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THE NEW PETROLEUM PRICES: THEIR IMPACT ON
TRANSPORT IN LATIN AMERICA

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1. Transport and the consumption of petroleum

The apparent world scarcity of crude oil which arose at the end of 1973 could have had particularly serious repercussions on the transport sector in Latin America.

Latin America depends to a very considerable extent on imports of crude oil and petroleum products. In 1972, it was only in Bolivia, Colombia, Ecuador, Mexico, Venezuela and Trinidad and Tobago that local production was greater than consumption, while the petroleum-deficit countries as a whole had to import more than 50 per cent of their requirements. The entire region uses petroleum as the source of a large proportion of its commercial energy, since it is short of solid fuels. In 1970 around 64 per cent of the commercial energy consumed came from petroleum, while the corresponding figure for the rest of the world was 42 per cent.^{1/} Lastly, a large share of the petroleum consumed by the region is absorbed by transport services. Proof of this lies in the fact that in 1969 this sector's consumption of petroleum products accounted for 46 per cent of regional consumption (excluding Cuba, Jamaica and Trinidad and Tobago).^{2/} Consequently, any restriction on the ready availability of petroleum in Latin America will have direct repercussions on transport.

^{1/} The data on the consumption of commercial energy in Latin America are based on official data supplied by the countries; world consumption was obtained from United Nations, World Energy Supply, 1961-1970, series J, No. 15.

^{2/} ECLA, La industria del petróleo en América Latina: notas sobre su evolución reciente y perspectivas, United Nations publication, Sales No.: S.73.II.G.2, table 18. In Latin America a particularly large share of total energy consumption is accounted for by the transport sector. Without taking into account its consumption of electrical energy and coal, this sector absorbed 30 per cent of commercial energy in 1969, compared with 16 per cent in Western Europe and 28 per cent in the United States of America. See Gerald Leach, "The impact of the motor car on oil reserves", Energy Policy, December 1973, page 195.

It is not an actual physical shortage which is anticipated in the long term, however, but rather a considerable increase in the price of imported petroleum and in the opportunity cost of the petroleum produced in the various Latin American countries. The present study will make a brief review of the repercussions of this increase in transport and will identify some of the policy options open to the Latin American governments.

2. The price of fuels and of transport

A typical feature of the modern world is its geographical specialization as regards agricultural, mining and industrial production, with consequent trade between the regions of each country and between countries. This gives rise to transport requirements, and any change in the cost of transport has repercussions on the size of markets, productivity and national income. Transport services are the life-blood of the industrialized societies, with their many interdependencies and interrelations, and anything which affects them simultaneously affects the entire economy. This is why it has been considered desirable to examine the impact of the price of fuels on the cost of transport and to estimate the effect on transport of the price increases in petroleum.

At first sight, the impact of fuel prices on the total cost of the different modes of transport appears to be small. The share of fuels and lubricants in the cost of transport has been approximately 5 per cent in rail transport, 8 per cent in local sea transport, 15 per cent in air transport and 20 per cent in road transport (see table 1). Even in the last-mentioned case, an increase of 100 per cent in fuel prices should not, theoretically speaking, mean an immediate increase of more than 20 per cent in road transport prices. As regards the other modes of transport, the higher fuel costs could be absorbed by even smaller increases in freight charges. Increases of 20 per cent in the cost of local transport in the various countries of Latin America, should not produce any upheavals, especially if all the modes of transport raised their tariffs simultaneously, so that theoretically the increase in the price of crude oil would not be of very great importance.

/Table 1

Table 1

INCIDENCE OF FUELS AND LUBRICANTS IN THE COSTS OF THE
DIFFERENT MODES OF TRANSPORT

(Percentage of total costs)

Rail transport

Argentina, 1972	Ferrocarriles Argentinos	6.6
Mexico, 1971	Ferrocarril del Pacífico	3.6
	Ferrocarril Chihuahua al Pacífico	5.5
	Ferrocarriles Unidos del Sureste	2.2
	Ferrocarril Sonora-Baja California	3.4

Water transport (coastal trade)

Colombia, 1962		6.7
Chile, 1959		10.6
	1974 <u>a/</u>	8.8
Caribbean sub-region, 1970 <u>b/</u>		5.9

Air transport

Scheduled airlines of ICAO member countries, 1967		13.0
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Road transport

