
Chile: riqueza por decil, 2017
(En hogares y miles de pesos chilenos)

decil	Hogares	Riqueza	Activos Totales	Activos Físicos	Activos Financieros	Deuda
I	486	-3 723 060 080	2 964 703 969	2 779 915 736	184 788 234	6 687 764 049 470
II	487	-13 743 638	178 352 408	152 725 542	25 626 866	192 096 045 858
III	487	1 135 371 081	2 716 255 882	2 417 949 306	298 306 576	1 580 884 800 622
IV	487	5 873 266 425	9 532 789 455	9 125 615 224	407 174 231	3 659 523 030 120
V	487	10 610 842 768	14 055 253 026	13 732 768 948	322 484 077	3 444 410 257 283
VI	487	14 680 030 198	18 523 353 639	18 202 767 647	320 585 991	3 843 323 440 811
VII	487	19 828 846 507	24 646 965 719	23 880 942 031	766 023 688	4 818 119 211 309
VIII	487	29 051 271 058	34 753 719 463	33 376 058 556	1 377 660 908	5 702 448 405 182
IX	487	47 551 160 759	55 014 331 500	52 345 025 752	2 669 305 747	7 463 170 740 653
X	487	157 008 388 190	173 952 281 467	153 022 096 181	20 930 185 286	16 943 893 277 178

Fuente: Elaboración propia.

Se generan datos desglosados del décimo decil:

```
efh2017 %>% filter(imp>0&centil>90) %>%
  group_by(imp,centil) %>%
  summarise(Hogares=sum(factor),
            riqueza=sum(riqueza*factor),
            activos=sum((a_fisico+a_fijo+a_var)*factor),
            a_fisico=sum(a_fisico*factor),
            a_finan=sum((a_fijo+a_var)*factor),
            deuda=sum(deuda*factor)) %>%
  group_by(centil) %>%
  summarise(Hogares=mean(Hogares),
            Riqueza=mean(riqueza)/1000,
            Activos_Totales=mean(activos)/1000,
            Activos_Físicos=mean(a_fisico)/1000,
            Activos_Financieros=mean(a_finan)/1000,
            Deuda=mean(deuda)/1000) %>%
  gt() %>% tab_header(title = "Riqueza del decil X",
                    subtitle = "(En hogares y miles de pesos chilenos)") %>%
  fmt_number(c("Hogares","Riqueza","Activos_Totales","Activos_Físicos",
               "Activos_Financieros","Deuda"),decimals = 0) %>%
  tab_style(cell_text(align = "right"),
            locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(align = "center"),
            locations = cells_column_labels(columns = everything()))

`summarise()` has grouped output by 'imp'. You can override using the `.groups`
argument.
```

Cuadro 58
Chile: riqueza del decil X, 2017
(En hogares y miles de pesos chilenos)

centil	Hogares	Riqueza	Activos Totales	Activos Físicos	Activos Financieros	Deuda
91	48 563	6 853 299 227	8 159 078 815	7 753 970 108	405 108 707	1 305 779 588
92	48 084	7 437 914 404	8 476 362 291	7 996 769 746	479 592 545	1 038 447 887
93	49 403	8 630 069 186	10 353 136 685	9 677 692 611	675 444 075	1 723 067 499
94	48 536	9 516 647 215	10 878 655 482	10 381 051 943	497 603 539	1 362 008 267
95	48 333	10 563 949 602	12 342 129 436	11 505 459 624	836 669 812	1 778 179 835
96	49 167	12 213 263 464	14 050 579 402	13 097 512 786	953 066 616	1 837 315 938
97	48 941	14 409 676 773	16 111 808 526	14 376 763 631	1 735 044 894	1 702 131 753
98	48 592	18 313 980 682	20 066 633 313	17 796 770 923	2 269 862 390	1 752 652 631
99	48 609	25 022 843 202	26 726 761 467	22 813 693 064	3 913 068 403	1 703 918 265
100	49 110	44 046 744 436	46 787 136 049	37 622 411 745	9 164 724 305	2 740 391 614

Fuente: Elaboración propia.

