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INFLUENCE OF SOME INTERMEDIATE
VARIABLES IN THE LEVEL AND
DIFFERENTIALS OF URBAN AND RURAL
FERTILITY IN LATIN AMERICA
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S U M M A R Y

In this paper an effort was made to unravel some of the cords of
of the complex knot of fertility. Some of the strings thus discover-
ed seem to be important ones such as those of age at marriage and
especially, education and family planning practices. Others do not
seem to lead very far either because they are not important variables
in explaning fertility differentials between the rural-urban areas
(age distribution, work of the women) or because they probably have
not been measured in a fully adequate way (occupation of husband).
The second phase of the rural fertility study should allow to go in-
to greater depth in studying the relations of these and other variab-
les with rural small-urban fertility. In a further paper attention
will be directed to the more social-psychological factors, such as
attitudinal and motivational structures of the interviewed women as
they are translated into fertility ideals and as they are related to
fertility and family planning practices.

R E S U M E N

En este trabajo se ha hecho un esfuerzo para desenredar alguno
de los hilos que componen la madeja de la fecundidad. Algunos de los
hilos descubiertos parecen ser importantes, tales como la edad al ca-
sarse y especialmente la educación y las costumbres sobre planeamien-
to familiar. Otros parecen no haber ido muy lejos, bien porque no
constituyen variables importantes al explicar las diferencias de fe-
cundidad entre las areas rurales-urbanas (distribución de la edad,
trabajo de la mujer) o porque probablemente no han sido medidos en
una forma totalmente adecuada (ocupación del esposo). La segunda fa-
se del estudio de la fecundidad rural debería hacerse más profunda-
mente al estudiar las relaciones de éstos y otras variables con la fe-
cundidad en pequeñas areas rurales y urbanas. En un trabajo adicional
la atención será dirigida más bien a los factores socio-psicológicos,
tales como la actitud y motivos de la mujer entrevistada cuando son
traducidos al ideal de la fecundidad y cuando están relacionados con
la fecundidad y las costumbres sobre planeamiento familiar.

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One of the most challenging tasks of social sicience in the second half of the twentieth century is the study of relevant sociological phenomena in developing areas with modern tools of social survey research. Human fertility in Latin America es precisely a case in point. In order to gain a deeper insight into the dimensions of human fertility in its Latin American setting, the Latin American Demographic Centre (CELADE) is carrying out a series of studies in which the modern tools of social survey research are being applied. Besides giving a brief overview of these efforts, the aim of this paper is to compare some preliminary results of recent surveys on fertility in rural and small urban areas with those of previous surveys which were concentrated on the fertility of large urban centres. First some broad methodological considerations will be given followed by a description of the sites where the surveys were performed. Subsequently, the influence of several demographic and sociological variables on fertility will be compared for the large urban and rural-small urban areas.

1. General methodological notes

Methodologically, the series of studies undertaken by CELADE to obtain a greater understanding of some of the dimensions of human fertility in Latin America may be characterized by the following properties:

a) The studies are cumulative. The first fertility survey undertaken by CELADE, and probably the first on the Latin American region, was that undertaken in Santiago, Chile, 1959.(1) This preliminary study, based on interviews with 1 970 women from 20 to 50 years of age, was followed by a large scale comparative study of urban fertility using an amplified questionnaire in seven Latin American cities. The surveys for these cities, also covering a sample of women 20 to 50 years old ranging from 2.100 to 2 500 in each city were conducted between the end of 1963 and the end of 1964.(2) Later, other Latin American countries studied their urban fertility using as basic documents those prepared by CELADE for the seven cities studies.

As it was recognized that urban fertility is only part of over-all Latin American reproductive behavior, a project was designed to study rural and small urban fertility as well. A preliminary survey in a rural area in the

neighborhood of Santiago, Chile (3) was followed by a fully organized program to study rural and small urban fertility (heretofore summarily referred to as rural fertility study) in the context of Latin American culture. The cumulative nature which is characteristic of the whole series of fertility studies directed by CELADE has been more formally integrated in the planning design of the rural fertility study. This has been divided into three temporal sequences, the first one being essentially a phase of pretesting all the different tools used in the survey; sample design, questionnaire, coding system, instruction for field directors, interviewers and coders. This first phase, however, has been conceived on a larger scale than is usually the case for pilot surveys. For this phase six samples of women between 15 and 49 years old were chosen from three Latin American countries interviewing from 200 to 350 women in the two sites in each country. As a consequence, besides its methodological objectives, the study also has some substantive results to show, a few of which will be touched upon in the following parts of this paper where comparisons will be made with some of the results of the aforementioned study of urban fertility.

The second phase will be on a similar scale as that of the urban fertility study: several more countries will participate and the sample will be representative of a large part of the rural and small urban areas of these countries. Again following the pattern of the urban fertility study, in a third phase it is hoped that several other countries will join and study their rural and small urban fertility patterns using the research tools developed by CELADE.

The questionnaire used in the rural fertility study differs in two important aspects from the one used in the urban surveys. First, it is a questionnaire especially adapted for women with low education in rural and small urban areas of Latin America. Care has been taken to use as simple language as possible and to phrase the questions mainly in terms of the spheres of interest of such women. Secondly, the questionnaire integrates several new features, partly the results of the experience of the urban fertility study and partly the result of developments in similar fertility studies elsewhere in the world.

The rural fertility study also incorporates a recommendation of the Committee on Comparative Studies of Fertility and Family Planning of the International Union for the Scientific Study of Population. The recommendation is that two series of information on fertility and on some socio-economic variables

be obtained. One set of information is gathered by detailed interviewing through the questionnaire of the women falling in the sample. The other information is obtained in a more succinct way from all the women in households within the sample areas and age limits. This allows for comparisons between women in the sample and those of a larger population. It will also serve to indicate whether the collection of data can be improved through the use of more elaborate means in the questionnaire. Finally, it permits the calculation of some fertility measures based on a larger number of women than those contained in the sample. The data examined in this paper refer only to those obtained through the detailed questionnaire.

b) The studies are comparative. Probably never before in the short history of human fertility survey research has fertility been studied in such a systematically comparative way. The comparative element does not consist in a loose coordination of somewhat different modes of fertility research in Latin America. Rather it is a well planned effort to bring different Latin American research institutes together under the guidance and supervision of CELADE through regular organized sessions, methodological publications, continuous correspondence, and personal visits of CELADE staff members, as well as through the use of the same basic sample design, identical questionnaire and coding systems with concomitant instructions to study human fertility in their respective countries. With these basically identical research tools, an effort is made to analyze fertility behaviour and structures in a series of Latin American countries which can be put on different points along a scale of socio-economic development, thus allowing at the same time the study of differential fertility in and between these countries as well as a transversal study of the demographic transition in Latin America.

c)   The contents of the studies are polyvalent. Were it not for the fact that actually several fertility surveys in Latin America have been executed which are weak in the measurement of their most basic dependent variables, it would scarcely need stressing that extreme care is used to obtain accurate demographic information on the level of fertility. This is not only obtained by the use of a carefully designed pregnancy history especially adapted for women with little or no education, but also by making the field director and his interviewers and coders sensitive to the various imperfections of this instrument as known from previous

experiences. Similar care is taken to obtain accurate information on infant
mortality and spontaneous and induced abortions. However, it is readily admit-
ted that careful measurements of abortion, especially induced abortion, need
special survey methods.(4) Furthermore, it is recognized that fertility may be
pictured as a complex knot in which the cords of sociological, psychological,
ecological, and economic variables are closely intertwined. and knitted together.
In an effort to untie at least partially this complex knot, the questionnaire is
intended to integrate the search for the influence of sociological, psychologic-
al, ecological and economic factors. No claim is made that all independent va-
riables have been included; neither is it claimed that those which have been in-
cluded are measured in the proper way. Due to the rather undeveloped state of
the social sciences in Latin America, CELADE very often was obliged to experi-
ment and to develop measures of variables that do not come directly under the
realm of demography. This is especially true for the measurement of communica-
tion patterns and of attitude variables such as traditionalism and religiosity,
and of such socio-economic variables as occupation, income and consumption.