Chile, 1960	6 ton truck, with gasoline engine	22.9
Brazil, 1970	6.5 ton truck, with gasoline engine	25.8
	7.3 ditto ditto	22.6
Colombia, 1961	7 ditto ditto	20.5
Bolivia, 1974	9 ton truck, diesel	13.4
Brazil, 1970	10.5 ditto ditto	18.6
	25 ditto ditto	15.8

Sources: Rail transport. Argentina: Ferrocarriles Argentinos, Síntesis estadística, 1970, 1971 and 1972; Mexico: Dirección General de Ferrocarriles en Operación, Estadística ferroviaria nacional, 1971. Water transport. Colombia: Departamento de Planeación Nacional, La futura demanda de transporte en Colombia, 1962; Chile: Universidad de Chile, Instituto de Economía, Costos del transporte marítimo en Chile, 1960, and data supplied directly by the Empresa Marítima del Estado; Caribbean sub-region: United Nations, Transporte de cabotaje, servicios de enlace y servicios de transbordadores, Sales No.: S.70.VIII.3, page 76. Air transport. ICAO, A Review of the Economic Situation of Air Transport, 1957-1967, Circular 89-AT/15, July 1968, page 8. Road transport. Bolivia: Costos promedios anuales del transporte pesado Santa Cruz-La Paz, December 1973; Brazil: Conselho Estadual de Desenvolvimento de Minas Gerais, Tarifas e custos operacionais de transporte en Minas Gerais, July 1970; Colombia: Departamento de Planeación Nacional, La demanda de transporte en Colombia, August 1962; Chile: Corporación de Fomento, Programa de transporte, 1961-1970.

a/ Before the increase in fuel prices. b/ Simulated travel accounts.

Because of the local transport structure in the majority of the Latin American countries, however, the problem is not as simple as that. Generally speaking, in the last two decades rail transport and coastal traffic have had a smaller share in total traffic (especially in general cargo traffic), while road transport has increased rapidly. A typical feature of the latter is the considerable proportion of small enterprises where the owner is often also the driver, with the result that in some countries the owner-driver associations are very powerful. It is only in exceptional cases that actual government rules exist regarding road transport tariffs, and generally speaking the competition between truckers is relied upon to prevent charges from becoming too high. Furthermore, since truck-owners do not keep adequate records of costs and are therefore not aware of their real total operational costs, they charge freights based on their direct expenditure, especially on fuel and tyres.

In these circumstances, a large increase in the price of fuel has a major psychological impact which may lead to percentage increases in freights which are much higher than those theoretically needed to absorb the rise in fuel prices. Furthermore, there are few governments which are in a position to control these increase and maintain them within the limits indicated by the real incidence of fuel prices in the total costs of truck operators. For these reasons, an increase of, say, 100 per cent in fuel prices could produce an increase of over 50 per cent in freight rates instead of the 20 per cent mentioned above. Increases of this order, especially if they are followed by large increases in rail tariffs, would have an inflationary impact on other sectors of the economy and would bring about changes in the economic relations between sectors and regions in many countries. Thus, an apparently local phenomenon could rapidly spread throughout the economic system.

3. Objectives pursued and instruments open to governments

Before reviewing the measures which the governments of the region could adopt to alleviate the effects on transport of the higher prices of crude oil, mention should be made of the various objectives which must be reconciled. These are as follows:

(a) To spend less foreign exchange on imports of petroleum and petroleum products for the transport sector and to make better use of a resource which now has a higher economic value;

(b) To avoid the deterioration of the public finances and to charge users of road, rail and sea transport the real costs of such services.

(c) To avoid sharp and sudden increases in the tariffs of the different modes of transport, which could cause upheavals in economic sectors or geographical regions or could distort the competitive relations between the different modes of transport.

In order to reconcile these objectives, governments have a number of instruments at their disposal, both for direct action and for making sure that individual decisions by the suppliers and users of transport services are consistent with national objectives. Some instruments may have immediate effects, while others may require more time to achieve the results pursued. As it is anticipated that the price of crude oil will remain at a much higher level than in the past, it is obvious that certain measures need to be taken, although their effects may only be felt after some time.

In view of the magnitude and rapidity of the increase in petroleum prices, the countries have, generally speaking, endeavoured to reduce their real consumption of petroleum products as an end in itself, without taking due account of the short- and long-term effects such action may have on the supply and quality of transport services, on new investment, and on the expenditure of foreign exchange. Care must be taken to ensure that any measures adopted do not have an economic cost - especially in the long term - which is higher than the benefits resulting from the reduction of the effect of the new petroleum prices.