4. Riqueza neta ajustada por decil

Se generan los datos:

```
efh2017 %>% filter(imp>0) %>%
  group_by(imp,decil_a) %>%
  summarise(Hogares=sum(factor),
            riqueza_a=sum(riqueza_a*factor),
            activos_a=sum((a_fisico_a+a_fijo_a+a_var_a)*factor),
            a_fisico_a=sum(a_fisico_a*factor),
            a_finan_a=sum((a_fijo_a+a_var_a)*factor),
            deuda_a=sum(deuda_a*factor)) %>%
  group_by(decil_a) %>%
  summarise(Hogares=mean(Hogares)/1000,
            Riqueza_a=mean(riqueza_a)/1000,
            Activos_Totales_a=mean(activos_a)/1000,
            Activos_Físicos_a=mean(a_fisico_a)/1000,
            Activos_Financieros_a=mean(a_finan_a)/1000,
            Deuda_a=mean(deuda_a)/1000) %>%
  gt() %>% tab_header(title = "Riqueza ajustada por decil",
                    subtitle = "(En hogares y miles de pesos chilenos)") %>%
  fmt_number(c("Hogares","Riqueza_a","Activos_Totales_a","Activos_Físicos_a",
               "Activos_Financieros_a","Deuda_a"),decimals = 0) %>%
  tab_style(cell_text(align = "right"),
            locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(align = "center"),
            locations = cells_column_labels(columns = everything()))

`summarise()` has grouped output by 'imp'. You can override using the `.groups`
argument.
```

Cuadro 59
Chile: riqueza ajustada por decil, 2017
(En hogares y miles de pesos chilenos)

decil a	Hogares	Riqueza a	Activos Totales a	Activos Físicos a	Activos Financieros a	Deuda a
I	486	-7 483 753 400	10 201 178 478	9 602 747 984	598 430 495	17 684 931 879
II	487	-89 302 602	826 969 144	750 028 946	76 940 198	916 271 746
III	487	776 941 328	3 501 026 721	3 030 087 779	470 938 942	2 724 085 393
IV	487	4 662 589 348	11 674 822 080	10 820 479 401	854 342 679	7 012 232 732
V	487	9 542 445 657	13 518 511 463	12 875 608 576	642 902 888	3 976 065 807
VI	487	13 890 326 694	17 657 960 644	17 001 636 655	656 323 989	3 767 633 950
VII	487	19 223 566 280	24 449 235 701	23 315 914 741	1 133 320 960	5 225 669 420
VIII	487	29 190 929 620	35 975 421 102	33 369 216 749	2 606 204 353	6 784 491 482
IX	487	51 124 549 769	59 633 684 889	52 200 924 348	7 432 760 541	8 509 135 120
X	488	254 697 508 643	276 334 987 946	146 069 219 746	130 265 768 201	21 637 479 303

Fuente: Elaboración propia.

Se generan datos desglosados del décimo decil:

```
efh2017 %>% filter(imp>0&centil_a>90) %>%
  group_by(imp,centil_a) %>%
  summarise(Hogares=sum(factor),
            riqueza_a=sum(riqueza_a*factor),
            activos_a=sum((a_fisico+a_fijo+a_var)*factor),
            a_fisico_a=sum(a_fisico_a*factor),
            a_finan_a=sum((a_fijo_a+a_var_a)*factor),
            deuda_a=sum(deuda_a*factor)) %>%
  group_by(centil_a) %>%
  summarise(Hogares=mean(Hogares),
            Riqueza_a=mean(riqueza_a)/1000,
            Activos_Totales_a=mean(activos_a)/1000,
            Activos_Físicos_a=mean(a_fisico_a)/1000,
            Activos_Financieros_a=mean(a_finan_a)/1000,
            Deuda_a=mean(deuda_a)/1000) %>%
  gt() %>% tab_header(title = "Riqueza ajustada del decil X",
                    subtitle = "(En hogares y miles de pesos chilenos)") %>%
  fmt_number(c("Hogares","Riqueza_a","Activos_Totales_a","Activos_Físicos_a",
               "Activos_Financieros_a","Deuda_a"),decimals = 0) %>%
  tab_style(cell_text(align = "right"),
            locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(align = "center"),
            locations = cells_column_labels(columns = everything()))
`summarise()` has grouped output by 'imp'. You can override using the `.groups`
argument.
```