This paper will not touch all these variables. It will be limited to some
of the intermediate variables affecting fertility patterns as they were defined
by Davis and Blake several years ago. (5)

2. The areas under comparison

The data used for comparative purposes in this paper thus refer to the two
series of fertility studies previously mentioned: the comparative study of urban
fertility in seven Latin American countries and the first phase of the rural fer-
tility study in three Latin American countries. First the areas of the urban
fertility study will be briefly indicated. Secondly, due to the fact that this
paper contains the first information ever published on the rural fertility stu-
dies, a more elaborate description will be given of the areas where the rural
fertility surveys have been performed. Since Chile has been included in the
first phase of the rural fertility study, occasional comparisons will be drawn
with the results of the previously mentioned fertility study of Santiago in 1959.

a) Areas of the urban fertility study. The cities under study differ not only
in their socio-economic context, belonging as they do to countries of different
socio-economic development and cultural background. In their internal ecological

organization they can be differentiated too. Three of the seven cities are
the three largest ones of the region (Buenos Aires, Mexico City and Rio de
Janeiro). Two are medium sized capitals (Bogotá and Caracas) and the remain-
ing two belong to the category of small cities (Panama and San José, in Costa
Rica).

b) <u>Areas of the rural small-urban fertility study</u>. The principle in selecting
the areas for the pilot surveys in the rural fertility study was to choose in
Colombia, Chile and Mexico two areas of quite different or even opposite socio-
economic and cultural characteristics so as to submit the research tools to very
diverse conditions, expecting at the same time to find some fertility differen-
tials between the two areas in each country. Most of the areas described below
consist of an urban and a rural sector. Normally, the urban part possesses some
of the amenities of modern life such as electricity, water, and sewage system.
The rural sectors generally do not contain any of these facilities.

<u>Colombia</u> . Two distinct geographical areas with significant differences ,
regarding level of general development, type of activities, ethnic composition,
family structure, influence of religion, communication facilities, closeness to
a large city and other features were selected for the surveys. One area belongs to
what is usually designated as the "Caribbean region", with cattle raising and a
more diversified subsistence agriculture as predominant activities of the popu-
lation. The influence of the Catholic Church is weak in this region. Consen-
sual unions are frequent and sexual mores are rather free. The bulk of the po-
pulation consists of Mulattos, although some settlements have a mixture of In-
dians and Whites as well. The sites selected in this region were located in
the municipalities of Turbana and Calamar in the Department of Bolívar, at a
distance of between 55 and 105 kilometers from Cartagena, a city of about 250 000
inhabitants. Some of them are connected with Cartagena by roads only accesible
during the dry season. To designate these sites the name of Cartagena will be used
in this paper.

The other area is Neira, located in the Colombian Andes in the Department
of Caldas at an altitude of about 2 000 meters above sea-level and about 20 kilo-
meters from Manizales, a city of almost the same size as Cartagena. The activi-
ties of the area are primarily monocultural and are related to coffee which is

the economic backbone of Colombia's economy. Racially the mestizo type dominates in this region. Catholicism is much stronger in this area. Consensual unions are much less frequent, and sexual life adheres more to strict rules. While people in the rural areas around Cartagena are living in concentrated settlements, the population of Neira outside the urban core is well dispersed over very mountainous land which presented many difficulties for the interviewers. (6)

Chile. Although the population and culture of Chile are much more homogeneous than in either Colombia or Mexico, a similar effort was made to select two areas with very diverse characteristics. One is a municipality (Mostazal, in the province of O'Higgins) comprising a small town and its surroundings in the relatively rich central valley where the agricultural exploitation takes place, primarily in large holdings and which has received some modernizing influences. The town with some incipient industrial activity is located near the Pan American highway and on the railway 63 kilometers south of Santiago, the nation's capital. Mostazal also lies at 22 kilometers from a medium sized city which is the center of an area of importance, both in terms of its mineral resources (the world's largest covered copper mine is located here) and of its agricultural and cattle raising activities.(7)

The second site is in a rather remote area (Cauquenes and Chanco, in this paper referred to as Cauquenes) in the province of Maule, which is located in the costal mountains of Chile away from the Pan American highway and about 400 Kilometers from Santiago. While the previous area is more or less representative of average rural Chile, this area is among the poorest in Chile. Agricultural activities conducted here in a poorly irrigated, hilly terrain are much more traditional and are developed primarily in medium and small-size holdings. The city of Cauquenes, with an important wine industry and other activities of secondary importance, is the capital of the province. As in Colombia, the spatial settlement structure of this area is very different from the one for Mostazal. In Mostazal, the rural settlements are concentrated in several clusters mostly corresponding to the different "fundos" as the big agricultural holdings are called in Chile. In Cauquenes-Chanco the dwellings are extremely dispersed over very hilly terrain and very often lack the most essential means of communication.

Mexico. In a typology defining seven possible stages of economic develop-
ment, one of the two sites selected in Mexico (San Juan de Guelavia and Teotitlan,
here called Guelavia, in the province of Oaxaca) belongs to the very low category,
and the other (Pabellon de Arteaga in the province of Aguascalientes) to the me-
dium high. In the area of very low development, there is a predominance of po-
pulation of Indian origin, engaged primarily in subsistence agriculture. Cul-
tural and social structure still are very traditional. A substantial proportion
of the population speaks only Zapoteco, and Indian language, and religion is a
mixture of Catholicism and pagan rites. The area is also of a rather high alti-
tude (1.600 meters above sea level) and is located 25 kilometers from Oaxaca, a
city of about 75 000 inhabitants.

In the more developed area coupled with an agricultural structure more re-
lated to exports from the area, there are industrial and commercial activities.
While the previous place is not provided with any of the amenities of modern life,
the urban part of the latter area has electricity, some telephone installations,
banks, and schools. Its establishment is associated with the construction of one
of the important irrigations dams of Mexico, and on account of this, it has re-
ceived an important modernizing influence. Pabellon is served by the railway which
connects it with Mexico City, Juarez City and Torreon. It is located two kilo-
meters from the Pan American highway. (8)

The number of women interviewed in the different sites is given in Table 1.
For the places of the rural fertility study, besides the number of women, the to-
tal population of the area is given together with the proportion rural when this
was available. In comparing the results of the rural fertility study four li-
mitations should be kept clearly in mind. First, the urban fertility data are
based on a definite survey while the first phase of the rural fertility study is
essentially a pilot undertaking, which will serve as a basis for a definite study.
Secondly and for the same reason, the sample size used in the first phase of the
rural fertility survey is much smaller than that for the urban. Thirdly, although
the urban fertility is representative only of a major city, it nevertheless is
representative of a large part of the urban areas of the particular countries,
since these cities present an important proportion of the total urban area. As
may be concluded from the previous description, an effort has been made in the
rural fertility study to select areas with different characteristics. But it is

evident that these samples cannot be considered as representative of the whole rural areas of the particular countries. Fourth, the surveys of urban and rural fertility have been performed at different points in time. (9)

3. Level of fertility and age differentials

From Table 2 where average number of live births for all women interviewed in the several sites of the urban and rural fertility studies are shown, three conclusions may be drawn. First, there are important differences in urban fertility which to a certain extent may be correlated with the general socio-economic and cultural context of the respective countries in which the cities are located. The level of fertility in Mexico City, the highest as measured by the average number of live births, is more than twice that of Buenos Aires, the city with the lowest level.

Second, as for rural fertility, differences seem to exist in the rural small-urban fertility levels of various Latin American countries. Chile has the lowest level followed by Colombia and Mexico, which has the highest average number of live births in the places included in the survey. The range of variation, however, is not as wide as for the cities. This may be because the first phase of the rural fertility study covers only a very limited part of Latin America and/or because the degree of homogeneity of rural small-urban fertility is higher than is the case for the urban, presumably because the different cities have been subject to different degrees of modernization. While the two places in Colombia have exactly the same average number of live births, there is about the same amount of differences in this index for the two places selected in Chile and Mexico. Contrary to what would have been expected, the sites in Chile as Mexico presenting the higher figures are those communities which on most accounts have been receiving more modernizing influences.