/Among the

Among the measures which governments could employ are the following:

(a) In order to cut down on fuel consumption without reducing the actual amount of transport, more traffic could be channelled towards those modes of transport which use less fuel per transport unit. As may be seen from table 2, fuel consumption per net ton/kilometre of cargo or per passenger/kilometre varies considerably from one mode of transport to another. For example, diesel rail transport uses only 76 Kcal per net ton/kilometre carried while a truck with a gasoline engine uses 353 Kcal, and a diesel-engine truck 277 Kcal. Similarly, a bus with a diesel engine consumes 63 Kcal per passenger/kilometre, compared with 151 Kcal by rail, 630 by car and 857 by jet plane. In view of these relations, any diversion of freight from road to rail, and of passengers from cars, trains and planes to buses, will be reflected in a saving of energy.

Table 2

ENERGY REQUIRED FOR THE TRANSPORT OF GOODS IN BULK AND PASSENGERS

	Goods in bulk		Passengers	
	Net ton/kms Gross ton/kms	Kcal per net ton/km	Gross tons per passenger	Kcal per passenger/km
Ship	0.70	50	20 - 28	1 714
Oil pipeline	1.00	38	-	-
Railway, diesel	0.40	76	3 - 5	151
Truck or bus, diesel	0.60	277	0.2 - 0.3	63
Truck or bus, gasoline	0.60	353	0.2 - 0.3	88
Propeller plane	0.25	3 377	0.7 - 1.5	983
Jet plane	0.25	2 747	0.8 - 1.7	857
Car	-	-	0.5 - 1.0	630

Source: Glen B. Warren and Dale H. Brown, "Transport Energy", Transportation Design Consideration, National Academy of Sciences, National Research Council, Publication No. 841, Washington, D.c.

It is not, however, easy to produce large-scale diversions from one mode of transport to another. In the case of freight, governments are usually major users of transport services, not only directly but also indirectly through public enterprises, and may therefore perform the function of arranging the use of transport when it is feasible and economic to do so. This is made easier when the transport network is being extended or improved over large economic areas of a country, as is the present case of the railways in Brazil.

Moreover, if road transport tariffs increase by more than the amount required to absorb the higher fuel prices, governments could control rail tariffs in order to encourage diversion of traffic.

It is probable, however, that many railways, at least in South America, have insufficient transport capacity to absorb large-scale increases in traffic, on account of the lack of both locomotives and wagons. It will thus only be possible to attract freight away from road transport by making new investments in the railways, with considerable expenditure of foreign currency.

The diversion of passengers from cars and planes to buses and trains is even more difficult. Although the increase in fuel prices would help, in the case of private cars the price elasticity of demand is notoriously low. Only direct measures, such as the prohibition of traffic in certain city centres, would significantly reduce the use of private vehicles. From the political point of view, however, such measures are difficult to apply while urban public transport is of poor quality, and new investment would be called for in order to allow their implementation.

(b) Measures destined to "rationalize" transport may reduce fuel consumption, but to the detriment of the quality of the services provided. Such measures include the reduction of the number of commercial air flights and the frequency of train services, ship and bus services. If the level of utilization of these services is low, a lower frequency would not reduce the physical volume of transport, but it would risk diverting freight to trucks, and passengers to

/private cars

private cars. Furthermore, the reduction of services where utilization is already at a satisfactory level would be a source of great inconvenience for the users.

Another "rationalization" measure consists of reducing imports of trucks. In many Latin American countries, the utilization factor of trucks is very low, so that if the freight transported on each trip were increased, the number of trips could be cut down. The causes of this low rate of use are the following: the excessive number of trucks in many countries; production enterprises which use their own trucks and frequently transport freight in only one direction, instead of using the services of transport enterprises; and the large number of small transport enterprises which lack a communications system to give them timely knowledge of the existence of freight to be transported.

Increased restrictions on imports make the timely renewal of old vehicles difficult, and if these restrictions are applied through a system of administrative permits, there is a serious risk of irregularities in granting such permits. Moreover, there are several countries which make trucks and where restriction of their production would have economic and political effects. Through a suitable taxation system, however, it would be possible to orient both imports and production of vehicles towards those which have a higher energy yield and are at the same time more economical.

