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An appraisal of *capital goods policy* in Argentina

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This article makes both a theoretical and an empirical analysis of the new policies applied in Argentina since 1992 with regard to the treatment accorded to capital goods: exemption from import duties, with drawback facilities for domestic producers in respect of their local sales. The new system is evaluated through a detailed analysis of its effects on demand for capital goods (section II); on the domestic supply of such goods (section III); and on some macroeconomic variables such as the fiscal balance (section IV) and the external balance (section V). Some aspects relating to the management and control of the new system are then dealt with (section VI), the main results of an empirical analysis of its effects are outlined (section VII), and finally a global appraisal is made of it (section VIII). It is concluded that the new system regarding capital goods has had both favourable and unfavourable effects. Among the former are an increase in the investment rate and general productivity of the economy and a reduction in costs made possible by cheaper capital goods, while the unfavourable effects include the unsatisfactory evolution of the domestic supply of capital goods (except transport equipment), the macroeconomic impact on the fiscal sector, the external sector and unemployment, and the higher management costs, both public and private, of the new system compared with the previous one.

I

Introduction

Since the early 1990s, the Argentine Government has simultaneously been applying a macroeconomic stabilization plan and a broad process of structural reforms, especially a rapid increase in trade openness. The massive inflow of capital and the big increase in expenditure (fundamentally on consumer goods) encouraged by these policies have given rise to strong appreciation of the exchange rate. Although this situation had elements in common with similar processes in other countries of the region, the Argentine case was complicated by the fact that the episodes of hyperinflation in 1989-1990 and the form of the stabilization process (in which the convertibility of the currency was fixed by law) left very few opportunities for the use of exchange policy as a corrective measure.

Towards the end of 1992, the growing trade deficit and the excessive pressures suffered by the tradeables sector of the economy (on account of the simultaneous processes of trade openness and currency appreciation) led the Argentine Government to apply a number of measures designed to correct the problem of relative prices by fiscal means and to facilitate the restructuring of the production sectors.

These measures included a new form of treatment of capital goods, consisting of exemption from import duties (representing a 20% reduction in the effective exchange rate for the importation of such goods, through the elimination of 25 percentage points of overall protection) and the granting of a drawback (although only of 15% in this case) on the local sales of domestic producers.[1, 2]

The simplest and most direct theoretical reading of the new policy is that it replaced a second-best promotional instrument (trade protection) with a first-best instrument (a subsidy). The objective of the present article is precisely to analyse theoretically and empirically how good this kind of policy is in general, and how advisable its application is in the case of Argentina in particular.[3]

II

Impact of the new policy on demand for capital goods

The new capital goods policy makes both domestic and imported capital goods cheaper, and this must be analysed from at least three standpoints: as a stimulus for investment, as a reduction of production costs, and as a change in the relative prices between different factors of production.

□ This article is a summary of a considerably longer research study. The author wishes to express his gratitude for the valuable comments made on the original version by M. Bekerman, P. Gerchunoff and H. Nochteff.

[1] However, this difference in rates underestimates the change in the relative incentives to buy domestic or imported capital goods, fundamentally because the new system gave rise to substantial financial and management costs which have to be borne exclusively by local producers. Furthermore, the tariff exemption increased the portion of the total purchase price of imported capital goods eligible for financing, which represents a substantial benefit in view of the big advantages in terms of financing offered by foreign products in comparison with locally-produced goods (Argentina, Secretaría de Industria y Comercio Exterior, 1994).

[2] In March 1995, because of the urgent fiscal needs of the government, the tariffs were raised again (to 10%) and the drawback on domestic sales was lowered (likewise to 10%). This reduced to some extent the differences generated by the new policy as regards the relative incentives for the purchase of domestic or foreign capital goods.

[3] Both the theoretical and empirical analyses concentrate on the effects of the new policy during 1993 and 1994, since the subsequent behaviour of industrial policy departed from the supply-side version we are discussing here, concentrating instead on fiscal considerations, and the subsequent behaviour of demand for capital goods was governed basically by the negative impact of the recession.

