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Facoltà di Scienze Economiche e Bancarie

QUADERNI DELL'ISTITUTO DI ECONOMIA

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# INWARD-LOOKING DEVELOPMENT AND IMPORT SUBSTITUTION IN THE ARGENTINE ECONOMY 1950-1980

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Luisa Montuschi

# INWARD-LOOKING DEVELOPMENT AND IMPORT SUBSTITUTION IN THE ARGENTINE ECONOMY 1950-1980

Siena, settembre 1987

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The majority of developing countries, and particularly the Latin American countries, followed inward-looking development strategies based on import substitution (IS) policies in the Post-War period. The ruling "export pessimism", the increasing urbanization, the expectations (later on falsified) about the most likely evolution of the world economy, the growing awareness about the urgent need to narrow the gap with the more advanced economies, all these elements set up a reference frame which pointed out to those strategies as the most adequate and possibly as the only feasible ones(1).

Many critical surveys of IS experiences stressed their most negative traits: the protectionism which is a common feature of any IS policy, the inflationary processes that seem to be one of their inevitable byproducts, the indiscriminate and horizontal development of an inefficient and non-competitive industrial sector and the anti-export bias characteristic of these strategies(2). The negative performance of the economies which adhered to the IS model has been frequently compared with the more successful one of countries which recently have followed export promotion strategies. This led many people to believe that IS policies could be considered as a sort of memory from a remote past and just a matter of analysis for economic historians. This was the mode of thinking prevailing, until very recently, in academic circles as well as in influential international economic organizations.

At present, the world economic crisis, the growing protectionism of the industrial economies, the huge external debt accumulated by LDCs, raise serious doubts about the possibilities of developing countries to achieve satisfactory rates of growth or even to overcome states of virtual stagnation or recession. As a consequence of this state of affairs, some economists and policymakers seem to be ready to support the idea of a revival of the old inward-looking development models based on the expansion of the domestic markets. Therefore, it seems relevant to undertake the task of analyzing the extent and limitations of these models implemented in Argentina after the Second World War.

In the first place is seems important to ascertain which were the grounds and reasons put forward to justify the implementation of the IS strategy. Letting aside for the moment any political motivation (no matter how important it could have been, at least in the Argentine case) the most sound arguments in favor of IS were deeply rooted in the prevailing export pessimism, which led policymakers to believe that the expected evolution of the import capacity would not be enough to satisfy the demand of imported goods.

The import capacity is determined by the export earnings plus (or minus) the net capital movements. Since there are limits to the possibility of utilization of the international reserves or to increasing the external debt, then the import capacity will essentially depend on the variations of the purchasing power of exports. The purchasing power is determined by both the quantum of exports and the terms of trade. A strong support to the export pessimism was given in the forties and in the fifties by the widespread belief in a growing protectionism in the industrial economies which would set a limit to the expansion of the international trade as well as by the partially corroborated thesis of a long run decline in the terms of trade of LDCs.

In any development process the demand of imported goods (intermediate and capital goods) displays a high income-elasticity. As a consequence, the import capacity appears as an unavoidable bottleneck to the economic growth.

The foregoing argument about the external constraint could be presented somewhat more formally:

(1) $$C_M \geqslant M_i + M_k + M_c$$

Where $C_M$ stands for the import capacity, $M_i$ for imports of intermediate goods, $M_k$ for imports of capital goods and $M_c$ for imports of consumer goods.

Imports of intermediate goods necessary to occupy the productive capacity of the economy are proportional to the GDP, so that

(2) $$M_i = m_i \, Y$$



and imports of capital goods are a proportion $m_k$ of total investment. So

(3) $$M_k = m_k \, I = m_k \, \Delta K$$

If we define the marginal capital/output ratio as $v = (\Delta K / \Delta Y)$, then

(4) $$M_k = m_k \, v \, \Delta Y$$

Substituting (2) and (4) for $M_i$ and $M_k$ in (1) and assuming that there is no international reserves accumulation, so that the import capacity is depleted by imports, we obtain

(5) $$C_M = m_i \, Y + m_k \, v \, \Delta Y + M_c$$

and

(6) $$C_M/Y = m_i + m_k \, v \, \hat{Y} + (M_c/Y), \quad \text{where} \quad \hat{Y} = \Delta Y/Y$$

In a frame of any IS strategy the ratio $C_M/Y$ is assumed to be given exogenously at a level which could not be considered satisfactory as far as the growth requirements is concerned. Thus the magnitude of the coefficients $m_i$, $m_k$, v and $M_c/Y$ will impose severe restrictions on the attainable rates of growth. The so-called problem of the external constraint to the economic growth implies that $\hat{Y}$ will grow only if export earnings grow. The main objective of the IS strategy is then to loosen the economy from this constraint by reducing the requirements of imported goods. This would be done by substituting domestically produced goods for the previously imported ones. This process of substitution will eventually bring about drops in the coefficients $m_i$, $m_k$ and $M_c/Y$ or, at least, so it is expected.