(c) The use of energy not derived from petroleum products does not appear promising for transport in Latin America. On the majority of the railways of the region, steam engines have been replaced by diesel engines, and the rehabilitation of steam locomotives and their conversion from petroleum to coal would be costly and impractical. However, extension of railway electrification in the countries which have hydro-electric or coal resources and the construction of electric rapid transit systems in big cities offer opportunities which merit careful study, although the necessary investment is very great and the period of construction lengthy.

/(d) The

(d) The proper management of fuel prices is a particularly complex matter and conflicts usually arise between the objectives pursued. All countries regulate or can regulate the level and structure of the prices of petroleum products, but each of them is in a different situation as regards the importance of petroleum imports in its total consumption, refining capacity, the relative importance of the different modes of transport in its transport system, its dependence on income from taxes on fuels, etc. If a country tries to keep petroleum products at an excessively low price, it could discourage the activities of its own petroleum enterprises and have to subsidize petroleum imports, while such a policy would encourage the use of modes of transport which made inefficient use of this fuel. On the other hand, a sudden large rise in petroleum prices could seriously affect certain economic sectors or regions and generate inflation.

Furthermore, the increased crude oil costs which have to be financed are considerable: a price of 7 dollars per barrel FOB represents an increase of around 4.80 dollars (or 3 US cents per litre) over the price of a year ago. Table 3 gives the average price structure of petroleum for Western European consumers in 1969. Out of the total price of 10.73 dollars, 5.10 dollars are accounted for by indirect taxes and other taxes in the consumer countries. An increase in the FOB price from 1.82 dollars to 7 dollars could be absorbed to a considerable extent by a reduction in taxes, but a measure of this type would be a heavy blow to fiscal revenue.

Table 4 gives a similar estimate for Latin America as a whole at the beginning of 1973. It indicates that not even the total abolition of consumer taxes could make up for an increase of 4.80 dollars in the FOB price of crude oil.

Table 3

WESTERN EUROPE: AVERAGE COST OF A BARREL OF PETROLEUM, 1969
(Dollars per barrel and percentages)

	Dollars	Percentages
Production cost	0.285	2.7
Earnings of producer countries	0.853	7.9
Net profits of petroleum companies	0.681	6.3
<u>Subtotal: FOB price</u>	<u>1.819</u>	<u>16.9</u>
Freight	0.680	6.3
Refining cost	0.3503	3.3
Storage, distribution and profit of intermediaries	2.780	26.0
<u>Subtotal</u>	<u>5.629</u>	<u>52.5</u>
Indirect and other taxes in consumer countries	5.100	47.5
<u>Total</u>	<u>10.729</u>	<u>100.0</u>

Source: ECLA, La industria del petróleo en América Latina: notas sobre su evolución reciente y perspectivas, op.cit., table 68
 (original source: ARPEL, Boletín informativo No. 42, January and February 1971).

Table 4

LATIN AMERICA: ESTIMATED AVERAGE COST OF A BARREL OF
PETROLEUM TO THE CONSUMER, 1973

	Dollars	Percentages
FOB cost	2.20	25.8
Freight and insurance	1.56	18.2
Refining	0.50	5.8
Marketing	1.05	12.3
Profits	0.80	9.4
Taxes	2.44	28.5
<u>Total</u>	<u>8.55</u>	<u>100.0</u>

Source: ECLA.

Table 5 gives data on the direct taxes on petroleum products applied in Latin American countries between 1965 and 1972 and in Europe between 1965 and 1968. The taxes in Europe are compatible with the general average of 47.5 per cent shown in table 3. In Latin America, none of the countries had a general average of more than 37 per cent in the last years of the 1960's, nor an average higher than 44 per cent in 1972. These lower levels of taxation in Latin America would make it difficult to absorb much of the rise in crude oil prices by cutting down on taxes. Furthermore, in several Latin American countries these taxes constitute a significant share of total government revenue. In Mexico in 1969, for example, gasoline taxes alone generated 7.8 per cent of the current central government revenue.^{3/} In reality, there are grounds for arguing that the direct taxes in Latin America should be brought into line with European tax levels.

^{3/} International Bank for Reconstruction and Development,
The Transport Sector of Mexico, Report No. PTR-88, 1971.