The third and probably the most important aspect for the purposes of this comparison, is that there are relatively significant differences between urban and rural small-urban fertility as measured by the average number of live births. In comparing the figures of the urban and rural fertility studies, it should be taken into account that the former, in contrast with the latter do not include women 15 to 19 and do include women of age 50. This tends to exaggerate the

urban average number of live births thus reducing the difference with the rural, as reflected in the figures of Columns (1) and (3) of Table 2.

Only in the unlikely case that the average number of live births for age group 15 to 19 and for age 50 would be the same as the over-all figure, would the comparison be straightforward. The rural-urban differences are thus larger than may be deduced from Columns (1) and (3) of Table 2. However, even disregarding this influence, for all but one location, Cauquenes in Chile, all the figures for the rural areas have higher values than the cities. If the average numbers of live births for the rural areas are calculated omitting age group 15-19 so as to make them more directly comparable to the urban figures, the rural-urban fertility difference looms even larger (Column 4 of Table 2). If the figures for the rural areas are compared with the urban figures for the respective countries they are always higher. The fact that rural-urban fertility differences in Latin America are obtained using survey methods confirms their existence as shown when calculating child-woman ratios from census data for urban and rural areas. (10)

The age distribution may exert a considerable influence on the over-all level of fertility. How the influence is exercised depends on the particular measure of fertility used. When using average number of live births as a measure of fertility and comparing the fertility of a population with a younger age distribution with that of an older population, this measure will tend to reduce the difference in fertility level. This is opposite to what would happen if birth rates of fertility rates would be used to measure fertility. This may be easily seen when comparing in Table 2 the standardized figures, especially those standardized with the age distribution of Buenos Aires as the standard population, with the unstandardized figures. The average number of births increases for all places when using the age distribution of Buenos Aires as a standard. Table 3 clearly shows that the age distribution of Buenos Aires is strikingly older than for the remaining cities with the exception of Santiago, which is somewhat between Buenos Aires and the other large urban areas. The same is true when the comparison is made with the rural small-urban areas. But with the exception of Buenos Aires and Santiago, it cannot be said that the age distribution of the women interviewed in the rural areas is generally younger than in the urban area. The rural places in Mexico, especially Guelavia, even have a definitely older age distribution than Mexico City.

It may thus be concluded that if fertility rates had been available, differences in them would generally be due only in a minor degree to differences in age distribution. That there is a real difference in fertility independent of the age distribution between the urban and the rural small-urban areas is evident when comparing the age-specific average numbers of live births for the corresponding areas. The difference becomes particularly impressive when concentrating on the values for age groups 40-44 and 45-49 which may be considered as measures of completed fertility. All the available values for the rural areas, even those of Cauquenes which has the lowest over-all average number of live births for the rural areas, are substantially higher than those for Mexico City, which among the large urban areas, has the highest figure for those age groups.

4. Nuptiality patterns and level of fertility

The percent distribution and average number of live births by marital status age are given in Table 4. It should be noted that the table for the large urban areas is not strictly comparable with the one for the rural small-urban areas on two accounts. As indicated before, the rural small-urban samples include age group 15-19 which was excluded from the urban fertility study, and it excludes women of age 50 who were included in the urban surveys. This, of course, inflates the proportion single in the rural fertility study as compared with the urban areas. Second, there are some differences in the categories of marital status used. For the rural surveys, a distinction is made between "civil marriage only" or religious marriage regardless of whether a civil ceremony was performed. It was thought that these groups are different in some of their sociological characteristics, especially in regard to the role of religion in the life of these women. Due to the very low percentages of separated and widowed from either legal or common law marriage and of divorced in the rural surveys, the figures were collapsed into one category entitled "Remaining Categories" in Table 4.

In the cities there are not very large differences in the proportions single. For the rural areas there is more variation. It ranges from a percentage of 38.6 in Cauquenes, the place with the lowest rural fertility, to

13.3 percent in Guelavia which has the second highest fertility level. The incidence of common law marriage is rather high in Panama and Caracas, medium in Mexico City, San José and Rio de Janeiro, and on the low site in Bogota, Santiago and Buenos Aires. For the rural areas with the exception of Cartagena, the proportion in common law marriage, contrary to what would have been expected, is low. The area of Cartagena belonging as does Panama City to the Caribbean culture, has a proportion in common law marriage which is about the same as Panama City. A word of caution should be added when studying the proportion of single, consensually married and other marital categories for Latin America. Although much care is applied in the efforts to obtain information on marital status, theres is no doubt that the proportion single in varying degrees also includes women who presently have or have had a more or less stable relationship with a man. The incidence of civil marriage only has some importance in Chile, probably a reflection of the more secular nature of the Chilean society which has an impact even in rural areas. In Colombia, "civil marriage only" is practically nonexistent. This could probably be explained by the fact that usually there is a religious ceremony performed in the case of a legal marriage. In Mexico, Pabellon has a low percent of women reporting "civil marriage only", but Guelavia has a larger one, a result which again appears inconsistent with the higher degree of secularization which one would have expected in the more developed site.

Regarding fertility differences based on marital status, the most important question is whether fertility differentials exist between consensually married and legally married (either religious civil or both) women and, if so, in what sense are they different. No definite conclusion can be drawn from Table 4 to substantiate the nature and direction of the differential. Differences in opposite directions are found, and, even so, some are not large. For consensually married women live birth per woman are lower than for legally married women in Buenos Aires, Santiago, Bogotá and San José. But the number of live births per consensually married woman is higher in Rio de Janeiro, Mexico, Caracas and Panama. If any tentative conclusion may be drawn it is that fertility for the consensually married tends to be higher in those cities where there is a more sizable proportion in commnon law marriage. Nei ther do the rural areas show a clear-cut relationship. All that may be

concluded is that for the further study of this relationship two addition-
al methodological requirements should be fulfilled. Proportionally,
larger samples of consensually married are needed, and a typology is re-
quired which differentiates between various kinds of common law relation-
ships. As yet this category has been treated too monolithically in most
research on this topic in Latin America.

Two basic dimensions of nuptiality are the age at first marriage and
the proportion remaining definitely single. It is clear that other factors
being the same, both these dimensions can have a considerable influence on
the level of fertility. Median age at first marriage for the different
places is given in Table 5 and proportion definitely single in Table 6.
Buenos Aires and Santiago with a median age at first marriage or union of
22 are clearly differentiated from the other cities which have median ages
ranging form 20.1 in Rio to 18.3 in Caracas. This is probably due to the
fact that Santiago and, especially, Buenos Aires, belong to countries which
in the past were more developed than the others and also have been more
open to influences from Western Europe where age at marriage in the last 100
years has never been as low as in some of the other Latin American cities.

Although median age at marriage for the rural areas in Chile is higher
than for most of the cities, it is definitely lower than for Santiago.
Likewise in the rural areas of Colombia and Mexico, median age at first mar-
riage or union is lower than in the large urban centers. Lower age at first
marriage thus seems to be a factor accounting to a certain extent for the
existing fertility differences between urban and rural places. The same
thing cannot be said of the proportion definitely single which is measured
by percentages single in age groups 35 and over. In the rural areas the
three groups comprising ages 35 to 49 have been collapsed into one age
group since the five year age groups between 35 and 49 include too few cases
to be meaningful. Proportions of definitely single between urban and rural
localities are not very dissimilar inside the respective countries so that
they cannot be considered as an important factor in explaining differentials
between the urban and rural-small urban places. However, these differences
in the proportions definitely single are somewhat more helpful in explaining
variations in fertility between cities and even more so between rural areas.

The rank order of the proportion definitely single follows roughly the rank order of the average number of live births. For the cities the relation is less clear-cut. The high proportion definitely single for San José is suspicious. It certainly includes a portion of women who are not single. If San José is left out of the picture, Buenos Aires and Santiago, with proportions of about 12 percent differ from the other cities chich have proportions ranging from 6.0 percent for Panama City to 8.5 percent for Bogotá.