As a general rule, the IS process is initially centered on consumer goods industries, usually characterized by simple technologies and low intensities in physical and human capital. This is the so-called "easy phase" of import substitution, in general, the most successful one. During this stage domestically produced consumer goods are substituted for imported goods. As a consequence, there is a spurt in the domestic economic activity. New productive jobs are created and the income increases as its distribution improves. The initial push in the consumer goods industries is multiplied in the input supplier industries due to linkage effects. But, unfortunately, at this point serious problems arise.

Under the IS strategy industrial development was extensive and not integrated with a remarkable lack of selectivity. Any kind of industries proliferated, even those producing dispensable luxury goods whose importation has been forbidden. This was due to the generalized protection and to the lack of incentives to specialization. Eventually, those industries turned into demanders of imported intermediate capital goods. Old and new industries competed for the import permits and the scarce foreign exchange which were ultimately allocated according to questionable rationality criteria. Thus, the dependence of the economy increased. The increasing incidence of intermediate goods in total imports appears as an indicator of such dependence. Therefore, the initial favorable effect due to the fall in $M_c/Y$ is likely to be offsetted, at least partially, by an increase in $m_i$. This is so because of the greater incidence of the intermediate imported goods necessary to produce domestically the substituted consumer goods. Evidence of this negative effect was found in a previous paper on the IS Argentine case(3). This chain of events could eventually lead to the end of the "easy phase" of IS.

When this actually happens two possible paths could be followed to overcome the external constraint and thus avoiding the occurrence of the so-called stop-go cycles. The first one implies the deepening of the substituting effort centering it on intermediate and capital goods. The second path leads to a complete reversal of the IS strategy implementing policies aiming at an export promotion of the already established industrial production.



As far as the IS strategy is concerned it must be noted that the stage of substitution of intermediate and capital goods, usually known as the "difficult phase", implies more capital intensive processes, more complex technologies and production scale too large for the limited absorption capacity of the small domestic markets. The success of this phase appears severely constrained by the induced necessity of imported inputs. If the ratio $M_c/Y$ had been set at an irreducible level during the previous "easy phase" and the import capacity was given exogenously, then the output would only grow if it were possible to reduce $m_i$, $m_k$ and/or v. However, it is not likely that all those coefficients would vary in the same expected direction. Any attempt at reducing $m_i$ could well induce an increase in $m_k$ and a policy aiming at attaining a drop in $m_k$ could induce increases both in $m_i$ and v.

An outstanding fact about the IS strategy is that it could not solve the problem of the dependence of the economy on the external sector which had been presented as the main reason to justify its adoption. Such dependence aggravated, increasing the vulnerability of economies which evolved according to a pattern of stop-go cycles characterized by recurrent balance of payments crises.

Argentina was by no means an exception in the Latin American scenario. Actually, it was the country which adhered to the IS strategy over the longest period of time. The purpose of this paper is to measure the extent of the substituting effort carried out in Argentina after the Second World War as well as evaluate its coherence and results.

First of all it seems necessary to establish without any ambiguity the meaning of the concept "import substitution". In general, this concept has been understood, rather loosely, as a drop in the import/output ratio. The first step towards a more rigorous definition is to present a definition of the trade bias s as(4)

$$s = (P_x^d/P_m^d)/(P_x^i/P_m^i) \tag{7}$$

where $P^d$ denote domestic prices, $p^i$ international prices and x and m refer to exports and imports. The bias s is unity (s = 1) under free trade. When it is less than unity (s < 1) it represents the case of an antiexport bias or import substitution bias, meanwhile s greater than unity represents a bias towards export promotion(5). Whenever s $\neq$ 1 the economy is in a suboptimal situation. This could be easily seen in figure 1 which represents a simplified model of an economy producing an exportable good X and an importable good M according to given factor endowments and technology represented by the production possibilities frontier AB.