Table 5

INCIDENCE OF TAXES IN SELLING PRICE OF MAIN
PETROLEUM PRODUCTS

(Percentages)

Country	Year	Gasoline	Kerosene	Diesel oil	Fuel oil	Weighted average ^{a/}
Argentina	1969	60	3	7	0	35
	1972	57	35	43	4	44
Bolivia	1969	24	0	3	0	..
	1972	14	0	0	0	..
Brazil	1969	44	20	42	5	37
	1972	30	14	30	0	27
Colombia	1965	10	3	3	2	7
Chile	1968	35	13	26	15	26
	1972	44	12	21	16	34
Ecuador	1965	40	7	8	4	..
Mexico	1969	14	16	16	15	15
	1972	12	13	13	12	12
Paraguay	1965	45	26	23	22	..
	1972	40	23	20	21	..
Peru	1972	39	48	49	50	43
Uruguay	1969	14	7	16	12	13
	1973	50	14	20	16	34
Venezuela	1968	13	0.4	2.3	3	7
France	1968	74	53	66	8	..
Italy	1965	73	67	68	23	..
Federal Republic of Germany	1965	59	..	55	35	..

Sources: ECLA, *La industria del petróleo en América Latina: notas sobre su evolución reciente y perspectivas*, op.cit., table 70, Data for 1972 and 1973: ECLA, on the basis of official data.

^{a/} The taxes applied to each petroleum product were weighted by the relative value of consumption based on tables 14 and 71 of the publication mentioned. For 1972 and 1973, official data of the countries on consumption and selling prices were used.

/The problem

The problem is more complex than this, however. Table 6 gives the relative prices (excluding taxes) of the main petroleum products, expressed in terms of fuel oil prices. The table gives data on some South American countries for the period 1965-1969 and for 1972; on two European countries for 1965, and on the annual average FOB prices for exports by the United States, Venezuela and Saudi Arabia in 1969. A point of particular interest is the great structural difference between export prices and domestic prices, since while the price of diesel oil on the international market was between 3 and 8 per cent higher than that of fuel oil, in all the countries during the years indicated the price-difference between these petroleum products was at least 30 per cent, and in some countries over 200 per cent. Mention should also be made of the great diversity of price structures in the different countries: while in one country the price of gasoline was only 1 per cent higher than the price of fuel oil in 1965, in another it was 592 per cent higher in 1969 and 672 per cent higher in 1972.

These enormous variations indicate that the countries apply different price policies and that while these policies may be in keeping with the demand and refining capacity of each country, they also contain elements of implicit taxation of some petroleum products. These variations also indicate that the countries are keeping the price of fuel oil down as a measure designed to stimulate industry, while some countries have fixed prices for diesel oil and gasoline which contain a large tax element.

The importance of these implicit taxes can be appreciated from a simple model indicating the theoretical increase in the prices of petroleum products which would take place in different Latin American countries if the increase in the price of crude oil were distributed among the petroleum products in proportion to the previous distribution of income from sales of petroleum products, without taking taxes into account. If the direct tax on each petroleum product is then applied to this theoretical increase, an estimate may be obtained of the increase in the price of petroleum products which would result if the government introduced no innovations in its price policy and if there were no changes in freight rates, refining costs, distribution costs and profits.

Table 6

RELATIONS BETWEEN SELLING PRICES OF MAIN PETROLEUM
PRODUCTS, EXCLUSIVE OF TAXES

Country	Year	Gasoline	Querosene	Diesel oil	Fuel oil
Argentina	1969	302	275	236	100
	1972	233	224	207	100
Brazil	1969	309	393	264	100
	1972	433	405	300	100
Colombia	1965	197	191	190	100
Chile	1968	139	92	134	100
	1972	134	91	130	100
Ecuador	1965	101	118	150	100
Mexico	1969	692	271	271	100
	1972	772	154	246	100
Paraguay	1965	151	155	141	100
	1972	172	169	147	100
Peru	1972	193	75	153	100
Uruguay	1968	668	275	303	100
	1972	369	224	168	100
Venezuela	1968	169	168	160	100
France	1965	189	176	167 ^{a/}	100
Italy	1965	266	279	247 ^{a/}	100
World export prices ^{b/}	1969	111-139	103-145	103-108	100

Source: ECLA, La industria del petróleo en América Latina: notas sobre su evolución reciente y perspectivas, op.cit., tables 56, 70 and 71.

^{a/} For motor vehicles: the price of diesel oil for industrial use is much lower.

^{b/} Prices FOB United States, Venezuela and Saudi Arabia.