5. Education and fertility differences.

That there is a substantial difference in the educationsl level of the interviewed women between the urban and rural-small urban areas scarcely needs comments after a quick inspection of the proportions with no education in Table 7. Only one rural locality, Neira, has a relatively low proportion for this category. The proportion without education is even smaller than for Bogotá. One can speculate on this low value. The region apparently is well provided with a rather ample school system developed with the support of the coffee growers. It might also be due to selectivity in the sample as a consequence of a deviation from the general sample scheme. In contrast with the other areas where no previously prepared population lists were used, in rural Neira lists of households were obtained from the electricity company. Although this region has a remarkable electricity net which even brings electricity to far out-of -the-way places high in the mountains, and although an effort was made to add to the lists all households without electricity, it is possible that some of these were missed and they contain precisely a higher proportion of women without education. Another possibility is that due to the very difficult terrain, interviewers tended to avoid remote dwellings.

All the other rural areas have high proportions of women without education. This is even true for the rural small-urban areas of Chile, a country which has a substantially higher literacy rate than most of the other Latin American countries. Guelavia in Mexico and Cartagena in Colombia have the highest proportions of women without education. These are probably the two least developed areas included in the study. They are, however, not the places with the highest average number of live births. Similar differences

in educational level between urban and rural small-urban areas are reflected in the proportions for the other educational categories. While sizable proportions of the women in the cities have had contact with secondary education, in the rural areas these proportions are low.

No other socio-economic variable shows such clear-cut negative relation with fertility as does education. This relationship shows up convincingly clear in the urban as well as in the rural small-urban areas. Except for a few minor fluctuations which are probably due to sample variations and insufficient number of cases, the relation is a straightforward negative one. It, however, does not seem to be a straightforward linear relation. Somewhere at the primary level, especially at the completed primary level a large decrease in fertility occurs while differences for the secondary and higher levels are much less marked. In some cities there is even a slight upturn at the university level. Whether this is genuine or due only to sample fluctuations cannot be decided here.

Are there intervening factors which could explain the negative correlation between education and fertility? Age and age at first marriage immediately come to mind. To be completely clear about the influence of education on fertility the cross tabulations between education and fertility should be controlled for age of the woman and for age at first marriage or union. Due to the fact that level of education is a dynamic factor changing over time, it is possible that there are proportionally more young people concentrated in the higher educational groups with the consequence that their average number of live births cannot be as high as for woman with lower education who would be more concentrated in the older age groups. On the other hand, it should not be forgotten that the group with university education (which is practically absent in the rural small-urban areas) normally contains women above a minimum age, which could inflate somewhat their average number of live births. Age at marriage is another variable which on many occasions has been shown to be positively related to education and which could thus influence fertility negatively. Nevertheless, it is difficult to accept the fact that education would be negatively related to fertility exclusively through the

aforementioned intervening variables. In every fertility study where such tabulations have been made controlled for age or age at first marriage, it has been possible to show that education exercised an independent influence on fertility.

Educational level thus can be considered as an important variable influencing the level of fertility in Latin America. In explaining the rural-urban differences in fertility the differential distribution of the women by education is an important explanatory variable. But if the series of cities is taken alone or if the series of rural small-urban locations is considered alone, differences in the educational composition between the various survey sites are in a minor degree correlated with the over-all fertility level. The sharp decline in fertility at the elementary school level may have some important implications for those considering population policies in Latin America. In the event that this decline could be considered general over Latin America, universality of complete elementary education or its equivalent could bring about some important changes in the level of fertility. At the same time, it would show that no sophisticated education is required of women in order to bring about changes in their fertility behavior.

6. Occupation of husband and levels of fertility

To study the relation between fertility and socio-economic status a whole gamut of indicators can be used. Unfortunately, most of these indicators are not suitable for developing countries. In the fertility studies the classical ones have been retained although very often some innovation had to be made in order to measure them in the proper way in the environment of Latin America. These are education, occupation of husband and wife, and income. Education of the wife has been shown to have a strong negative relation to fertility. Income is a much more difficult variable to handle when comparing countries. It definitely becomes difficult to measure in underdeveloped rural regions where often wages are not completely paid in money. An effort was made to measure income in terms of consumption of the household. The results obtained have not been very satisfactory. The discussion thus will be limited here to fertility in its relation to the

occupational status of the husband. Since only a minority of the women are working, it is not useful to measure socio-economic status by wife's occupation.

For the urban surveys, the occupational information was coded in six different occupational categories which afterwards were collapsed in three classes: higher non-manual, lower non-manual, and manual. These are shown in Table 8 together with the average number of live births for each group. The proportion higher non-manual with a value around 10 percent does not differ markedly from one city to the other. This may be an indication that for a metropolitan center to function it needs a certain minimun proportion of people in this group and that this minimum is not too different from city to city. The percentages for lower non-manual and manual sets Buenos Aires aside from the other cities. In Buenos Aires there is about the same proportion of people in the lower non-manual as in the manual group. In all the other cities of Table 8, there is a substantially higher proportion in the manual group as compared with the lower non-manual group. This difference is probably due to the existence of a fully developed middle class in Argentina. On the whole, there is a tendency for fertility to decrease as occupational level of the husband rises, although the differences are not as pronounced as for education.

It is evident that the occupational classification used in the urban surveys cannot be applied in the rural small-urban setting. Since the methodology to measure occupational structure in rural areas of underdeveloped countries is itself underdeveloped, a classification scheme was used which purported to differentiate between lower and higher level agricultural occupations and at the same time to set apart from the more modern those traditional occupations which tend to disappear with industrialization and modernization. In such a way an occupational classification of eight categories was obtained which will be given briefly:

1. Traditional occupations. In this category all traditional occupations which tend to disappear with modernization and which were not directly agricultural were classified. Examples are hand weavers, charcoal-makers, etc.

2. Low-level agricultural occupations. Agricultural workers, share croppers, and peons were classified together with small landowners in this category.

3. High level agricultural occupations. This category comprises owners and administrators of large agricultural holdings and also of agricultural laborers who have more prestige than those of the previous category, such as supervisors or tractor drivers.

4. Upper level white collar occupations, are occupations which require advanced training and which entail much responsibility and a high level of prestige, such as physician, nurse, accountant, and secondary schoolteacher.

5. Lower level white collar occupations are those which require a certain level of training but not as much as in the previous category. Office workers, primary schoolteachers, and policemen are included here.

6. Skilled labor includes those occupations related to sectors which will not disappear with the progress of modern life.

7. Service workers include shopkeepers, salesmen, waiters, etc.

8. Unskilled labor is, again, related to sectors which will not disappear with the progress of modern life.

The percentage distribution by these occupational classes is given in Table 6. The predominance of agriculture as the main source of individual income is clearly reflected in these figures. In Chile the proportions in the low level agricultural category are somewhat under 50 percent. In all the other places they are over 50 percent. If the two agricultural categories —low and high level — are combined, the proportions everywhere are well over 50 percent. The proportions in traditional occupations not directly related to agriculture are low. The differences between the various places may be a reflection of reality but they could be due to differing coding procedures since it is not always easy to specify an occupation as traditional and at the same time to distinguish it from the agricultural occupations. As may be expected from the description of the localities, the proportions in upper level white collar occupations are low. In the samples for Guelavia

and the two Colombian localities there is not even a single person in this
group. In fact, it has a small importance only in Chile. The small pro-
portion of upper level white collar occupations in Mostazal may reflect the
fact that it has received more modernizing influences than most of the other,
localities. The slightly higher proportion for Cauquenes than for Mostazal,
may be due to the fact that that city, as capital and urban core of the pro-
vince of Maule, has some importance. The proportion in the services should
again be carefully interpreted since it is almost certain that in Colombia
part of this group would probably have been coded more accurately in the tra-
ditional sector. The remaining proportions comprise the skilled and unskil-,
led laborers and range from 27 percent in Mostazal to 3 percent in Guelavia,
Mexico, indicating the rather low level of any industrial development these
regions have received. One must also remember that many of these occupations
are related to roadbulilding, repairshops, garages and similar functions
which, although not bound to disappear with economic development, do not re-
flect the existence of real modern industry. From the previous discussion
it may be concluded that this distribution to a certain extent gives a pic-
ture of one of the most important dimensions of these localities: the oc-
cupational structure of their populations, albeit, imperfect mostly due to
uncertainty in the interpretation in the coding. This occupational clas-
sification, however, is not aimed primarily for use as an economic indicator,
but as a means of encountering the occupational fertility differentials that
may exist. In this connection, besides the aforementioned difficulty in
coding the occupational distributions with the consequent possibility of blur-
ring any real differences in fertility, the other major difficulty is that
about fifty percent or more of the population is located in the lower level
agricultural group so that the other categories very often have insufficient
numbers from which to draw any conclusions. Taking these limitations into
consideration, it may be said that there is a tendency for the agricultural
category, especially the lower level one, to have a higher average number
of children. Keeping the same limitations in mind, there seems to be a ten
dency for the remaining categories to have lower average number of children
although it is far from a perfect trend.