Cuadro 60
México: riqueza ajustada del decil X, 2017
(En hogares y miles de pesos chilenos)

centil a	Hogares	Riqueza a	Activos Totales a	Activos Físicos a	Activos Financieros a	Deuda a
91	49 278	7 640 997 457	8 696 000 517	8 407 697 463	1 097 204 622	1 863 904 628
92	48 168	8 346 895 140	8 928 219 974	8 344 282 514	2 224 260 396	2 221 647 769
93	48 947	9 428 834 229	9 437 917 787	8 938 553 307	2 010 162 500	1 519 881 579
94	48 503	10 492 157 824	11 006 567 988	10 485 052 762	1 834 140 534	1 827 035 471
95	49 043	12 321 949 623	12 364 332 614	11 714 317 431	2 362 393 133	1 754 760 941
96	48 566	14 594 769 848	13 871 584 700	12 872 363 112	4 034 316 475	2 311 909 739
97	48 847	18 195 871 790	15 611 464 659	14 250 534 335	5 875 697 209	1 930 359 754
98	48 573	23 996 697 065	20 029 331 369	18 425 591 509	7 376 640 819	1 805 535 263
99	48 957	35 977 194 439	28 086 497 131	25 186 390 076	13 432 631 808	2 641 827 445
100	49 000	113 702 141 228	41 046 334 700	27 444 437 236	90 018 320 704	3 760 616 713

Fuente: Elaboración propia.

Se estiman los coeficientes de desigualdad. Para el caso de la riqueza neta, se utiliza la propuesta de Raffinetti, Siletti y Vernizzi (2017), que permite su estimación con valores negativos y sugieren aplicar su método cuando la proporción de hogares con valores negativos esté por arriba del 5%.

Gini cifras sin ajuste:

```
efh2017 %>% group_by(imp) %>%
  summarise(griqueza=as.numeric(Gini_RSV(riqueza,factor)),
            gactivos=Gini((a_fisico+a_fijo+a_var),factor),
            gfisico=Gini(a_fisico,factor),
            gfinanciero=Gini((a_fijo+a_var),factor),
            gdeuda=Gini(deuda,factor)) %>%
  summarise(Gini_riqueza=mean(griqueza),
            Gini_activos=mean(gactivos),
            Gini_físico=mean(gfisico),
            Gini_financiero=mean(gfinanciero),
            Gini_deuda=mean(gdeuda)) %>%
  gt() %>% tab_header(title = "Coeficiente de Gini") %>%
  fmt_number(c("Gini_riqueza","Gini_activos","Gini_físico",
              "Gini_financiero","Gini_deuda"),decimals = 6) %>%
  tab_style(cell_text(align = "right"),
            locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(align = "center"),
            locations = cells_column_labels(columns = everything()))
```

Cuadro 61
Chile: coeficiente de Gini, 2017

Gini_riqueza	Gini_activos	Gini_físico	Gini_financiero	Gini_deuda
0,701617	0,680159	0,670961	0,946771	0,842222

Fuente: Elaboración propia.

Gini con datos ajustados:

```
efh2017 %>% group_by(imp) %>%
  summarise(griqueza_a=as.numeric(Gini_RSV(riqueza_a,factor)),
            gactivos_a=Gini((a_fisico_a+a_fijo_a+a_var_a),factor),
            gfisico_a=Gini(a_fisico_a,factor),
            gfinanciero_a=Gini((a_fijo_a+a_var_a),factor),
            gdeuda_a=Gini(deuda_a,factor)) %>%
  summarise(Gini_riqueza_a=mean(griqueza_a),
            Gini_activos_a=mean(gactivos_a),
            Gini_físico_a=mean(gfisico_a),
            Gini_financiero_a=mean(gfinanciero_a),
            Gini_deuda_a=mean(gdeuda_a)) %>%
  gt() %>% tab_header(title = "Coeficiente de Gini (cifras ajustadas)") %>%
  fmt_number(c("Gini_riqueza_a","Gini_activos_a","Gini_físico_a",
              "Gini_financiero_a","Gini_deuda_a"),decimals = 6) %>%
  tab_style(cell_text(align = "right"),
            locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(align = "center"),
            locations = cells_column_labels(columns = everything()))
```


Cuadro 62
Chile: coeficiente de Gini (cifras ajustadas), 2017

Gini_riqueza_a	Gini_activos_a	Gini_físico_a	Gini_financiero_a	Gini_deuda_a
0,783214	0,742886	0,670961	0,964287	0,842222

Fuente: Elaboración propia.