From the first point of view, the lowering of the cost of these goods leads to an increase in the internal rate of return of investment and production restructuring projects at all levels of interest rates, promoting an increase in investment. The positive effects of this increase go beyond the microeconomic area and extend to the macroeconomic level, where they are reflected in rises in the average level of productivity of the economy, in the strengthening of aggregate demand, and, in general, in better expectations among the economic agents regarding the sustainability of the stabilization and growth process.

The second standpoint for analysing the effect of the new policy on the demand for capital goods concerns the reduction in costs that it involves, for quite apart from the increase in investment in such goods, it is also necessary to analyse the lowering of the cost of all those goods that would nevertheless have been acquired even at the original price (which included import duties).

According to conventional theory, this effect is seen as a mere redistribution of income from the State to the purchasers of capital goods and consumers in general, and is not included in analyses focussing on economic efficiency.[4] In economies with persistent imbalances in certain sectors (such as the fiscal and external sectors), however, the distributive effects directly affect the efficiency variables, so that the cost-benefit analysis becomes more complex.

In situations of rigidity of the real exchange rate, general reductions (or increases) in costs are reflected in an increase (decrease) of the macroeconomic competitiveness of local tradeable goods production. The tariffs applied to imported capital goods are one more element in the fixed unit costs of all the sectors of production using such goods. We thus find ourselves in the presence of yet another component of the so-called "Argentine cost", and its elimination is a similar case (although its impact is much smaller) to that of many other measures that the government has taken in the direction of "fiscal devaluation".[5]

The third standpoint concerns the change in the relative prices of the different factors of production (fundamentally capital and labour). Thus, while trade protection is eliminated for capital goods, wage costs continue to be influenced by labour taxes and the impact of the tariffs and export drawbacks that affect the tradeable goods forming part of the family shopping basket. It should be recalled that when a number of distortions exist at the same time (such as trade protection for all goods), the complete elimination of just one of them (in this case, the elimination of protection for capital goods) may reduce rather than improve efficiency. The change in this relative price may give rise to two types of adjustments: replacement of labour with capital goods in existing production activities, and a change in the relative rates of return of investment projects, as between sectors that are capital-intensive and those that are labour-intensive. From a neo-classical point of view, which assumes a high degree of interchangeability between labour and capital (well-behaved isoquantics), this can have a considerable impact on the equilibrium wage or the unemployment rate.[6]

Another price relation which is changed is that between capital goods imported from the rest of the world and those imported from MERCOSUR (which already enjoyed substantial tariff preferences, and even total preferences in some categories). In this case, the result would be to reduce the trade diversion generated by the integration process, by encouraging purchases from the cheapest foreign source.[7] At the same time, the *quid pro quo* for the concession made by Brazil in accepting the Argentine policy may well be some future concession (with its attendant economic costs) that may be demanded from Argentina at the bargaining table.

[4] See, for example, Grossman, 1990.

[5] It should be noted that the lowering of the cost of these goods extends to all sectors of the economy, and not just to the tradeables sectors (which are the only ones suffering from problems of competitiveness). Although the increases in the productivity of the non-tradeables sectors affect the costs of the economy as a whole, this effect is much slower and less direct (because of the regulation of the prices of privatized public services, for example).

[6] In this respect, such a noted economist as J. L. Bour has suggested that the relative price between capital goods and wages should be changed as a way of combatting unemployment (Economic Supplement of the newspaper *Página 12*, Buenos Aires, 31 December 1994).

[7] It should be remembered, however, that –as laid down in the theory of customs unions– trade diversion does not necessarily have a negative effect on well-being when it occurs in sectors with economies of scale and positive externalities, or when there are possibilities of securing improvements in the terms of trade (Chudnovsky, 1992).

III

Effect on the domestic supply of capital goods

There are basically two reasons why this effect should be incorporated in the analysis of social costs and benefits. The first reason is that reducing (increasing) domestic production may lead to the disuse (use) of production resources that have no place in other production activities. The Keynesian disuse or downgrading of specific production resources (such as some labour skills and the production experience built up by firms) represent situations where the reduction of domestic production may have high costs in terms of social well-being.[8]

The second reason is that, even when there are no problems of reassignment of production resources, it may be argued that the use of such resources in the capital goods industry gives social returns which are different from those that would be generated by other uses. Conventional analysis, which incorporates all the assumptions regarding perfect competition, tends to indicate that the product generated by the resources used in protected industries is less than their social opportunity cost. Thus, the elimination of tariffs would make it possible to free these resources, which would find more productive uses.