7. Work of the women and fertility level

Table 9 shows that the proportion of women working is not too different for the series of seven cities and ranges between 30 and 40 percent. At the same time this table clearly establishes a trend toward higher average number of live births for the non-working women which, of course, may be due partially or wholly to intervening factors such as age, marital status, education, or to selective factors as spinterhood, childlessness or lower fertility. For the rural sites the localities in Mexico and Chile have proportions centered around or in the 20 to 25 percent range. The Colombian localities with a percentage of 17 in Neira and 42 in Cartagena, are at the low and high ends of the low and high ends of the scale for working women.. Again, one whould be careful in accepting these figures at their face value. Since it is known that many of the women working do so at home in traditional occupations, the questionnaire required that the women be asked whether they were working inside or outside the home or both. With one exception, Pabellon, there are many more women working inside the home than outside. Those who work in both places represent very small proportions. There is no clear cut difference in fertility between working and non-working women. In the two Chilean places non-working women have somewhat higher fertility, but the differences are so small as not to have any significance. In Mexico and Colombia the differences are larger but in both countries opposite trends are found for the two sites within the countries. Neither can anything systematic be concluded from the comparison of the women working inside and outside the house. Only in Colombia is the relation clear-cut in the sense that women working outside the home have lower fertility. It may thus be tentatively concluded that the occupations in which women of rural small-urban areas work are still too much linked to traditional modes of life to have any significant undirectional influence on fertility.

8. The use of family planning

An important problem is whether family planning practices play a role
in the fertility differentials between urban and rural-small urban areas.
In Table 10 percentage distributions are given according to the number of
methods ever used. The same table also gives the proportion of women who
have never used family planning methods. Generally, these proportions
are much higher in the rural small-urban areas than in the large urban cen-
ters. Mostazal's proportion of "never-users", which is the lowest among
the rural localities is still higher than the proportion for Mexico City,
which has the highest proportion of "never-users" among the cities. The
interview records for one rural locality, Guelavia in Mexico, do not indicate
even one user. That the cities differ from the rural small-urban areas not
only in the proportion of non-users but also by a more sophisticated use of
family planning methods appears from the remaining distribution by number of
methods in the same table. While in all the cities at least 15 percent or
more have used two or more methods, for the rural localities only Mostazal
with a percent of 14.2 has a relatively high figure, although it is still well
below most similar figures for the urban areas. The other rural places have
figures which barely reach 5 percent for the proportion of women ever having
used more than one method. There is thus a real difference in urban areas
which should have an effect on fertility. To a certain extent a higher use
of family planning methods also runs parallel with lower fertility, taking
the cities or the rural areas alone. The relation, however, is not perfect.
Cauquenes, which has the lowest average number of live births, nevertheless
has a proportion of non-users which is higher than the figures for Cartagena
and Neira. It should be stressed that the measure used is a very imperfect
one. It takes into account neither the differences in efficiency between
the methods nor the regularity with which they were used and the extent of
time over which they have been used.

Since it has been shown that there is a strong negative relation between
education and fertility, the proportions of ever-users have been calculated
for the different educational levels. (Table 11). An examination of this
Table shows that the decrease in fertility with higher educational level is

in no minor degree due to a larger use of family planning methods among those who have a higher level of education. Although in some cases there is a tendency for family planning practices to increase much at the primary and especially the completed primary level, this is by no means as universal as the decrease in fertility, especially in the rural areas.

Table 1

NUMBER OF WOMEN INTERVIEWED IN THE PROGRAMME OF COMPARATIVE FERTILITY SURVEYS IN LATIN AMERICA FOR URBAN AND RURAL AREAS. TOTAL POPULATION AND PROPORTION RURAL FOR RURAL-SMALL URBAN AREAS.

Large urban areas		Rural small-urban areas			
	Women interviewed		Total population	Percentage rural	Women interviewed
Buenos Aires	2 136	Chile			
Rio de Janeiro	2 512	Cauquenes-Chanco	38 151	53.2	331
Panama	2 222	Mostazal	9 656	48.2	281
Caracas	2 087	Colombia			
San José	2 132	Cartagena	7 594[a]	46.7[b]	196
Bogotá	2 259	Neira	4 147	56.2	176
Mexico	2 353	México			
Santiago	1 970	Guelavia-Teotitlan	5 541	100.0	136
		Pabellón	10 031	38.2	229

Sources: "Entidades de Población: O'Higgins". Santiago, Dirección de Estadística y Censos, Chile, 1960.
Op. cit.: Maule
"VIII Censo General de Población. Estado de Oaxaca". Tomos I y II. Dirección General de Estadística. Secretaría de Industria y Comercio México, 1964.
Op. cit.: Data furnished by the "Departamento Administrativo Nacional de Estadística.
a/ Estimate.
b/ Proportion rural as obtained in the survey.

Table 2

UNSTANDARDIZED AND STANDARDIZED NUMBER OF LIVE BIRTHS FOR ALL WOMEN INTERVIEWED FOR URBAN AND RURAL AREAS

	Large urban areas			Rural small-urban areas			
	Unstandardized	Standardized (by Buenos Aires age distribution)		Unstandardized		Standardized	
				Including age group 15-19	Excluding age group 15-19	(by Cauquenes age distribution)	(by Buenos Aires age distribution excluding age group 15-19)
	(1)	(2)		(3)	(4)	(5)	(6)
Buenos Aires	1.49	1.49	Chile				
Rio de Janeiro	2.25	2.48	Cauquenes	3.05	3.85	3.05	4.24
Panama	2.74	3.14	Mostazal	3.48	4.29	3.66	4.98
Caracas	2.97	3.42	Colombia				
San José	2.98	3.28	Cartagena	3.71	a/	a/	a/
Bogotá	3.16	3.64	Neira	3.71	a/	a/	a/
México	3.27	3.79	México				
Santiago	2.38	2.51	Guelavia	3.80	4.40	3.58	4.88
			Pabellón	4.16	5.21	4.50	6.03

a/ not available.

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TABLE 3

AGE DISTRIBUTION AND AVERAGE NUMBER OF LIVE BIRTHS WITHIN EACH AGE GROUP FOR URBAN AND RURAL AREAS FOR ALL WOMEN INTERVIEWED

LARGE URBAN AREAS

AGE GROUPS	BUENOS AIRES		RIO DE JANEIRO		PANAMÁ		CARACAS		SAN JOSÉ		BOGOTÁ		MEXICO		SANTIAGO	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
TOTAL	100.0	1.49	100.0	2.25	100.0	2.74	100.0	2.97	100.0	2.98	100.0	3.16	100.0	3.27	100.0 [a]	2.38
20 - 24	13.5	0.36	21.4	0.69	26.5	1.18	25.1	1.15	20.6	1.18	23.2	1.07	23.9	1.08	17.4	0.84
25 - 29	13.8	0.99	17.6	1.83	19.9	2.33	20.8	2.48	19.9	2.26	22.6	2.46	20.7	2.68	19.4	1.93
30 - 34	18.0	1.53	18.0	2.57	16.2	3.48	16.6	3.74	18.3	3.22	18.4	3.85	17.6	3.66	18.3	2.67
35 - 39	19.0	1.76	15.9	2.80	14.9	3.82	14.2	4.25	16.9	4.07	15.7	4.61	14.3	4.70	14.7	3.15
40 - 44	17.2	1.95	11.7	3.52	11.3	3.72	10.4	4.03	11.9	4.22	10.8	4.79	11.9	5.19	14.6	2.84
45 - 49	15.2	1.90	11.4	3.00	9.1	3.74	10.7	4.23	10.5	4.17	8.2	4.27	9.3	4.62	15.4	3.16
50	3.3	1.96	4.0	3.06	2.1	3.46	2.1	3.21	1.9	3.71	1.2	4.89	2.3	3.83		

A = PERCENT DISTRIBUTION.