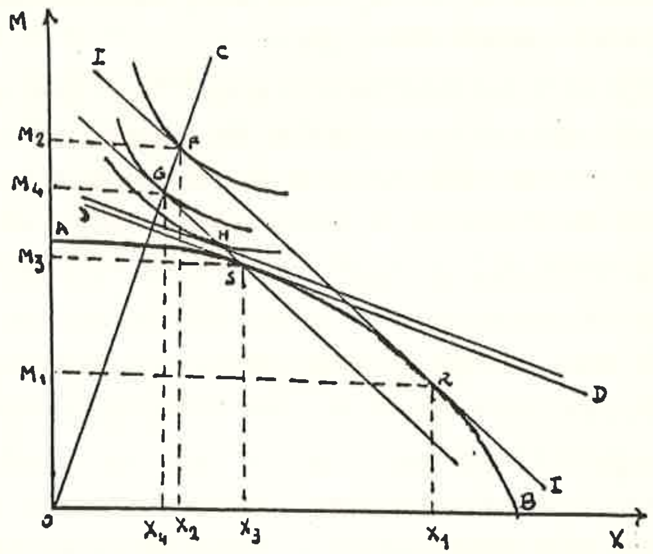


**FIGURE 1**



The international price ratio is represented by II. Then R is the optimal production point of M and X under free trade ($X_1$ is the production of X and $M_1$ that of M). Given the social demands derived from the social indifference curves, it is possible to observe that through the international trade the economy could reach an indifference curve higher than that corresponding to the pretrade situation. The economy produces at R and consumes at F. Exports are $X_2X_1$ and imports $M_1M_2$. Whenever an IS strategy is implemented, so that s < 1, the domestic price ratio $P_x^d/P_m^d$ will shift to DD due to a protective tariff. As a consequence, domestic production will also shift from R to S. Domestic output of M expands at the expense of the output of X. Assuming homothetic social indifference curves, the international exchange will allow consumption at C. But C is located inside the free trade consumption frontier. Therefore, it corresponds to a lower level of social utility. In addition, there is a decrease in the external trade ($X_3X_4$ of exports and $M_3M_4$ of imports). If the tariff could be disaggregated into a subsidy to the domestic production of M plus a tax on the consumption of M, then consumption will be set at H where the marginal rate of substitution of M for X is $P_x^d/P_m^d$. Production will not vary but there will be a further reduction in the size of the external sector and in the social utility level.

In figure 2 a growing economy is depicted by means of two production possibilities frontiers $A_oB_o$ and $A_1B_1$. Let o denote the initial period and 1 a period that follows the initial one. Due to the growth in the resources endowments, the economy can produce more of both M and X in period 1. Assuming as before homothetic tastes and a constant international price ratio, consumption levels will be set on OC. Any trade distorsion or market imperfection will bring about shifts in the equilibrium point and will lead to a suboptimal situation (either with an antiexport bias s < 1, or with a proexport bias s > 1). In figure 2, X*, M* and C* refer to optimal quantities produced and consumed. X, M and C are quantities actually produced and consumed.

Measure of IS can be derived from the foregoing analysis. We will present

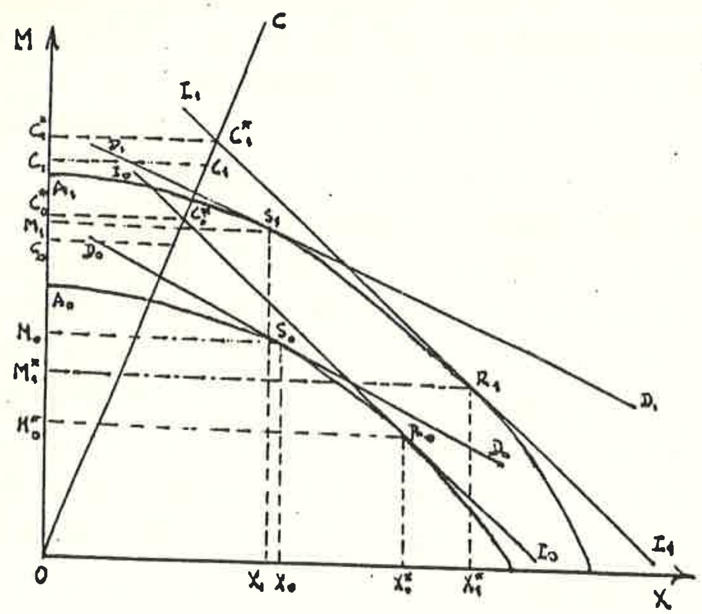


FIGURE 2

here two of such indicators(6).

1) The most widely used measure indicates the presence of IS between periods o an 1 if

(8) $(M_1/S_1) < (M_o/S_o)$

where S is the total supply of the importable good equal to the domestic production Q plus imports M.



It should be noted that this measure merely describes what has happened between o and 1. It does not point to the presence of any trade bias that could have induced a deviation from the optimal equilibrium point.

2) An alternative measure could be put forward to take into account the presence of any trade bias. This measure compares the actual M/S ratio with the optimal M/S ratio. For any t

(9) $(M_t/S_t) < (M^*_t/S^*_t)$

indicates the presence of an antiexport or pro IS bias. This bias could well vary over time, so the IS process will deepen (or will begin) if

(10) $(M_o/S_o) \leqslant (M^*_o/S^*_o)$

and

(11) $\Delta(M/S) < \Delta(M^*/S^*)$

In any empirical analysis it is only possible to derive IS indicators from (8). Three of such indicators will be presented here.