There are reasons for believing, however, that the social benefits generated by the capital goods sector may be greater rather than less than those generated by other economic activities. Firstly, the fact that this is a technology-intensive industry gives entrepreneurs the possibility of obtaining quasi-monopolistic (Schumpeterian) rents. In the case of the Argentine capital goods industry, which consists predominantly of small and medium-sized firms and lags significantly behind the international technological frontier, it may be objected that these above-average returns may be irrelevant because of internal features of the firms, but even so there are still above-average returns which are external to the firms: i.e., the externalities generated by the local production of these goods. Among the many types of positive externalities which have been attributed to the local production of capital goods are the higher relative skills attained by the labour force of this sector; its positive influence in terms of the spread and use of technological know-how by the other sectors of production (Porta, 1994);[9] the easing of external constraints which may constitute operational gaps that hinder growth,[10] and the benefits (with respect to the terms of trade and the volatility of international demand) offered by a pattern of specialization more oriented towards products with greater differentiation and higher added value, such as capital goods (Bekerman and Sirlin, 1996).

These benefits, however, must be compared with those offered –in terms of modernization of the production system and increased investment– by greater access to imported capital goods. In other words, the benefits provided by the externalities connected with the local production of these goods must be compared with the benefits that could be obtained by the appropriation of the externalities generated in more highly developed countries through the international dissemination of the technological advances incorporated in their products. The importance of this aspect should not be underestimated in view of the serious technological lag of this sector's structure of production in the country and its limited capacity for designing and producing technologically sophisticated goods.

[8] However, this argument is offset by the positive effect of the cheaper imports of capital goods on the investment rate and the competitiveness of the tradeables sector of the economy.

[9] Likewise, Wade (1990) notes that the social costs (in terms of lack of innovative capacity and chronic external deficits) of not having a domestic capital goods industry are not fully reflected in free-market prices used for choosing between domestic and imported goods.

[10] Dosi, Pavitt and Soete (1990), for example, hold that "the sensitivity of the pattern of specialization and the external accounts situation to Ricardian adjustments (of prices) depends on the degree of availability 'of capital goods'".

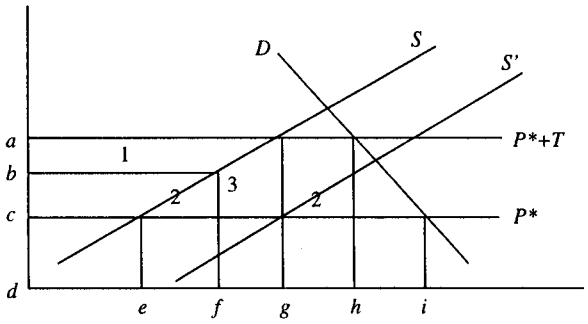
Let us now examine the effects of the new capital goods policy on the domestic supply of these goods, using two frames of analysis. The first of these, which is a conventional-type approach of a static and comparative nature, shows the effect of the changes in price signals on the equilibrium levels of local production. The second, which has more heterodox micro-bases, shows the impact of growing foreign competition on the strategic decisions of local capital goods firms with regard to their production and technological restructuring.

If we use the first frame of analysis, the crucial aspect is whether or not the new policy changes the incentives to buy domestic or imported goods. If the degree of price reduction brought about by the new policy were similar in both cases, then the impact on local production would undoubtedly be positive, depending only on the price-elasticity of the corresponding demand function. If the prices of imported goods went down more than those of locally produced items (as occurred in the Argentine case), however, the aggregate impact would become indeterminate and would depend on a number of variables, including the type of market for each product (i.e., more or less competitive), the level of relative advantage or disadvantage of local producers compared with foreign manufacturers in terms of costs, and the elasticities of the supply and demand functions for domestic and imported capital goods.

Let us look first of all at the simplest case (figure 1): that of a local firm with an upward supply curve (marginal costs); there is no product differentiation between local and foreign supply, and in the relevant section the demand curve faced by local firms is infinitely elastic to international price levels. The initial situation is given by the international price plus the tariff $P^* + T$. At this price, local supply covers only the fraction dg/dh of the total amount demanded, and the rest (gh) is imported. The elimination of trade protection would lead to a price reduction equal to the segment ac, to the replacement of domestic production by imports in the amount eg, and finally to an increase hi in the proportion of total demand satisfied by imports. The subsidy (ef) granted to local firms would partially reverse the displacement of local supply by imports.