Theil con datos sin ajustes:

```
efh2017 %>%
  summarise(triqueza=theil.wtd(riqueza,factor),
            tactivos=theil.wtd((a_físico+a_fijo+a_var),factor),
            tfísico=theil.wtd(a_físico,factor),
            tfinanciero=theil.wtd((a_fijo+a_var),factor),
            tdeuda=theil.wtd(deuda,factor)) %>%
  summarise(Theil_riqueza=mean(triqueza),
            Theil_activos=mean(tactivos),
            Theil_físico=mean(tfísico),
            Theil_financiero=mean(tfinanciero),
            Theil_deuda=mean(tdeuda)) %>%
  gt() %>% tab_header(title = "Índice de Theil") %>%
  fmt_number(c("Theil_riqueza","Theil_activos","Theil_físico",
              "Theil_financiero","Theil_deuda"),decimals = 6) %>%
  tab_style(cell_text(align = "right"),
            locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(align = "center"),
            locations = cells_column_labels(columns = everything()))
```

Cuadro 63
Chile: índice de Theil, 2017

Theil_riqueza	Theil_activos	Theil_físico	Theil_financiero	Theil_deuda
0,789415	0,791821	0,672618	1,989958	1,156424

Fuente: Elaboración propia.

Theil con datos ajustados:

```
efh2017 %>%
  summarise(triqueza_a=theil.wtd(riqueza_a,factor),
            tactivos_a=theil.wtd((a_físico_a+a_fijo_a+a_var_a),factor),
            tfísico_a=theil.wtd(a_físico_a,factor),
            tfinanciero_a=theil.wtd((a_fijo_a+a_var_a),factor),
            tdeuda_a=theil.wtd(deuda_a,factor)) %>%
  summarise(Theil_riqueza_a=mean(triqueza_a),
            Theil_activos_a=mean(tactivos_a),
            Theil_físico_a=mean(tfísico_a),
            Theil_financiero_a=mean(tfinanciero_a),
            Theil_deuda_a=mean(tdeuda_a)) %>%
  gt() %>% tab_header(title = "Índice de Theil (cifras ajustadas)") %>%
  fmt_number(c("Theil_riqueza_a","Theil_activos_a","Theil_físico_a",
              "Theil_financiero_a","Theil_deuda_a"),decimals = 6) %>%
  tab_style(cell_text(align = "right"),
            locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(align = "center"),
            locations = cells_column_labels(columns = everything()))
```


Cuadro 64
Chile: índice de Theil (cifras ajustadas), 2017

Theil_riqueza_a	Theil_activos_a	Theil_físico_a	Theil_financiero_a	Theil_deuda_a
1,288039	1,187881	0,672618	2,467674	1,156424

Fuente: Elaboración propia.

Se propone estimar la riqueza neta de patrimonio a partir del 50% de la media o mediana.

```
efh2017 <- efh2017 %>% group_by(imp) %>%
  mutate(relpov_m=if_else(riqueza_a<=(Quantile(riqueza_a,factor,probs=0.5)*0.5),factor,0)) %>%
  mutate(relpov_p=if_else(riqueza_a<=(Mean(riqueza_a,factor)*0.5),factor,0)) %>%
  mutate(relpov_f_m=if_else(a_físico_a<=(Quantile(a_físico_a,factor,probs=0.5)*0.5),factor,0)) %>%
  mutate(relpov_f_p=if_else(a_físico_a<=(Mean(a_físico_a,factor)*0.5),factor,0))
efh2017 %>% filter(imp>0) %>%
  group_by(imp) %>%
  summarise(hw=sum(factor),
            relpov_m=sum(relpov_m)/sum(factor),
            relpov_p=sum(relpov_p)/sum(factor),
            relpov_f_m=sum(relpov_f_m)/sum(factor),
            relpov_f_p=sum(relpov_f_p)/sum(factor)) %>%
  summarise(Hogares=mean(hw),
            Pobreza_m=mean(relpov_m),
            Pobreza_p=mean(relpov_p),
            Pobreza_f_m=mean(relpov_f_m),
            Pobreza_f_p=mean(relpov_f_p))%>%
  gt() %>% tab_header(title = "Pobreza de patrimonio",
                    subtitle = "Porporción de hogares") %>%
  fmt_number(c("Pobreza_m","Pobreza_p","Pobreza_f_m","Pobreza_f_p"),
            decimals = 4) %>%
  tab_style(cell_text(align = "right"),
            locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(align = "center"),
            locations = cells_column_labels(columns = everything()))
```

Cuadro 65
Chile: pobreza de patrimonio, 2017
(En proporción de hogares)

Hogares	Pobreza_m	Pobreza_p	Pobreza_f_m	Pobreza_f_p
4 868 518	0,3745	0,6418	0,3487	0,5204

Fuente: Elaboración propia.