I - The most simple indicator

(12) $MS_1 = (M_1/S_1) - (M_o/S_o) = -(1/S_1)|\ (Q_1 - Q_o\ (S_1/S_o))$

measures the change in M/S between periods o and 1.

II - An indicator introduced by Chenery takes into account the fact that any change in M could be attributed either to changes in S or to a substitution effect(7). Only the latter indicates the presence of an IS process. If

(13) $S = Q + M = D + F + X$

where D stands for intermediate demand, F for final demand and X for exports, it follows that

(14) $\Delta S = \Delta Q + \Delta M$

If a coefficient u is defined as $u = Q/S$ then $\Delta Q = u \Delta S$ if u is assumed as a constant. But u varies between o and 1 due to the substitution effect, so that

(15) $\Delta Q = u \Delta S + S \Delta u$

and

(16) $S \Delta u = S_1 (u_1 - u_o)$ measures the aforementioned substitution effect. The Chenery's indicator is derived from (16) as

(17) $MS_2 = (S_1 / \Delta Q)(u_1 - u_o) = (1/ \Delta Q) [(Q_1 - Q_o (S_1 S_o)]$

III - A possible variant of the Chenery's proposal can be also derived[8]. If $m = M/S$ then

(18) $\Delta M / \Delta Q = (M_1 - M_o)/(Q_1 - Q_o) = 1/ \Delta Q (m \Delta S + S \Delta m)$

and $S \Delta m = S_1(m_1 - m_o)$ is the variation in M due to the substitution effect. The third indicator $MS_3$ is obtained from (18)

(19) $MS_3 = (S_1 / \Delta Q)(m_1 - m_o) = - 1/ \Delta Q[Q_1 - Q_o(S_1/S_o)]$

It could be easily seen that the following relationship holds among $MS_1$ ,



$MS_2$ and $MS_3$:

(20) $MS_1 = - MS_2 (\Delta Q/S_1) = MS_3 (\Delta Q/S_1)$

There will be import substitution over a period of time as long as

(21) $Q_1 > Q_o (S_1/S_o)$

which implies negative values for both $MS_1$ and $MS_3$ and positive values for $MS_2$. All three indicators lead to similar qualitative conclusions about the trade bias which is an obvious implication of using the same definition of IS as a starting point. This definition is the one given by (8).

The results corresponding to estimates of $MS_1$ for the 1950-1980 period are depicted in Table 1. Even though they do not refer to any optimum, some independent estimates of the trade bias corresponding to a shorter period (1960-1980)[9] point to a permanent presence of a severe antiexport bias (see Table 1). However, the whole period could not be properly characterized as one of IS. In fact only 13 years out of the 30 years analyzed could be identified as such. The M/S ratio oscillates over the period but its magnitude at the end is approximately the same it was at the beginning of the fifties.

Estimates for a shorther period in which disaggregated data were available[10] will lead to similar conclusions if the analysis is carried out in terms of different kinds of goods (intermediate, final and capital goods). Even though it would seem that the IS process had deepened for the intermeditate goods, this is only apparent because the M/S ratio corresponding to these goods diplays a pattern similar to that of the aggregate imports (see Tables 2 and 3).

When we turn to the analysis of the different economic sectors, the most striking result is the fact that there was not IS in the industrial sector. Something similar happened in the agricultural sector (with a greater emphasis in the substitution of final goods and an increasing dependence on imported intermediate goods). Finally, it is in Mining where it is possible to observe a sustained process of IS. This is mainly due to the oil policies pursued during the period.

In the light of the facts just outlined it seems necessary to present a characterization of the development strategy followed in Argentina after the Second World War, other than that of IS. It is difficult to understand why policies that failed to overcome the external constraint were carried to such an extent that brought about a worsening of the dependence of the economy. We will try to present a sensible explanation of such puzzling question based on some statistical data available for the 1955-1969 period.

Average values for the coefficients of the equation (6) ($m_i$, $m_x$, $M_c/Y$) as well a X/Y were calculated for three subperiods (1955-1959, 1960-1964 and 1965-1969). It must be noted that X/Y is clearly an overestimation of the true import capacity as the tansfer payments ($T_e$) to/from foreigners were consistently negative. So an average estimate of $T_e/Y$ was substracted from X/Y.

As far the marginal capital/output ratio v is concerned it displays a great variability due to the yearly oscillations of GDP. So, it seems more adequate to utilize the average ratio which shows an upward trend consistent with an economic development process(11). A unique estimate of 3.5 was considered for such average ratio(12). The results are shown in Table 4.