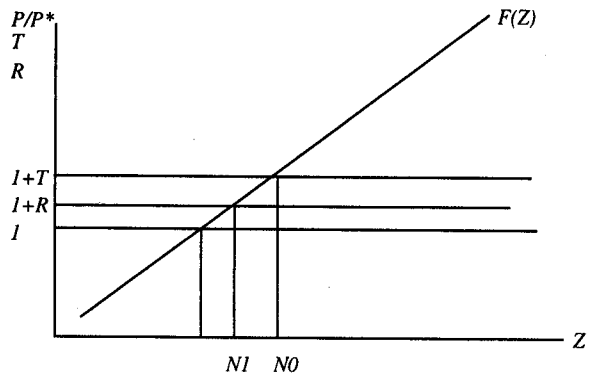
In this case, if the tariff reduction is bigger than the drawback rate (subsidy), then local production will inevitably fall, and the greater the elasticity of the supply curve and the bigger the differential between the drawback rate and the former trade protection, the more pronounced that fall will be. In turn, the increase in imports will be a function of the reduction in domestic supply and the elasticity of the demand curve. As already noted, in the absence of other distortions this fall in local production would mean an increase in efficiency equal to area 3 of figure 1. If, however, we assume that these "imperfections" in the economy are considerable, the decline in production will have an indeterminate effect on efficiency. If we assimilate the total amount of such imperfections to an externality and assume that the size of this was corrected by the former protective tariff (as in the "social" supply curve S' in figure 1), then any reduction in domestic production must lead to a decline in efficiency.

FIGURE 1



A second case of interest is that in which there is a continuum of firms or segments in this sector which produce with infinitely elastic supply curves in the relevant section and differ from each other in terms of their degree of advantage or disadvantage in matters of costs compared with imported goods. This case is shown in figure 2, where the function $F(Z)$ indexes the firms or products (Z) in terms of the difference between their prices and those of imported goods. The abscissa axis shows the number of firms, while the ordinate axis shows the price variables. At the starting point, local industry is protected by import duties (T), which permits the survival of a quantity $N0$ of firms. With the application of the new policy, the drawback on domestic sales (R) becomes the only factor of promotion for the sector. As this drawback is less than the value of the previous trade protection, the number of firms that can survive goes down to $N1$. The reduction in the number of firms does not necessarily mean that aggregate production must fall. The result is rather indeterminate, depend-

FIGURE 2



ing on the comparison between the increase in demand, which favours the surviving firms (because of the lower prices of their products), and the loss of production of the firms which have disappeared. What *is* relatively certain is that the share of local production in the total supply of capital goods will tend to go down.

The third case of interest to us is that in which the strong competition from capital goods imported from the other MERCOSUR countries (previously favoured by high preferences) has led, before the new system, to a shift in the corresponding international supply curve, and local firms have sought to insulate themselves from foreign competition by the imposition of para-tariff barriers, heavy product differentiation, imperfect tradeability, etc. (a typical example is that of the truck manufacturers, covered by the system of drawbacks on capital goods, whose tariff protection was reduced but who maintained their system of para-tariff protection –quotas–, which is the most effectively operative means of protection). These situations do not comply with the general rule that the prices of imports are lowered more than those of locally produced goods. Here, the import supply curve does not change much, so that the drawback does not operate as partial compensation, but as a subsidy for local production. The effect on the level of production will therefore necessarily be positive.

The existence of these different cases indicates that there is an unequal impact on different segments of the capital goods sector. Likewise, it could be said that there are differences by strata: the small and medium-sized firms in the sector have probably been more heavily affected (or less benefitted) by the new policy because of the large economies of scale inherent in the handling of drawback applications and their smaller oligopolistic capacity to defend market niches.