XIV. Luxembourg Wealth Study Database (LWS)

Librerías requeridas

```
library(haven)
library(DescTools)
library(tidyverse)
library(gt)
```

En virtud de que no fue posible instalar la librería GiniWegNeg para el cálculo de la riqueza neta con valores negativos (de acuerdo con la propuesta de Raffinetti, Siletti y Vernizzi, 2017), se genera la siguiente función:

```
Gini_RSV <-
function(y,w=rep(1,length(y)))
{
  dataset<-cbind(y,w)
  ord_y<-order(y)
  dataset_ord<-dataset[ord_y,]
  y<-dataset_ord[,1]
  w<-dataset_ord[,2]
  N<-sum(w)
  yw<-y*w
  C_i<-cumsum(w)
  num_1<-sum(yw*C_i)
  num_2<-sum(yw)
  num_3<-sum(yw*w)
  G_num<-(2/N^2)*num_1-(1/N)*num_2-(1/N^2)*num_3
  t_neg<-subset(yw,yw<=0)
  T_neg<-sum(t_neg)
  T_pos<-sum(yw)+abs(T_neg)
  n_RSV<-(2*(T_pos+(abs(T_neg))))/N)
  mean_RSV<-(n_RSV/2)
  G_RSV<-(1/mean_RSV)*G_num
  list(GINI_RSV=G_RSV)
}
```

El LIS Cross-Nacional Data Center, de Luxemburgo ha construido una base de datos armonizada (Luxembourg Wealth Study Database LWS), para 17 países que han levantado encuestas financieras: Alemania, Australia, Austria, Canadá, Eslovaquia, Eslovenia, España, los Estados Unidos, Estonia, Finlandia, Grecia, Italia, Luxemburgo, Noruega, Reino Unido, Sudáfrica y Suecia. Además de las variables sobre el monto de activos y pasivos de los hogares, han incluido en sus tablas aspectos geográficos (región y tamaño de la localidad, entre otros), así como composición del hogar, características sociodemográficas, actividad laboral, ingreso disponible y comportamiento financiero.

Se presentan bases a nivel de persona y de hogar, y permiten su consulta a través de su página de armonizada, previo registro. Para validar la rutina en R, antes de ejecutarla desde su sitio en armonizada, facilitan ejemplos de base de datos artificiales con base en submuestras para los Estados Unidos e Italia. La sintaxis que se muestra a continuación se realizó con la base artificial de Italia.

Se utilizaron las siguientes variables de riqueza (ver cuadro 66):

- Activos no financieros (Non financial assets): han,
- Activos financieros, sin pensiones (Financial assets excl. pensions): haf,
- Deudas hipotecarias (Real estate liabilities): hir,
- Deudas no hipotecarias (Non-housing liabilities): hln,
- Pasivos (Total liabilities): hl = hir + hln, y
- Riqueza neta disponible (Disposable net worth): dnw = han + haf – hl.

Cuadro 66
Construcción de variables de la base Luxembourg Wealth Study Database

Variable	Descripción
dnw	Riqueza neta disponible (Disposable net worth), igual a han + haf -hl
han	Activos no financieros (Non-financial assets). Residencia principal, otros bienes inmuebles, vehículos, bienes duraderos y otros activos no financieros.
haf	Activos financieros, sin pensiones (Financial assets excl. pensions). Cuentas de ahorro y cheques, bonos, títulos de deuda, acciones, fondos de inversión y otros activos financieros.
hl	Pasivos totales (Total liabilities), igual a hir + hln
hir	Deudas hipotecarias (Real state liabilities)
hln	Deudas no hipotecarias (consumo, vehículos, educacionales, y otras)

Fuente: Elaboración propia.