During the period 1955-59 imports of consumer goods had already attained an irreducible level. Besides, the import capacity was unfavorably influenced by the steady decline in the terms of trade. Under these conditions the import capacity was barely enough to sustain the existent productive capacity. So it was only possible to aspire to very modest rates of growth. And as it could be seen in Table 4 the actual average rate of growth was a mere 1.8%.

In the light of such facts it could be accepted as reasonable the behavior of governments that understood that it was necessary to maintain and even to deepen the IS strategy. And it was so because they believed that it was impossible to expand the import capacity. As a consequence, the nominal and the effective protection reached the highest level in Latin America(13) with a reasonable anti-



export bias. Nevertheless, the results were not beneficial for the Argentine economy as it is inferred from the results depicted in Table 4.

Let us analyze some facts underlying the failure of the IS strategy. The M/S ratio is also an indicator of the opening up of the economy. It is related with other indicators widely used to measure such opening up as $[(X + M)/2]/Y$, X/Y and M/Y. The M/Y ratio is frequently presented as a measure of IS and it could be considered as a proxy of M/S. The evolution of these ratios could be observed in Tables 1 and 5 and in Figure 3. This observation enables us to draw the conclusion that the process of import substitution was already depleted by the end of the Second World War. Afterwards, only changes in the imports structure could be achieved as well as some partial substitutions in some sectors that were offsetted by larger imports in other sectors.

Thus, the external constraint was the ever present bottleneck in the Argentine development process. Many policies were aimed at overcoming such constraint. But those policies were unsuccessful and their implementation was very costly in terms of inflationary pressures, income redistributions, losses in the capital formation and an absence of technological progress. Actually, whenever the external constraint was loosened this was mainly due to favorable external conditions and not to any domestic policy. As a matter of fact, the drop in the $m_k$ coefficient during the period 1965-1969 is not indicative of any substitution of domestically produced capital goods for imported ones. The drop in $m_k$ is to be explained by the fact that imported capital goods must be considered as a sort of adjustment variable. Whenever there was a shortage of foreign exchange and since there were no possibilities of achieving any further reduction in imports of consumer and indeterminate goods, any need of imported capital goods was postponed even though this would widen the technological gap with more advanced economies.

The foregoing analysis allow us to conclude that the evolution of the Argentine economy could be properly characterized by Figure 1 and 2. With the permanent presence of an antiexport bias (see Table 1 and Figure 3), consequence of the

IS policies, the distorsions in relative prices resulted in a shrinking of the external sector and in drops in the level of social welfare.

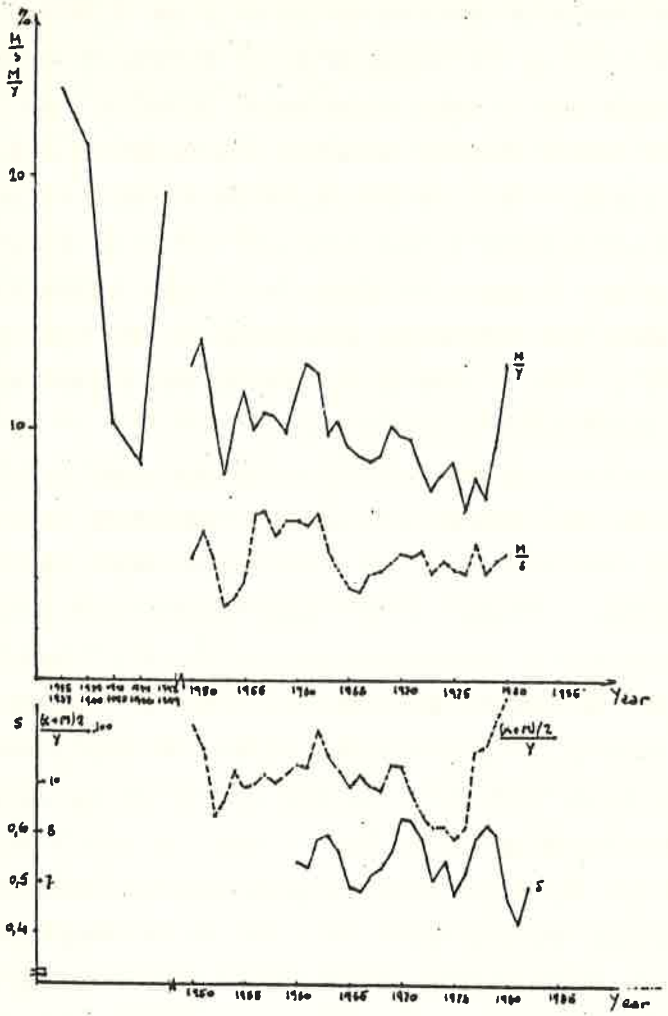


FIGURE 3



In spite of the permanence and even deepening of the protectionist policies, the IS process (measured as changes in M/S or in M/Y) did not advance during the period just analyzed. And this was so because the IS process was already depleted by the end of the Second World War. So it would seem more adequate to refer to an inward-looking development model which prevailed in Argentina since the forties. The objective of that model, as declared by the economic authorities, was to develop a domestic market until it would prevail over the external one. The negative results of that model were not probably foreseen but they are still impinging on the present Argentine economy.