To sum up, then, it may be noted that the impact of the new capital goods policy on local production varies considerably, depending on the typical case to which the firm or production segment in question corresponds. At the aggregate level, the result is indeterminate. At all events, except in the case of sectors which for some reason are not affected by the elimination of tariff preferences, it may be assumed that local producers are adversely affected, either in terms of absolute levels of production or of market shares.

The second frame of analysis for examining the impact of the new policy takes into account its repercussions on the decisions taken by capital goods producers with regard to their production and technological restructuring. It is no longer a question of identifying where the new equilibrium point will be located, in the light of the production and supply functions, but of determining what strategies will be adopted by the firms to try to modify those functions. The effect of tariff reduction or elimination (which is not offset by the production subsidy) raises the level of competitive exposure of local firms. Many authors belonging to the neoclassical school bring in this factor and maintain that the greater pressure of competition gives rise to improvements in the level of efficiency x of firms. However, as Atiyas, Dutz and Frischtack (1992) note in their study on processes of restructuring of production, the pressure of competition on a sector is probably a necessary but not of itself sufficient condition for promoting an efficient restructuring process. When this greater pressure of competition is not accompanied by an abundant and versatile supply of the resources needed for restructuring (finance, information, etc.), firms will tend to adopt defensive reactions. These reactions do not involve a strengthening of the true competitiveness of the firms through investments in capital and technology, but reflect mere efforts to reduce costs (especially labour costs) or, still worse, the dismantling of local production in order to take advantage of the experience accumulated in the past by engaging in the marketing and repair of imported products.

The new capital goods policy has given rise basically to greater competitive pressure on local producers of those goods. Versatility and, above all, resources were aspects that were more or less neglected in the beginning. Some firms have been able to meet the challenge facing them, and have designed successful conversion strategies. These cases have

been limited, however, to those segments of the capital goods sector (as described earlier) where the firms were less affected by competition from imports and were able to take maximum advantage of their dynamism and store of experience. At the aggregate level, however, the evolution of the sector has been frankly unfavourable. Indeed, many firms which made substantial investments in the late 1980s with a view to converting their activities and gaining a better position within MERCOSUR were thrown off their stroke by the changes in policy in the early 1990s and sank into irreversible financial crises.

The critical situation of the sector led the government to apply other measures (such as the new arrangements for the importation of inputs, parts and components for capital goods) aimed at making local producers more competitive, but according to various specialists in this sector these policies have not succeeded in reversing the slump suffered by a broad segment of capital goods producers.

IV

Fiscal impact of the new capital goods policy

As already noted, there are numerous factors which mean that the redistributive effects (from the State to purchasers of capital goods) implicit in the new policy are accompanied by important aspects relating to economic efficiency. These factors include in particular the impact of that policy on the fiscal accounts, since it involves replacing an instrument that generated fiscal income (trade protection) with one which gives rise to outlays (drawbacks on domestic sales).

The problem is that the government does not possess optimal mechanisms for obtaining revenue (taxes that do not cause distortions and have zero collection costs) to cover the outlays involved in optimal subsidy policies (an aspect which has been extensively dealt with in the economic literature). The conclusion which has been reached is that the subsidy policy continues to be optimal even though it can only be applied in part, while import duties (whose collection costs are less than those of other taxes) may turn out to be sub-optimal tax instruments. In Argentina, the marginal costs of collection (both of new and existing taxes) are so high that they are ultimately reflected in severe fiscal constraints.

This raises two problems which are often unjustifiably neglected. Firstly, because it affects the fiscal balance the new policy has indirect effects not only on specific variables such as interest rates, the balance of payments, etc., but also on less analytically determinable variables such as the expectations of domestic and international investors. It can therefore be asserted that each peso that enters the government's coffers has a higher accounting price than a peso that ceases to flow out of them, while the price of the latter, in turn, is higher than unity. Consequently, the fiscal cost of this instrument becomes a key aspect of the cost-benefit analysis.

Secondly, the cost-benefit status of this particular instrument cannot be analysed in isolation: it is necessary to make a comparison between the different benefits obtainable by using scarce fiscal resources for different types of industrial policies.