/With this

With this methodology, and using the structures and consumption levels for 1972 and the price levels for 1973 for the various products refined in Argentina, Brazil, Chile, Mexico and Uruguay, estimates were made of the amount by which the selling price per litre in US cents of gasoline, kerosene, diesel oil and fuel oil would increase as a result of a rise of 4.80 dollars in the FOB price of a barrel of crude oil (from 2.20 dollars at the beginning of 1973 to an estimated average of 7 dollars). The most recent tax percentages available were used. The results are given in tables 7 and 8, together with the selling prices of refined products actually in force at the beginning of 1973 and 1974.

It may be observed that with the exception of Mexico, and to a lesser extent Argentina, the real increase in the price of refined products between 1973 and 1974, including taxes, is higher than the price increase which may be attributed to the rise in crude oil prices. This appears to indicate that the countries are to a greater or lesser extent applying prices which are higher than those corresponding to the increase in the cost of crude. However, it is possible that the prices paid by the countries for crude oil may have been higher than the 7 dollars per barrel FOB considered in this analysis, while there may also have been increases in import freight costs, refining costs, profits and other elements making up the cost of refined products.

Unlike the other four countries considered, Mexico is practically self-supplying as regards petroleum. The fact that the increase in the prices of petroleum products is less than the increase to be expected from the higher price of crude oil indicates that Mexico is applying a price policy aimed at not passing on to the user the higher opportunity cost of the petroleum it produces.

Table 7

ESTIMATED INCREASE IN PRICE OF REFINED PRODUCTS AS A RESULT
OF INCREASE IN FOB PRICE OF A BARREL OF CRUDE OIL
FROM 2.20 TO 7 DOLLARS
(US cents per litre)

	Gasoline	Kerosene	Diesel oil	Fuel oil	Average increase <u>a/</u>
<u>Argentina</u>					
Increase due to rise in cost of crude oil <u>b/</u>	5.80	3.86	2.90	1.29	3.02
Tax on selling price (per cent) <u>c/</u>	50.0	33.0	16.0	4.0	
Increase including taxes	11.60	6.03	3.45	1.37	4.79
<u>Brazil</u>					
Increase due to rise in cost of crude oil <u>b/</u>	4.80	4.49	2.80	0.73	3.02
Tax on selling price (per cent) <u>d/</u>	44.0	20.0	42.0	5.0	
Increase including taxes	8.57	5.61	4.83	0.77	5.04
<u>Chile</u>					
Increase due to rise in cost of crude oil <u>b/</u>	5.02	2.15	2.28	1.86	3.02
Tax on selling price (per cent) <u>e/</u>	44.0	12.0	21.0	16.0	
Increase including taxes	8.96	2.44	2.89	2.21	4.59
<u>Mexico</u>					
Increase due to rise in cost of crude oil <u>b/</u>	5.88	1.17	1.88	0.76	3.02
Tax on selling price (per cent) <u>e/</u>	12.0	13.0	13.0	12.0	
Increase including taxes	6.68	1.34	2.16	0.86	3.43
<u>Uruguay</u>					
Increase due to rise in cost of crude oil <u>b/</u>	8.43	2.80	2.34	1.21	3.02
Tax on selling price (per cent) <u>c/</u>	50.0	14.0	20.0	16.0	
Increase including taxes	16.86	3.26	2.93	1.44	4.88

Source: ECLA, on the basis of official data.

a/ Weighted according to 1972 consumption structure.

b/ On the basis of the 1972 structure and levels of consumption and 1973 price levels.

c/ 1973 taxes.

d/ 1969 taxes.

e/ 1972 taxes.

Table 8

INCREASE IN SELLING PRICES OF PETROLEUM PRODUCTS AND ESTIMATE
OF PROPORTION OF INCREASE ATTRIBUTABLE TO THE RISE IN
CRUDE OIL PRICES

(US cents per litre)