It is not difficult to understand the origins of the inward-looking model in Argentina, but it is certainly difficult to explain why this model was carried out to such an extent and over such a long span of time. And more so considering that the model was based on an indiscriminate pattern of very high protection for the import competing industries meanwhile the production oriented towards exports was clearly discouraged(14).

If the IS process had been over by the end of the forties the economy should have followed a very different development path to avoid the external constraints, the stop-go cycles and a disappointing overall performance.

## Notes

(1) Cf. Canavese, A.J. and Montuschi, L., (1985).

(2) Cf. Bhagwati, J., (1978) and Krueger, A.O., (1978) and (1981).

(3) Cf. Montuschi, L., (1984).

(4) Cf. Krueger, A.O., (1981).

(5) Some authors used to identify the export promotion strategy with the case of s=1 since countries usually regarded as "export promoting" have implemented those strategies as means of ofsetting the disincentives built into the system by IS policies. Cf. Bhagwati, J., (1978) and Krueger, A.O., (1978).

(6) Cf. Desai, P., (1969).

(7) Cf. Chenery, H.B., (1960).

(8) Cf. James, E.M., (1979).

(9) Cf. Sturzenegger, A.C., (1986).

(10) Cf. Montuschi, L., (1984).

(11) Cf. Goldberg, S. and Ianchilovici, B., (1986).

(12) Only few estimates of this ratio are available. Some of them indicate values of about 3.5 for the fifties and others point to values of 4 for the beginning of the seventies. Cf. Montuschi, L., (1966) and Goldberg, S. and Ianchilovici, B., (1986).

(13) Cf. Macario, S., (1964) and Berlinski, J. and Schydlowsky, D.M., (1977).

(14) R. Prebisch one of the first and most distinguished supporters of the IS strategy in Latin America wrote in 1963: "As is well known, the proliferation of industries of every kind in a closed market has deprived the Latin American countries of the advantages of specialization and economies of scale, and owing to the protection afforded by excessive tariff duties and restrictions, a healthy form of internal competition has failed to develop to the detriment of efficient production", Cf. Prebisch, R., (1963).

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TABLE 1

External trade and IS Indicators

| YEARS | M/S | $MS_1$ | $\frac{(X+M)/2}{Y}$ | s |
|---|---|---|---|---|
| 1950 | 0.048 | .. | 12.244 | .. |
| 1951 | 0.059 | 0.011 | 11.306 | .. |
| 1952 | 0.048 | -0.011 | 8.760 | .. |
| 1953 | 0.028 | -0.020 | 9.213 | .. |
| 1954 | 0.032 | 0.004 | 10.414 | .. |
| 1955 | 0.039 | 0.007 | 9.821 | .. |
| 1956 | 0.066 | 0.027 | 9.973 | .. |
| 1957 | 0.067 | 0.001 | 10.296 | .. |
| 1958 | 0.057 | -0.010 | 10.062 | .. |
| 1959 | 0.063 | 0.006 | 10.353 | .. |
| 1960 | 0.063 | 0.000 | 10.693 | 0.541 |
| 1961 | 0.061 | -0.002 | 10.619 | 0.532 |
| 1962 | 0.066 | 0.005 | 12.104 | 0.589 |
| 1963 | 0.051 | -0.015 | 11.136 | 0.595 |
| 1964 | 0.044 | -0.007 | 10.440 | 0.565 |
| 1965 | 0.037 | -0.007 | 9.992 | 0.499 |
| 1966 | 0.035 | -0.002 | 10.283 | 0.484 |
| 1967 | 0.042 | 0.007 | 9.962 | 0.516 |
| 1968 | 0.043 | 0.001 | 9.740 | 0.531 |
| 1969 | 0.047 | 0.004 | 10.716 | 0.564 |
| 1970 | 0.050 | 0.003 | 9.110 | 0.630 |
| 1971 | 0.049 | -0.001 | 8.742 | 0.627 |
| 1972 | 0.051 | 0.002 | 8.289 | 0.593 |
| 1973 | 0.042 | -0.009 | 8.169 | 0.507 |
| 1974 | 0.047 | 0.005 | 8.285 | 0.544 |
| 1975 | 0.044 | -0.003 | 8.136 | 0.459 |
| 1976 | 0.042 | -0.002 | 8.171 | 0.521 |
| 1977 | 0.054 | 0.012 | 9.791 | 0.591 |
| 1978 | 0.042 | -0.012 | 10.181 | 0.619 |
| 1979 | 0.047 | 0.005 | 11.250 | 0.599 |
| 1980 | 0.050 | 0.003 | 13.170 | 0.477 |
| 1981 | .. | .. | 14.239 | 0.423 |
| 1982 | .. | .. | 11.650 | 0.497 |
| 1983 | .. | .. | 11.615 | .. |
| 1984 | .. | .. | 11.553 | .. |