However, there is also a second aspect relating to the fiscal costs of the new policy. Whereas trade protection is a more or less automatic (although not optimal) sectoral promotion mechanism, subsidy arrangements involve much higher management costs, due to the need to identify the recipients of drawbacks properly (in the case of tariff protection the recipients are selected automatically), to administer a complicated system of drawbacks, and to apply suitable mechanisms of control over levels of production, sale prices, etc. In addition to these management costs that have to be borne by the State, there are also the substantial management costs that must be borne by local producers, as noted earlier. In this respect, the theory of "second best" solutions (see, for example, Corden, 1978) clearly states that if the management costs of a subsidy system are much greater than those of a system of trade protection, the order of "optimality" of public policies may be reversed, and the use of trade protection may once again be the most appropriate.

V

Impact of the new policy on the balance of payments

One of the central elements of trade policy debates is the question of anti-export bias. The elimination of tariffs on capital goods reduces the anti-export bias in so far as it simultaneously encourages both imports (of such goods) and exports (by all the sectors whose productivity is increased or whose fixed unit costs are reduced).[11] Conventional approaches do not bother to investigate what happens if one of these two effects is greater than the other. It is implicitly assumed that when there is an imbalance between them the real exchange rate will spontaneously adjust to its new equilibrium level. Thus, any analytical link between trade policy and possible problems of trade imbalances is simply ignored.

In post-convertibility Argentina, however, there is a clear problem of relative rigidity of the real exchange rate. Furthermore, trade openness in general (and the openness in the capital goods sector in particular) has given rise to a much bigger increase in imports than in the stimuli for new exports. At least, this is what happened up to the end of 1994. It is not clear to what extent the increase in exports registered after that year was due to lower costs and increased productivity, on the one hand, or to the domestic recession and the temporary improvement in the terms of trade, on the other.

The approach taken by the most orthodox school to this matter has been to flatly deny that tariffs (or their elimination) have any effect on the trade balance, which, they claim, is determined by macroeconomic variables such as excess of absorption, which would be influenced, in turn, by the results of the balance of payments capital account (Rodríguez, 1995). This approach rejects the role of trade policy as a policy for modifying expenditure and thus inherently altering the relation between absorption and income. This approach also assumes that capital income is totally independent of the trade balance, whereas in reality imports of capital goods usually involve international finance, so that a reduction (increase) in imports of goods due to an increase (decrease) in tariffs would simultaneously reduce (increase) the inflow of capital and hence eliminate any pressure on the real exchange rate. This is why –in contrast with the orthodox approach referred to above– it may be asserted that tariffs on imports of capital goods do indeed have a direct effect on the trade balance.

Even so, the query remains about the long-term external sustainability of high trade deficits caused by imports of capital goods. The fact is that the effects of the changes in production brought on by the process of modernization and retooling give rise to movements which are very hard to predict accurately.

Without pretending to settle in this article the debate on the sustainability of the Argentine trade deficit, it must be stressed that the external impact of the new capital goods policy cannot be ignored, because: i) the capital account is rationed, at least potentially;[12] ii) the natural adjustment variables, such as the real exchange rate, are subject to strong inflexibilities (which affect the nominal exchange rate or the general level of prices, and iii) the combined effect of these two situations means that the current trade balance has a significant impact on the agents' expectations.

In these conditions, it may be maintained that the accounting price of each dollar that ceases to flow out through the trade account is higher than each dollar that enters through the capital account, and that the latter price is higher than unity. Consequently, the impact of the new policy on the external accounts cannot be ignored when analysing its social costs and benefits.

[11] The anti-export bias present within the capital goods sector itself (in terms of the incentives to sell abroad or at home) does not enter into the analysis because of the existence of export drawbacks.

[12] It cannot be claimed that this situation can only be traced back to the period after the "tequila effect", because the danger was latent in the 1990s.

VI

Management and control aspects of the new policy

We must now look at some aspects of the new policy which have to do with the possible sources of administrative inefficiency and improductive rent-seeking that mark various industrial policy instruments.

Everything appears to indicate that the new drawback system needs a larger administrative apparatus if it is to be effectively managed. It should be borne in mind that the more aspects have to be subjected to control, the greater the possibility that fiscal interests may be adversely affected and that improductive rent-seeking may take place. In this respect, the number of aspects that have to be subjected to control under a drawback system is greater than in the case of trade protection, where it is only necessary to control the type, amount and price of the imported products.[13] It is impossible to give a final verdict in this respect, however, in view of the serious and generally acknowledged administrative shortcomings displayed by the Argentine customs system and the arbitrary criteria followed in the past in fixing tariff levels.