B = LIVE BIRTHS PER WOMAN

TABLE 3 (CONTINUED)

RURAL-SMALL URBAN AREAS

	CHILE						COLOMBIA						MEXICO					
	CAUQUENES			MOSTAZAL			CARTAGENA			NEIRA			GUELAVIA			PABELLÓN		
	A(1)	A(2)	B	A(1)	A(2)	B	A(1)	A(2)	B[2]	A(1)	A(2)	B[2]	A(1)	A(2)	B	A(1)	A(2)	B
TOTAL[3]	100.0	100.0	3.06	100.0	100.0	3.50	100.0	100.0	4.89	100.0	100.0	6.10	100.0	100.0	3.81	100.0	100.0	4.16
15 - 19	18.1		0.03	21.1		0.15	23.2		1.50	24.5		1.60	14.1		0.23	21.6		0.35
20 - 24	19.3	23.5	1.24	19.7	24.8	1.86	18.0	23.5	2.28	16.7	22.2	2.87	13.3	15.5	1.40	15.0	19.1	2.12
25 - 29	15.0	18.3	2.22	13.8	19.9	2.64	17.0	22.1	4.16	15.0	19.8	4.85	21.5	25.0	3.06	17.2	21.9	4.03
30 - 34	12.8	15.7	3.33	12.0	15.5	4.66	12.4	16.1	5.43	13.8	18.3	7.20	22.2	25.9	4.43	18.9	24.1	4.72
35 - 39	12.8	15.7	4.95	14.3	15.9	5.86	13.4	17.5	6.91	15.6	20.6	7.65	14.1	16.4	5.65	11.9	15.2	7.67
40 - 44	12.2	14.9	5.70	10.0	15.1	6.65	10.3	13.4	7.95	9.6	12.7	10.27	7.4	8.6	5.13	7.0	9.0	8.50
45 - 49	9.8	11.9	7.31	9.1	8.8	7.30	5.7	7.4	7.91	4.8	6.4	5.00	7.4	8.6	6.50	8.4	10.7	8.05

A(1) = PERCENT DISTRIBUTION INCLUDING AGE GROUP 15-19.

A(2) = PERCENT DISTRIBUTION EXCLUDING AGE GROUP 15-19.

1/ BASE OF PERCENTAGE INCLUDES CATEGORY "AGE UNKNOWN".

2/ FIGURES REFER TO LIVE BIRTHS PER WOMAN EVER PREGNANT.

3/ DIFFERENCES IN THIS AND SUBSEQUENT TABLES WITH FIGURES OF TABLE 2 ARISE FROM THE EXCLUSION FROM
THE TOTAL OF WOMEN WHO DID NOT ANSWER

TABLE 4

PER CENT DISTRIBUTION AND AVERAGE NUMBER OF LIVE BIRTHS BY MARITAL STATUS OF ALL WOMEN INTERVIEWED FOR URBAN AND RURAL AREAS

LARGE URBAN AREAS

	BUENOS AIRES		RÍO DE JANEIRO		PANAMÁ		CARACAS		SAN JOSÉ		BOGOTÁ		MÉXICO		SANTIAGO	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
TOTAL	100.0	1.49	100.0	2.25	100.0	2.74	100.0	2.97	100.0	2.98	100.0	3.16	100.0	3.27	100.0	2.38
SINGLE	19.7	0.02	19.2	0.05	17.2	0.27	16.1	-	24.8	0.40	19.2	0.14	19.8	0.09	23.6	0.33
MARRIED	73.9	1.83	64.4	2.72	41.1	3.14	51.2	3.24	55.6	3.92	63.8	3.96	61.1	4.10	61.7	3.11
COMMON-LAW MARRIAGE	0.9	1.79	5.5	3.18	26.7	3.61	15.0	4.45	7.4	3.83	4.5	3.60	7.5	4.40	3.6	2.33
DIVORCED,SEPARATED OR WIDOWED FROM LEGAL MARR.	4.8	1.82	10.0	3.04	6.5	2.78	8.5	3.80	7.2	3.85	8.1	4.17	7.3	3.64	10.9	2.70
SEPARATED OR WIDOWED FROM COMMON-LAW MARRIAGE	0.7	3.86	0.5	1.58	8.5	3.05	9.1	3.44	5.0	2.80	4.4	3.10	4.3	3.37		
NOT SPECIFIED	-	-	0.4	1.82	0.0	-	0.1	3.00	-	-	-	-	-	-	0.2	

TABLE 4 (CONTINUED)

<u>RURAL-SMALL URBAN AREAS</u>

	CHILE				COLOMBIA				MÉXICO			
	CAUQUENES		MOSTAZAL		CARTAGENA		NEIRA		GUELAVIA		PABELLÓN	
	A	B	A	B	A	B[1]	A	B[1]	A	B	A	B
TOTAL	100.0	3.04	100.0	3.47	100.0	4.89	100.0	6.14	100.0	3.80	100.0	4.16
SINGLE	38.6	0.22	33.7	0.16	23.6	-	31.1	1.00	13.3	0.06	22.3	0.29
CIVIL MARRIAGE ONLY	8.2	4.37	11.8	4.45	-	-	-	-	7.4	1.00	1.8	5.50
RELIGIOUS MARRIAGE	46.2	4.78	48.0	5.34	38.5	4.51	61.1	6.35	69.6	4.90	67.2	5.32
COMMON-LAW MARRIAGE	4.0	5.08	3.9	3.82	25.1	5.69	5.4	4.63	3.7	3.40	3.1	4.86
REMAINING CATEGORIES	3.0	6.00	2.6	6.71	12.8	4.44	2.4	5.75	6.0	3.00	5.6	4.92

A = PERCENT DISTRIBUTION

B = LIVE BIRTHS PER WOMAN

1/ FIGURES REFER TO LIVE BIRTHS FOR WOMAN EVEN PREGNANT.

Table 5

MEDIAN AGE AT FIRST MARRIAGE OR UNION FOR LEGALLY OR CONSENSUALLY
MARRIED WOMEN FOR URBAN AND RURAL AREAS

Large urban areas	Median age	Rural areas	Median age
Buenos Aires	22.1	Chile	.
Rio de Janeiro	20.1	Cauquenes	20.9
Panama	18.9	Mostazal	20.3
Caracas	18.3	Colombia	
San José	19.9	Cartagena	17.6
Bogotá	19.4	Neira	18.8
México	18.7	Mexico	
Santiago	22.0	Guelavia	17.1
		Pabellón	18.1

Table 6

PERCENT DISTRIBUTION OF SINGLE WOMEN IN AGE GROUPS 35 AND OVER FOR URBAN
AND RURAL AREAS

Large urban areas	Percentage in age groups 35 and over				Rural and small urban areas	Age group 35-49
	35-39	40-44	45-49	35-49		
Buenos Aires	11.8	9.2	9.5	10.3	Chile	. .
Rio de Janeiro	7.1	3.4	5.6	5.5	Cauquenes	10.5
Panama	6.0	5.2	5.4	5.6	Mostazal	10.0
Caracas	6.1	8.7	7.5	7.3	Colombia	.
San José	14.2	13.7	18.8	15.3	Cartagena	7.0
Bogotá	8.5	10.7	10.2	9.6	Neira	6.0
México	6.6	5.4	4.5	5.6	México	
Santiago	12.1	9.4	11.6[a/]	11.0[b/]	Guelavia	0.
					Pabellon	4.8