SOURCES: Banco Central de la Repùblica Argentina, Sistema de Cuentas del producto e ingreso de la Argentina, Vol. II, Buenos Aires, 1975. Oferta y Demanda Global a precios corrientes, Buenos Aires, 1982. Estimaciones trimestrales sobre oferta y demanda globale. Buenos Aires, 1984.

Sturzenegger,A.C.,(1986)

TABLE 2

M/S rations

| YEARS | TOTAL | INDU-STRY | AGRI-CULTURE | MINING | IG | FG | KG- |
|---|---|---|---|---|---|---|---|
| 1955 | 0,039 | 0,066 | 0,033 | 0,415 | 0,072 | 0,015 | 0,152 |
| 56 | 0,066 | 0,111 | 0,044 | 0,598 | 0,133 | 0,032 | 0,264 |
| 57 | 0,067 | 0,110 | 0,047 | 0,664 | 0,121 | 0,028 | 0,208 |
| 58 | 0,057 | 0,091 | 0,044 | 0,599 | 0,106 | 0,022 | 0,179 |
| 59 | 0,063 | 0,104 | 0,027 | 0,585 | 0,116 | 0,022 | 0,206 |
| 1960 | 0,063 | 0,116 | 0,028 | 0,340 | 0,096 | 0,038 | 0,241 |
| 61 | 0,061 | 0,116 | 0,031 | 0,176 | 0,092 | 0,039 | 0,220 |
| 62 | 0,066 | 0,128 | 0,029 | 0,134 | 0,090 | 0,050 | 0,276 |
| 63 | 0,051 | 0,098 | 0,023 | 0,123 | 0,074 | 0,034 | 0,259 |
| 64 | 0,044 | 0,080 | 0,026 | 0,141 | 0,082 | 0,017 | 0,142 |
| 65 | 0,037 | 0,063 | 0,025 | 0,170 | 0,074 | 0,011 | 0,082 |
| 66 | 0,035 | 0,060 | 0,028 | 0,171 | 0,065 | 0,013 | 0,108 |
| 67 | 0,042 | 0,075 | 0,032 | 0,176 | 0,076 | 0,017 | 0,139 |
| 68 | 0,043 | 0,080 | 0,028 | 0,137 | 0,075 | 0,019 | 0,153 |
| 69 | 0,047 | 0,089 | 0,039 | 0,116 | 0,084 | 0,021 | 0,156 |

IG intermediate goods, FG final goods, KG capital goods:

SOURCES: Banco Central de la Repùblica Argentina, Sistema de cuentas del producto e ingreso de la Argentina, Vol.II, Bueno Aires, 1975. Comercio Exterior: Asignaciòn por uso económico de los bienes y sectores productivos de origen, Fascículo 1, Suplemento Boletín Estadístico N° 3, marzo 1969. Fascículo 2, Suplemento Boletín Estadístico N°5, mayo 1969. Fascículos 3-4, Suplemento Boletín Estadístico N°10, octobre 1969. Fascículo 5, Suplemento Boletín Estadístico N°2, febrero 1971.

TABLE 3

Indicators of Import Substitution $(MS_1)$

| YEAR | TOTAL | INDUSTRY | AGRICUL-TURE | MINING | TOTAL | IG | FG | KG |
|---|---|---|---|---|---|---|---|---|
| 1956 | 0,027 | 0,045 | 0,011 | 0,183 | 0,027 | 0,041 | 0,017 | 0,112 |
| 57 | 0.001 | -0,001 | 0,003 | 0,066 | 0,001 | 0,008 | -0,004 | -0,056 |
| 58 | 0,010 | -0,019 | -0,003 | -0,065 | -0,010 | -0,015 | -0,006 | -0,029 |
| 59 | 0,006 | 0,013 | -0,017 | -0,014 | 0,006 | 0,010 | 0 | 0,027 |
| 1960 | | 0,012 | 0,001 | -0,245 | 0 | -0,020 | 0,016 | 0,035 |
| 61 | -0,002 | 0 | 0,003 | -0,164 | -0,002 | -0,004 | 0,001 | -0,021 |
| 62 | 0,005 | 0,012 | -0,002 | -0,042 | 0,005 | -0,002 | 0,011 | 0,056 |
| 63 | -0,015 | -0,030 | -0,006 | -0,011 | -0,015 | -0,016 | -0,016 | -0,017 |
| 64 | -0,007 | -0,018 | 0,003 | 0,018 | -0,007 | 0,008 | -0,017 | -0,117 |
| 65 | -0,007 | -0,017 | -0,001 | 0,029 | -0,007 | -0,008 | -0,006 | -0,060 |
| 66 | -0,002 | -0,003 | 0,003 | 0,001 | -0,002 | -0,009 | 0,002 | 0,026 |
| 67 | 0,007 | 0,015 | 0,004 | 0,005 | 0,007 | 0,011 | 0,004 | 0,031 |
| 68 | 0,001 | 0,005 | -0,004 | -0,039 | 0,001 | -0,001 | 0,002 | 0,014 |
| 69 | 0,004 | 0,009 | 0,011 | -0,021 | 0,004 | 0,009 | 0,002 | 0,003 |