Lastly, it may be noted that the implementation of this new policy (and indeed of the other Argentine industrial policies in the 1990s) does not appear to have been accompanied by a process of institutional improvement in the public offices responsible for its application. Indeed, the tasks of implementation, control and follow-up are spread out among different public bodies –the Office of the Director-General of Taxes (DGI), the Ministry of Industry, the Office of the Director-General of Domestic Trade, etc.– with all the consequent problems of coordinating action within the bureaucracy. Furthermore, it may well be considered that since the agency selected for the execution of the policy (the DGI) is basically a tax collection body, it may not be capable of understanding and running the capital goods system as an industrial policy rather than as a mere arrangement for making fiscal outlays.

VII

An empirical evaluation of the new system

1. The evolution of imports

The main difficulty encountered when trying to calculate the effect of the new system on imports of capital goods is that of estimating the reference values: that is to say, determining what capital goods imports would have been in 1993 and 1994 if the new policy had not been put into effect. In the present study, we have compared the growth rates registered between 1992 and 1994 in imports of goods corresponding to the tariff items covered by resolution 501 (exemption from import duties) with the rates recorded for the capital goods tariff items which had already been exempted from customs duties because they were goods that were not produced locally (table 1). The analysis also covered the origin of the imports, in order to distinguish between the growth rates of goods from MERCOSUR (which already enjoyed substantial tariff preferences) and those from the rest of the world.

If we take the imports which already enjoyed tariff exemption as a parameter, we see that the growth rate of the imports corresponding to the tariff items covered by resolution 501 is significantly

[13] Once again, the costs of each of these systems must be weighted by the share of domestic production in total demand. If this share is only very small, the greater relative costs in terms of management and improductive rent-seeking could finally lead to lower absolute costs compared with those generated by trade protection.

TABLE 1

Argentina: Increase in imports of capital goods, by origin, 1992-1994
(Percentages)

		Variation, 1992-1994
Origin: Entire world		
1. Increase in total imports		102.9
2. Increase in goods corresponding to tariff items covered by resolution 501 [a]		153.3
3. Increase in goods corresponding to tariff items already enjoying exemption		71.1
4. Greater increase in (2) compared with (3)	48.0	
Origin: MERCOSUR		
1. Increase in total imports		118.6
2. Increase in goods corresponding to tariff items covered by resolution 501 [a]		150.2
3. Increase in goods corresponding to tariff items already enjoying exemption		26.7
4. Greater increase in (2) compared with (3)	97.5	
Origin: Rest of world		
1. Increase in total imports		100.4
2. Increase in goods corresponding to tariff items covered by resolution 501 [a]		154.3
3. Increase in goods corresponding to tariff items already enjoying exemption		73.7
4. Greater increase in (2) compared with (3)	46.4	

Source: Prepared by the author on the basis of data from the National Institute of Statistics and Censuses (INDEC).
[a] On exemption from import duties.

greater (nearly 50% more than imports from the world as a whole and from the rest of the world). It should be noted, however, that this is the estimate which tends to overestimate the impact of the new policy most seriously, because of the prior existence of a system of dual tariffs (depending on whether or not there was local production of the items in question) which gave an incentive for the wilful mis-declaration of the tariff item corresponding to a given product. With the new policy, this incentive has disappeared, but it is very likely that a certain proportion of the increase in imports corresponding to the tariff items covered by resolution 501 was due to mere falsification of customs declarations.

Another important aspect of imports of capital goods relates to their sectoral destination (table 2). As may be seen from the table, the tradeables sector proper (agriculture, mining and industry) absorbed 42% of total imports of capital goods in 1992, but this share showed a downward trend in 1993 and 1994. According to these statistics, the destination sector which grew most was transport (six percentage points), with much smaller increases in the case of commerce, banking and insurance, telecommunications and construction. It should be noted, however, that the changes in relative shares shown in the table may be distorted by the effects of the special system for the motor industry on imports of transport equipment.