A. Italia 2015 (ejemplo)

Se abre la base de ejemplo de Italia y se agrega el factor de conversión PPA (paridad de poder adquisitivo) para tener cifras comparables entre los países.

```
country <- read_dta("Bases/it14wh.dta")
```

Se preparan y seleccionan las variables para los cálculos:

```
country <- country %>%
  mutate(dnw=as.numeric(dnw)) %>%
  mutate(han=as.numeric(han)) %>%
  mutate(haf=as.numeric(haf)) %>%
  mutate(hl=as.numeric(hl)) %>%
  mutate(hpopwgt=as.numeric(hpopwgt)) %>%
```

```
filter(!is.na(dnw)&!is.na(han)&!is.na(haf)&!is.na(hl)) %>%
select(dname,iso2,year,inum,hpopwgt,dnw,han,haf,hl) %>%
drop_na()
```

Se generan los datos para comparar con cuentas nacionales y ajustar la información.

```
country %>%
  group_by(dname,iso2,year,inum) %>%
  summarise(hw=sum(hpopwgt),
            dnw=sum(dnw*hpowwgt),
            han=sum(han*hpowwgt),
            haf=sum(haf*hpowwgt),
            hl=sum(hl*hpowwgt)) %>%
  gt() %>% tab_header(title = "Riqueza y su desglose") %>%
  fmt_number(c("hw","dnw","han","haf","hl"),decimals = 0) %>%
  tab_style(cell_text(aligned = "right"),
            locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(aligned = "center"),
            locations = cells_column_labels(columns = everything()))

`summarise()` has grouped output by 'dname', 'iso2', 'year'. You can override
using the `.groups` argument.
```

Cuadro 67
Ejemplo Italia: riqueza y su desglose

inum	hw	dnw	han	haf	hl
1	2 360 445	614 095 177 702	551 774 109 139	72 844 669 913	10 523 601 351

Fuente: Elaboración propia.

Se ajusta la información, asignando la diferencia:

```
country <- country %>%
  group_by(dname,year,inum) %>%
  mutate(ia04f=if_else(year==2004,3445932000000-sum(haf*hpowwgt),0)) %>%
  mutate(ia08f=if_else(year==2008,3800187000000-sum(haf*hpowwgt),0)) %>%
  mutate(ia10f=if_else(year==2010,3719360000000-sum(haf*hpowwgt),0)) %>%
  mutate(ia14f=if_else(year==2014,4173263000000-sum(haf*hpowwgt),0)) %>%
  mutate(ia16f=if_else(year==2016,4309478000000-sum(haf*hpowwgt),0)) %>%
  mutate(ia04d=if_else(year==2004,603558000000-sum(hl*hpowwgt),0)) %>%
  mutate(ia08d=if_else(year==2008,838113000000-sum(hl*hpowwgt),0)) %>%
  mutate(ia10d=if_else(year==2010,899250000000-sum(hl*hpowwgt),0)) %>%
  mutate(ia14d=if_else(year==2014,893016000000-sum(hl*hpowwgt),0)) %>%
  mutate(ia16d=if_else(year==2016,903493000000-sum(hl*hpowwgt),0))
country <- country %>% group_by(dname,year,inum) %>%
  mutate(haf_p=((haf*hpowwgt)/sum(haf*hpowwgt))^1.2)/
  sum(((haf*hpowwgt)/sum(haf*hpowwgt))^1.2)) %>%
  mutate(hl_p=(hl*hpowwgt)/sum(hl*hpowwgt))
country <- country %>%
  mutate(han_a=han) %>%
  mutate(haf_a=if_else(year==2004,haf+(haf_p*ia04f)/hpowwgt,haf)) %>%
  mutate(haf_a=if_else(year==2008,haf+(haf_p*ia08f)/hpowwgt,haf_a)) %>%
  mutate(haf_a=if_else(year==2010,haf+(haf_p*ia10f)/hpowwgt,haf_a)) %>%
  mutate(haf_a=if_else(year==2014,haf+(haf_p*ia14f)/hpowwgt,haf_a)) %>%
  mutate(haf_a=if_else(year==2016,haf+(haf_p*ia16f)/hpowwgt,haf_a)) %>%
  mutate(hl_a=if_else(year==2004,hl+(hl_p*ia04d)/hpowwgt,hl)) %>%
```

```
mutate(hl_a=if_else(year==2008,hl+(hl_p*ia08d)/hpopwgt,hl_a)) %>%
mutate(hl_a=if_else(year==2010,hl+(hl_p*ia10d)/hpopwgt,hl_a)) %>%
mutate(hl_a=if_else(year==2014,hl+(hl_p*ia14d)/hpopwgt,hl_a)) %>%
mutate(hl_a=if_else(year==2016,hl+(hl_p*ia16d)/hpopwgt,hl_a)) %>%
mutate(dnw_a=han_a+haf_a-hl_a)
```