SOUCES; ID Table 2

TABLE 4

4.1 Coefficients of the equation (6)

| PERIOD | $m_i$ | $m_k$ | $M_c/Y$ |
|---|---|---|---|
| 1955-1959 | 0.080 | 0.121 | 0.005 |
| 1960-1964 | 0.071 | 0.188 | 0.003 |
| 1965-1969 | 0.071 | 0.091 | 0.004 |

4.2 External constraint and economic growth

| | 1955-1959 | 1960-1964 | 1965-1969 |
|---|---|---|---|
| X/Y | 0.099 | 0.108 | 0.111 |
| $C_c/Y=(X-T_c)/Y$ | 0.096 | 0.102 | 0.099 |
| $C_c/Y-M_c/Y$ | 0.091 | 0.099 | 0.095 |
| $m_i + m_k \hat{Y} * v=3.5$ | | | |
| 1) $\hat{Y}$=0.003 | 0.093 | 0.091 | 0.081 |
| 2) $\hat{Y}$=0.005 | 0.101 | 0.104 | 0.087 |
| 3) $\hat{Y}$=0.008 | 0.114 | 0.124 | 0.096 |
| Actual $\hat{Y}$ | 0.018 | 0.032 | 0.040 |

TABLE 5

External Trade Indicators

| YEAR | $\frac{(X+M)/2}{Y}$ 100 | $\frac{X}{Y}$ 100 | $\frac{M}{Y}$ 100 |
|---|---|---|---|
| 1935-1937 | 25.139 | 26.856 | 23.423 |
| 1938-1940 | 20.565 | 20.020 | 21.109 |
| 1941-1943 | 13.611 | 17.065 | 10.159 |
| 1944-1946 | 12.606 | 16.589 | 8.623 |
| 1947-1949 | 15.689 | 12.055 | 19.323 |
| 1950 | 12.244 | 12.074 | 12.413 |
| 1951 | 11.306 | 9.180 | 13.431 |
| 1952 | 8.760 | 7.095 | 10.424 |
| 1953 | 9.213 | 10.316 | 8.111 |
| 1954 | 10.414 | 10.609 | 10.219 |
| 1955 | 9.281 | 8.925 | 11.475 |
| 1956 | 9.973 | 9.961 | 9.984 |
| 1957 | 10.296 | 10.001 | 10.590 |
| 1958 | 10.062 | 9.712 | 10.413 |
| 1959 | 10.353 | 10.851 | 9.856 |
| 1960 | 10.693 | 10.120 | 11.265 |
| 1961 | 10.619 | 8.731 | 12.507 |
| 1962 | 12.104 | 12.002 | 12.206 |
| 1963 | 11.136 | 12.539 | 9.733 |
| 1964 | 10.440 | 10.637 | 10.243 |
| 1965 | 9.992 | 10.700 | 9.284 |
| 1966 | 10.283 | 11.677 | 8.888 |
| 1967 | 9.962 | 11.241 | 8.683 |
| 1968 | 9.740 | 10.631 | 8.848 |
| 1969 | 10.716 | 11.368 | 10.065 |
| 1970 | 10.666 | 10.673 | 9.631 |
| 1971 | 9.656 | 9.750 | 9.562 |
| 1972 | 8.698 | 8.826 | 8.571 |
| 1973 | 8.244 | 8.937 | 7.551 |
| 1974 | 8.285 | 8.398 | 8.172 |
| 1975 | 7.827 | 6.997 | 8.656 |
| 1976 | 8.321 | 10.010 | 6.631 |
| 1977 | 11.194 | 14.375 | 8.013 |
| 1978 | 11.476 | 15.704 | 7.248 |
| 1979 | 12.432 | 15.317 | 9.546 |
| 1980 | 13.410 | 14.265 | 12.556 |

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