[a/] 45-50
[b/] 35-50

TABLE 7

PERCENT DISTRIBUTION AND AVERAGE NUMBER OF LIVE BIRTHS BY EDUCATION OF WOMEN FOR URBAN AND RURAL AREAS[1]

LARGE URBAN AREAS

	BUENOS AIRES		RÍO DE JANEIRO		PANAMÁ		CARACAS		SAN JOSÉ		BOGOTÁ		MÉXICO	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B
TOTAL	100.0	1.49	100.0	2.25	100.0	2.74	100.0	2.97	100.0	2.98	100.0	3.15	100.0	3.27
WITH NO EDUCATION	1.9	3.14	10.2	4.68	1.2	3.44	16.7	4.56	2.9	5.09	9.8	5.01	11.9	4.72
SOME PRIMARY EDUCATION	29.5	2.10	34.9	3.02	20.5	3.68	35.7	4.08	42.2	4.96	39.1	4.28	36.2	4.94
COMPLETE PRIMARY EDUCATION	38.4	1.72	21.4	2.80	24.9	3.53	23.7	3.15	22.6	3.76	20.2	3.86	22.0	4.03
SOME SECONDARY EDUCATION	14.0	1.76	23.4	2.20	33.4	3.08	16.7	2.73	25.6	2.93	25.1	3.56	20.2	3.56
COMPLETE SECONDARY EDUCATION	9.8	1.48	7.2	2.09	10.5	2.64	3.7	2.59	0.2	2.38	3.8	3.18	4.0	3.56
SOME UNIVERSITY EDUCATION	6.4	1.91	2.9	2.17	9.5	2.44	3.5	2.56	6.5	2.76	2.0	3.18	5.7	3.03

TABLE 7 (CONTINUED)

RURAL AND SMALL URBAN AREAS

| | CHILE | | | | COLOMBIA | | | | MÉXICO | | | |
| | CAUQUENES | | MOSTAZAL | | CARTAGENA | | NEIRA | | GUELAVIA | | PABELLÓN | |
	A	B	A	B	A	B	A	B	A	B	A	B
TOTAL	100.0	3.03	100.0	3.48	100.0	4.91	100.0	6.13	100.0	3.80	100.0	4.16
WITH NO EDUCATION	20.2	4.86	18.7	4.81	32.5	5.68	8.4	5.83	37.5	4.69	18.1	5.54
SOME PRIMARY EDUCATION	48.3	3.40	51.8	3.89	47.4	4.36	61.6	6.71	61.0	3.35	67.8	4.38
COMPLETE PRIMARY EDUCATION	13.1	1.26	13.3	2.49	13.4	4.58	11.4	5.67	0.8	0.00	8.4	1.89
SOME SECONDARY EDUCATION	14.4	1.21	14.4	1.38	6.7	5.25	15.0	3.50	0.7	0.00	3.5	0.25
COMPLETE SECONDARY EDUCATION	4.0	1.59	1.8	2.00	-	-	3.6	5.00	-	-	2.2	1.00

A = PERCENTAGE DISTRIBUTION

B = LIVE BIRTHS PER WOMAN

1/ SANTIAGO IS NOT INCLUDED BECAUSE OF DIFFERENCES IN THE EDUCATIONAL CLASIFICATION USED.

2/ FIGURES REFER TO LIVE BIRTHS PER WOMAN EVER PREGNANT.

TABLE 8

PERCENT DISTRIBUTION AND AVERAGE NUMBER OF LIVE BIRTHS BY OCCUPATIONAL STATUS OF HUSBAND FOR
LEGALLY OR CONSENSUALLY MARRIED WOMEN AT TIME OF INTERVIEW

LARGE URBAN AREAS[1]

	BUENOS AIRES		RÍO DE JANEIRO		PANAMÁ		CARACAS		SAN JOSÉ		BOGOTÁ		MÉXICO	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B
TOTAL	100.0	1.82	100.0	2.73	100.0	3.20	100.0	3.50	100.0	3.87	100.0	3.93	100.0	4.12
HIGHER NON MANUAL	11.6	1.87	11.0	2.34	12.8	2.62	12.6	2.90	9.0	2.97	12.8	3.38	14.6	3.38
LOWER NON MANUAL	42.5	1.71	24.3	2.16	11.2	2.97	19.9	3.06	27.2	3.43	20.9	3.81	24.4	3.71
MANUAL	45.9	1.91	64.7	3.13	76.0	3.36	67.5	3.81	63.8	4.28	66.3	4.09	61.0	4.57

RURAL-SMALL URBAN AREAS

	CHILE				COLOMBIA				MÉXICO			
	CAUQUENES		MOSTAZAL		CARTAGENA		NEIRA		GUELAVIA		PABELLÓN	
	A	B	A	B	A	B[2]	A	B[2]	A	B	A	B
TOTAL	100.0	4.76	100.0	5.09	100.0	5.07	100.0	6.25	100.0	4.47	100.0	5.34
TRADITIONAL	8.9	4.71	1.1	3.50	1.6	5.00	1.8	7.50	40.0	4.20	2.4	8.00
LOWER LEVEL AGRICULTURAL	49.2	5.29	44.4	5.50	57.0	5.26	61.8	6.52	55.5	4.74	68.9	7.88
UPPER LEVEL AGRICULTURAL	6.8	4.69	12.8	5.04	2.5	8.00	0.9	6.00	-	-	2.5	4.50
UPPER LEVEL WHITE COLLAR	3.1	3.00	1.7	3.67	-	-	-	-	-	-	0.6	4.00
LOWER LEVEL WHITE COLLAR	4.2	2.88	5.6	4.60	1.7	5.50	5.5	4.00	-	-	7.3	2.25
SERVICES	7.9	4.47	6.7	5.08	16.2	5.36	15.5	6.08	0.9	6.00	4.3	5.14
SKILLED LABORER	11.5	3.09	16.7	4.30	5.8	3.86	5.4	5.17	2.7	3.67	5.5	2.33
UNSKILLED LABORER	7.9	5.87	10.5	4.69	11.6	3.79	8.2	7.00	0.9	1.00	7.9	5.00
NO OCCUPATION	0.5	8.00	0.5	11.00	1.6	4.00	0.9	2.00	-	-	0.6	7.00

A = PERCENTAGE DISTRIBUTION

B = LIVE BIRTHS PER WOMAN

1/ COMPARABLE FIGURES FOR SANTIAGO ARE NOT AVAILABLE.

2/ FIGURES REFER TO LIVE BIRTHS PER WOMAN EVER PREGNANT.

TABLE 3

PERCENT DISTRIBUTION AND AVERAGE NUMBER OF LIVE BIRTHS BY WORKING CONDITION
OF THE WOMAN AT TIME OF THE INTERVIEW FOR URBAN AND RURAL AREAS

LARGE URBAN AREAS [1]

	ALL WOMEN		WORKING WOMEN		NON WORKING WOMEN	
	A	B	A	B	A	B
BUENOS AIRES	100.0	1.49	38.2	1.01	61.8	1.78
RIO DE JANEIRO	100.0	2.25	30.7	1.79	69.3	2.47
PANAMA	100.0	2.74	38.1	2.96	61.9	3.48
CARACAS	100.0	2.97	31.7	2.21	68.3	3.33
SAN JOSÉ	100.0	2.98	39.5	1.92	60.5	3.68
BOGOTÁ	100.0	3.16	39.0	2.36	61.0	3.68
MÉXICO	100.0	3.27	34.6	2.46	65.4	3.72