Se genera un cuadro con los resultados del ajuste (control):

```
country %>% group_by(dname,inum) %>%
  summarise(hw=sum(hpopwgt),
            dnw_a=sum(dnw_a*hpopwgt),
            han_a=sum(han_a*hpopwgt),
            haf_a=sum(haf_a*hpopwgt),
            hl_a=sum(hl_a*hpopwgt)) %>%
  gt() %>% tab_header(title = "Riqueza ajustada y su desglose") %>%
  fmt_number(c("hw","dnw_a","han_a","haf_a","hl_a"),decimals = 0) %>%
  tab_style(cell_text(align = "right"),
            locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(align = "center"),
            locations = cells_column_labels(columns = everything()))

`summarise()` has grouped output by 'dname'. You can override using the
`.groups` argument.
```

Cuadro 68
Ejemplo Italia: riqueza ajustada y su desglose

inum	hw	dnw_a	han_a	haf_a	hl_a
1	2 360 445	3 832 021 109 139	551 774 109 139	4 173 263 000 000	893 016 000 000

Fuente: Elaboración propia.

Se calculan los valores en PPA (paridad de poder adquisitivo). Con el objetivo de comparar las cifras entre los países, se han convertido las cifras de las monedas locales de cada país a dólares PPA.

```
ppa_2004=0.638068305
ppa_2008=0.699145436
ppa_2010=0.715310401
ppa_2014=0.768651225
ppa_2016=0.768226448
country <- country %>% group_by(dname,iso2,year,inum) %>%
  mutate(dnw_ppa=if_else(year==2004,dnw_a/ppa_2004,dnw_a)) %>%
  mutate(dnw_ppa=if_else(year==2008,dnw_a/ppa_2008,dnw_ppa)) %>%
  mutate(dnw_ppa=if_else(year==2010,dnw_a/ppa_2010,dnw_ppa)) %>%
  mutate(dnw_ppa=if_else(year==2014,dnw_a/ppa_2014,dnw_ppa)) %>%
  mutate(dnw_ppa=if_else(year==2016,dnw_a/ppa_2016,dnw_ppa)) %>%
  mutate(han_ppa=if_else(year==2004,han_a/ppa_2004,han_a)) %>%
  mutate(han_ppa=if_else(year==2008,han_a/ppa_2008,han_ppa)) %>%
  mutate(han_ppa=if_else(year==2010,han_a/ppa_2010,han_ppa)) %>%
  mutate(han_ppa=if_else(year==2014,han_a/ppa_2014,han_ppa)) %>%
  mutate(han_ppa=if_else(year==2016,han_a/ppa_2016,han_ppa)) %>%
  mutate(haf_ppa=if_else(year==2004,haf_a/ppa_2004,haf_a)) %>%
  mutate(haf_ppa=if_else(year==2008,haf_a/ppa_2008,haf_ppa)) %>%
  mutate(haf_ppa=if_else(year==2010,haf_a/ppa_2010,haf_ppa)) %>%
  mutate(haf_ppa=if_else(year==2014,haf_a/ppa_2014,haf_ppa)) %>%
  mutate(haf_ppa=if_else(year==2016,haf_a/ppa_2016,haf_ppa)) %>%
  mutate(hl_ppa=if_else(year==2004,hl_a/ppa_2004,hl_a)) %>%
```

```
mutate(hl_ppa=if_else(year==2008,hl_a/ppa_2008,hl_ppa)) %>%
mutate(hl_ppa=if_else(year==2010,hl_a/ppa_2010,hl_ppa)) %>%
mutate(hl_ppa=if_else(year==2014,hl_a/ppa_2014,hl_ppa)) %>%
mutate(hl_ppa=if_else(year==2016,hl_a/ppa_2016,hl_ppa))
```