	Gasoline	Kerosene	Diesel oil	Fuel oil
<u>Argentina</u>				
Selling price in March 1973	9.0	6.0	4.5	2.0
Selling price in March 1974	34.0	10.0	6.5	2.9
Real price increase	25.0	4.0	2.0	0.9
Estimated price increase attributable to the rise in crude oil prices	11.6	6.0	3.5	1.4
Percentage of the increase attributable to the rise in crude oil prices	46	150	175	156
<u>Brazil</u>				
Selling price in March 1973	12.3	11.5	7.2	2.6
Selling price in April 1974	24.8	17.1	14.1	3.9
Real price increase	12.5	5.6	6.9	1.3
Estimated price increase attributable to the rise in crude oil prices	8.6	5.6	4.8	0.8
Percentage of the increase attributable to the rise in crude oil prices	69	100	70	62
<u>Chile</u>				
Selling price in March 1973	14.0	6.0	6.4	5.2
Selling price in February 1974	26.4	18.1	20.6	17.8
Real price increase	12.4	12.1	14.2	12.6
Estimated price increase attributable to the rise in crude oil prices	9.0	2.4	2.9	2.2
Percentage of the increase attributable to the rise in crude oil prices	73	20	20	18

Table 8 (conclusion)

	Gasoline	Kerosene	Diesel oil	Fuel oil
<u>Mexico</u>				
Selling price in March 1973	8.0	1.6	2.6	1.0
Selling price in January 1974	11.2	1.6	3.6	1.4
Real price increase	3.2	0.0	1.0	0.4
Estimated price increase attributable to the rise in crude oil prices	6.7	1.3	2.2	0.9
Percentage of the increase attributable to the rise in crude oil prices	209	0	220	225
<u>Uruguay</u>				
Selling price in March 1973	21.3	7.1	5.9	3.1
Selling price in March 1974	45.2	15.2	12.7	7.1
Real price increase	23.9	8.1	6.8	4.0
Estimated price increase attributable to the rise in crude oil prices	16.9	3.3	2.9	1.4
Percentage of the increase attributable to the rise in crude oil prices	71	41	43	36

Source: ECLA. Unit prices on the basis of official data, converted to US dollars using data provided by the International Monetary Fund.

/Argentina, however,

Argentina, however, which produces most of the petroleum it consumes, apparently is passing on the higher price of crude oil to users of gasoline. It would also seem that the other countries considered are likewise passing on to the users of the different petroleum products both the higher costs resulting from the increase in the price of crude oil and those resulting from other items in the cost of producing refined products. The figures indicate sharp country-to-country variations in the relative selling prices, but generally speaking they show that most of the total cost of production is loaded onto the price of gasoline and to a lesser extent that of diesel oil.

4. Conclusions

Latin America depends to a considerable extent on petroleum as a source of energy. Approximately half the petroleum it produces and imports is used in transport activities.

No shortage in the physical availability of petroleum in the region is anticipated for the remainder of this decade, but a substantial increase is expected in the price of imported petroleum and in the opportunity cost of petroleum in producer countries. This will mean higher prices for the petroleum products used in transport, and consequently increases in the tariffs for the various modes of transport.

If the increases in tariffs are sudden and excessive, and exceed the levels required to absorb the rise in the price of crude oil, they may cause inflation and affect other economic sectors of the countries and the relations between regions within the same country.

Governments should study and apply policy measures to correct possible situations of this type, reconciling them both with measures aimed at making better use of a resource which now has a high economic value and with those aimed at making users pay the real cost of transport services. The main objective of these measures, however, should be to minimize the total cost of transport, bearing in mind the real value of foreign exchange for the economy and considering that the cost of fuel is only one element in this overall cost.

/The individual

The individual situations of the countries with respect to the new price of petroleum vary considerably, and they will therefore have to adopt different policy measures to reduce the impact of the increase in petroleum prices. The following, however, are some general measures which could be adopted:

(a) Generally speaking, to channel more traffic towards the modes of transport which use less fuel per traffic unit. Any diversion of interurban cargo transport from trucks to railways, and of passenger transport from cars, railways and planes to buses, cuts down on the overall consumption of fuel. However, it should be recalled that fuel is not the only input which involves the spending of foreign exchange;

(b) To extend railway electrification in the countries which have already electrified considerable stretches of their rail networks and which have hydro-electric resources and coal;

(c) To use rail tariffs as a regulatory instrument when there are increases in road transport tariffs which do not correspond to the increase in the price of fuels;

(d) To establish systems of taxation of imported or domestically produced road vehicles which will tend to orient demand towards vehicles with a better energy yield and lower costs per traffic unit;

(e) To reduce maximum speed limits on the highways in order to save fuel and also possibly reduce accidents, and

(f) To secure a marked improvement in public passenger transport in urban and suburban areas and discourage the use of private cars within the cities. With this latter aim in view, traffic could even be banned in central areas at certain times of day.