RURAL-SMALL URBAN AREAS

	ALL WOMEN		WORKING WOMEN INSIDE THE HOUSE		WORKING WOMEN OUTSIDE THE HOUSE		WORKING WOMEN INSIDE AND OUTSIDE THE HOUSE		ALL WORKING WOMEN		NON WORKING WOMEN	
	A	B	A	B	A	B	A	B	A	B	A	B
CHILE												
CAUQUENES	100.0	3.06	17.8	3.41	9.0	2.28	-	-	26.8	3.03	73.2	3.06
MOSTAZAL [2]	100.0	3.46	15.5	3.19	8.7	3.50	0.4	2.00	24.6	3.28	75.4	3.52
COLOMBIA [2]												
CARTAGENA	100.0	4.84	33.3	5.63	8.2	4.31	0.5	6.00	42.0	5.40	58.0	4.30
NEIRA	100.0	6.16	10.2	6.30	7.0	2.25	0.6	-	17.8	5.14	82.2	6.34
MÉXICO												
GUELAVIA	100.0	3.79	14.8	3.80	4.5	5.00	3.7	6.00	23.0	4.39	77.0	3.61
PABELLÓN	100.0	4.16	7.9	2.00	10.2	2.13	2.2	4.40	20.3	2.33	79.7	4.63

A = PERCENTAGE DISTRIBUTION
B = LIVE BIRTHS PER WOMAN

1/ COMPARATIVE FIGURES FOR SANTIAGO ARE NOT AVAILABLE
2/ FIGURES REFER TO LIVE BIRTHS PER WOMAN EVER PREGNANT

TABLE 10

PERCENTAGE DISTRIBUTION OF LEGALLY OR CONSENSUALLY MARRIED WOMEN BY NUMBER OF SCIENTIFIC FAMILY PLANNING METHODS EVER USED FOR URBAN AND RURAL AREAS

LARGE URBAN AREAS 1/

NUMBER OF METHODS	BUENOS AIRES	RIO DE JANEIRO	PANAMÁ	CARACAS	SAN JOSÉ	BOGOTÁ	MEXICO
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NONE	21.7	49.0	52.6	42.7	37.0	61.3	63.8
ONE	40.1	33.8	23.4	25.0	31.7	19.2	20.3
TWO	24.8	12.2	14.8	20.8	18.1	12.0	9.2
THREE	9.1	3.7	5.2	8.8	9.8	4.6	4.4
FOUR OR MORE	4.3	1.3	4.0	2.7	3.4	2.8	2.3

RURAL-SMALL URBAN AREAS

	CHILE		COLOMBIA		MEXICO	
	CAUQUENES	MOSTAZAL	CARTAGENA	NEIRA	GUELAVIA	PABELLÓN
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NONE	90.1	67.0	87.2	76.0	100.0	95.0
ONE	6.6	18.8	7.4	18.3	0.0	2.3
TWO	1.5	7.3	2.7	4.8	0.0	0.9
THREE AND MORE	1.9	6.9	2.7	1.0	0.0	1.8

1/ FIGURES FOR SANTIAGO ARE NOT AVAILABLE.

TABLE 11

PROPORTIONS OF LEGALLY OR CONSENSUALLY MARRIED WOMEN EVER USING FAMILY PLANNING
(PERCENT)

LEVEL OF EDUCATION	LARGE URBAN AREAS [1]					
	BUENOS AIRES	RIO DE JANEIRO	CARACAS	SAN JOSÉ	BOGOTÁ	MEXICO
TOTAL	78.3	57.8	60.0	65.6	39.8	43.2
WITH NO EDUCATION	42.9	39.6	35.5	45.4	14.5	12.4
SOME PRIMARY EDUCATION	75.6	47.7	53.5	54.2	28.6	28.7
COMPLETE PRIMARY EDUCATION	81.9	61.6	70.8	69.8	40.1	86.2
SOME SECONDARY EDUCATION	75.4	70.1	76.9	79.0	59.1	57.6
COMPLETE SECONDARY EDUCATION	83.4	73.9	66.7	66.7	74.5	65.4
SOME UNIVERSITY EDUCATION	72.3	73.5	77.8	81.0	73.9	59.7

	RURAL-SMALL URBAN AREAS					
	CHILE		COLOMBIA		MEXICO	
	CAUQUENES	MOSTAZAL	CARTAGENA	NEIRA	GUELAVIA	PABELLÓN
TOTAL	10.0	33.3	11.5	17.5	0.0	5.0
WITH NO EDUCATION	3.2	25.0	8.3	0.0	0.0	2.4
SOME PRIMARY EDUCATION	5.6	30.2	10.7	12.9	0.0	3.9
COMPLETE PRIMARY EDUCATION	20.0	48.1	20.0	20.0	0.0	25.0
SOME SECONDARY EDUCATION	30.6	48.0	33.3	47.6	0.0	0.0

[1] FIGURES FOR PANAMA AND SANTIAGO ARE NOT AVAILABLE.

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REFERENCES

(1) Taboh, León and Samuel, Raúl, "Chile: Resultados preliminares de
     una encuesta de fecundidad y de actitudes relativas a la for-
     mación de la familia". Santiago, Chile. CELADE, Serie A/26.
     From here on whenever Santiago is cited, the source will be
     the same.

(2) For further details in the urban fertility surveys see: United
     Nations Document E/CN.9/AC.6/R.24, "The Programme of Compa-
     rative Fertility Surveys being conducted by the Latin American
     Demographic Centre"; Miró, Carmen A. and Rath, Ferdinand J.C.M.,
     "Preliminary Findings of Comparative Fertility Surveys in Three
     Latin American Cities," in the Milbank Memorial Fund Quarterly,
     Volume XLIII, Number 4, October, 1965, Part 2; and Miró, Carmen
     A., "Some Misconceptions Disproved. A programme of Comparative
     Fertility Surveys in Latin America," in Berelson and others,
     FAMILY PLANNING AND POPULATION PROGRAMMES," The University of
     Chicago Press, 1966

(3) "La fecundidad rural en Latinoamérica: una encuesta experimental
     para medir actitudes, conocimiento y comportamiento," in Demo-
     graphy, Vol. 2, 1965.

(4) CELADE is developing at present a programme of comparative studies
     of induced abortion in five Latin American cities (Bogotá,
     Buenos Aires, Caracas, Panamá and Quito). See: Requena,
     Mariano, "Programme of Comparative Studies of Induced Abortion
     and Usage of Contraceptives in Latin America," January, 1967

(5) Davis, Kingsley and Blake, Judith, "Social Structure and Fertility:
     An Analytical Framework," in Economic Development and Cultural
     Change, Vol. IV, No. 3, April, 1956

(6) The pilot surveys in Colombia have been conducted as a cooperative
     programme with the "Asociación Colombiana de Facultades de Medi-
     cina." The directors of studies were Dr. Abel Dueñas, in Carta-
     gena, and Dr. Nelson Lenis Nicholls, in Caldas.

(7) Maps and other informative material prepared by Ligia Herrera for her
     doctoral dissertation at the University of Chile, "La Región de
     San Francisco de Mostazal: Un Ensayo de Análisis Geográfico Re-
     gional con fines de Planificación" were used in the preparation
     of the report prior to the selection of Mostazal as a site for the
     study and for the design of the sample later on.

(8) The pilot surveys in Mexico have been conducted as a cooperative pro-
     gramme with "El Colegio de Mexico" and the "Instituto de Inves-
     tigaciones Sociales" of the "Universidad Nacional Autónoma de
     México. The director of the studies was Raúl Benítez Zenteno,
     who also directed the Mexico City survey.

(9) The program of comparative fertility studies has been conducted with
      the financial support of the Population Council. The Universi-
      ty of Cornell International Population Program collaborated in
      the early phases of the urban surveys series. The Community
      and Family Study Center of The University of Chicago has provi-
      ded the tabulations for these surveys and is actively partici-
      pating in the rural small-urban study, having facilitated the
      services of James Peterson for programming the tabulations with
      Data-Text which have been used in this paper and others which
      will serve as a basis for evaluation of the pilot surveys and
      for further planning. Albino Bocaz, from CELADE staff was res-
      ponsible for the design of the samples used both in the urban
      as well as in the rural fertility surveys.

(10) Carleton, Robert O., "Fertility Trends and Differentials in Latin
      America," in The Milbank Memorial Fund Quarterly, Vol. XLII,
      No. 4, October, 1965, Part 2.