Se generan deciles. Se calculan los deciles de riqueza neta ajustada.

```
country <- country %>%
  group_by(dname,iso2,year,inum) %>%
  arrange(dnw_ppa) %>%
  mutate(facum=cumsum(hpopwgt)) %>%
  mutate(decil=if_else(facum>sum(hpopwgt)*.1,2,1)) %>%
  mutate(decil=if_else(facum>sum(hpopwgt)*.2,3,decil)) %>%
  mutate(decil=if_else(facum>sum(hpopwgt)*.3,4,decil)) %>%
  mutate(decil=if_else(facum>sum(hpopwgt)*.4,5,decil)) %>%
  mutate(decil=if_else(facum>sum(hpopwgt)*.5,6,decil)) %>%
  mutate(decil=if_else(facum>sum(hpopwgt)*.6,7,decil)) %>%
  mutate(decil=if_else(facum>sum(hpopwgt)*.7,8,decil)) %>%
  mutate(decil=if_else(facum>sum(hpopwgt)*.8,9,decil)) %>%
  mutate(decil=if_else(facum>sum(hpopwgt)*.90,91,decil)) %>%
  mutate(decil=if_else(facum>sum(hpopwgt)*.91,92,decil)) %>%
  mutate(decil=if_else(facum>sum(hpopwgt)*.92,93,decil)) %>%
  mutate(decil=if_else(facum>sum(hpopwgt)*.93,94,decil)) %>%
  mutate(decil=if_else(facum>sum(hpopwgt)*.94,95,decil)) %>%
  mutate(decil=if_else(facum>sum(hpopwgt)*.95,96,decil)) %>%
  mutate(decil=if_else(facum>sum(hpopwgt)*.96,97,decil)) %>%
  mutate(decil=if_else(facum>sum(hpopwgt)*.97,98,decil)) %>%
  mutate(decil=if_else(facum>sum(hpopwgt)*.98,99,decil)) %>%
  mutate(decil=if_else(facum>sum(hpopwgt)*.99,100,decil))
```

Se genera la riqueza ajustada por deciles de riqueza neta ajustada.

```
country %>% group_by(dname,inum,decil) %>%
  summarise(Hogares=sum(hpopwgt),
            Riqueza_neta=sum(dnw_ppa*hpopwgt),
            Activos_físicos=sum(han_ppa*hpopwgt),
            Activos_financieros=sum(haf_ppa*hpopwgt),
            Deuda=sum(hl_ppa*hpopwgt)) %>%
  group_by(dname,decil) %>%
  summarise(Hogares=mean(Hogares)/1000,
            Riqueza_neta=mean(Riqueza_neta)/1000,
            Activos_físicos=mean(Activos_físicos)/1000,
            Activos_financieros=mean(Activos_financieros)/1000,
            Deuda=mean(Deuda)/1000) %>%
  gt() %>% tab_header(title = "Riqueza ajustada y su desglose",
                    subtitle = "(Miles de dólares PPA)") %>%
  fmt_number(c("Hogares","Riqueza_neta","Activos_físicos","Activos_financieros",
               "Deuda"),decimals = 0) %>%
  tab_style(cell_text(align = "right"),
            locations = cells_body(columns = everything(), rows = everything())) %>%
  tab_style(cell_text(align = "center"),
            locations = cells_column_labels(columns = everything()))
```

`summarise()` has grouped output by 'dname', 'inum'. You can override using the `.groups` argument.

``summarise()`` has grouped output by 'dname'. You can override using the `` .groups`` argument.

Cuadro 69
 Ejemplo Italia: riqueza ajustada y su desglose
 (En miles de dólares PPA)

Decil	Hogares	Riqueza_neta	Activos_físicos	Activos_financieros	Deuda
1	233	-785 534 759	66 780 870	122 918 909	975 234 538
2	235	2 493 903	17 647 938	12 749 162	27 903 197
3	238	33 706 468	17 605 405	22 650 479	6 549 416
4	238	62 151 365	41 925 756	23 949 197	3 723 587
5	234	100 481 196	57 347 175	78 769 382	35 635 361
6	236	149 908 056	64 383 609	107 975 558	22 451 111
7	239	229 390 302	89 700 577	149 899 896	10 210 171
8	234	397 159 660	84 671 632	326 341 874	13 853 846
9	237	701 945 342	104 346 097	651 448 874	53 849 629

Percentil	Hogares	Riqueza_neta	Activos_físicos	Activos_financieros	Deuda
91	22	90 627 073	9 538 754	81 640 784	552 465
92	24	108 112 662	23 367 648	86 739 471	1 994 457
93	25	131 507 416	10 761 507	120 745 909	0
94	23	144 059 316	11 980 294	139 621 804	7 542 782
95	24	169 717 019	9 302 271	160 414 747	0
96	22	169 936 265	15 440 884	154 495 381	0
97	25	259 047 087	14 634 161	244 412 926	0
98	24	345 500 474	11 474 572	334 025 903	0
99	23	506 499 434	24 550 361	484 244 618	2 295 545
100	24	2 168 675 188	42 387 662	2 126 287 526	0

Fuente: Elaboración propia.