A third aspect which warrants analysis is the role of MERCOSUR in imports of capital goods.[14] In 1992 the share of imports from MERCOSUR in total capital goods imports was relatively small, amounting to not more than 14% (table 3). For the subset of tariff items covered by resolution 501, however, this share rose to 26%, with the difference being particularly notable in the case of specialized non-electrical machinery and transport equipment. This situation may indicate either the previous existence of substantial trade diversion (the imports from Brazil are concentrated in the sectors previously protected by Argentina, to which Brazil gained preferential access) or merely the existence of similar supply structures. The fact that between 1992 and 1994 the growth rate of imports from MERCOSUR covered by resolution 501 was almost identical to that of imports from the rest of the world (see table 1) would appear to weaken the trade diversion hypothesis: Brazilian capital goods have managed to maintain their share of the Argentine market even under the same conditions of access as those applying to imports from the rest of the world.

[14] Only imports from Brazil and Uruguay were taken into account, since those from Paraguay are relatively insignificant.

TABLE 2

Argentina: Sectoral destination of capital goods imports, 1992, 1993 and 1994
(Percentages)

	1992	1993	1994
Agriculture	2.5	2.4	2.9
Mining	0.4	0.4	0.4
Industry	39.7	37.7	33.0
Electricity, gas and water	6.5	6.4	6.1
Construction	7.2	7.9	8.1
Transport	13.2	14.7	19.5
Commerce, banking and insurance	8.8	9.2	9.1
Communications	14.8	16.1	15.3
Health	4.8	3.4	3.6
Research	0.7	0.6	0.6

Source: Argentina, Ministry of the Economy and Public Works and Services, *Informe económico*, various issues.

TABLE 3

Argentina: Share of MERCOSUR in imports of capital goods, 1992
(Percentages)

	Of total imports	Of tariff items covered by resolution 501
Metal structures	3.3	3.3
Non-electrical machinery, n.e.s.	12.8	15.9
Non-electrical machinery, specialized	17.0	45.8
Electrical machinery	7.5	12.8
Telecommunications equipment	3.9	4.8
Transport equipment	24.3	81.7
Technical and precision instruments	2.8	3.1
Data processing and office equipment	4.9	4.2
Others, n.e.s.	6.1	4.3
Total	*13.5*	*26.0*

Source: Prepared by the author on the basis of data from the National Institute of Statistics and Censuses (INDEC).

In order to distinguish between the cases analysed in section III, it should be noted that imports from Brazil corresponding to the tariff items covered by resolution 501 account for high shares (over 30%) in the case of motor vehicles, agricultural machinery, machinery for the rubber and plastics industry, and machinery for road-building and the construction sector. They also have substantial shares in food-processing machinery, machinery for non-metallic minerals, and railway equipment, although the absolute amounts are not very significant.

2. The evolution of domestic capital goods production

In this case, the information on domestic production is more limited and less consistent than that on imports. As a first approach to this matter, table 4 shows the evolution of the indicators of physical volume of production, on the basis of data prepared by the sectoral associations.

Because of the low sectoral coverage of the available indicators on the physical volume of production, they cannot be used to estimate the aggregate performance of the capital goods sector. What *is* worth stressing is the great heterogeneity between the behaviour of the different segments of the sector. The following representative cases may be noted in this respect:

i) A very good performance was turned in by the segments producing trucks (class B vehicles) and such items as trailers and semi-trailers, which represent the most privileged segments because they enjoy the benefits not only of the drawback system but also of specific non-tariff protection mechanisms.

ii) A good performance (although not so good as the previous case) was registered by the segments producing agricultural machinery and road ma-

TABLE 4

Argentina: Evolution of physical volume of domestic production
(Percentages)

	1992/1993	1993/1994	1992/1994
Agricultural machinery	6.7	12.2	19.7
Road machinery [a]	-12.8	27.7	11.4
Tractors [b]	-22.9	25.8	-3.1
Machine tools for metals [c]	-26.6	-3.9	-29.4
Machine tools for wood [c]	-20.0	-10.2	-28.1
Motor vehicles, class B [d]	11.6	38.3	54.4
Trailers [e]	25.7	11.5	40.2
Semi-trailers [e]	24.9	4.8	30.9

Source: Aggregate estimates by the author, based on data from the Argentine Agricultural Machinery Manufacturers' Association (CAFMA) for that branch, and data from other bodies as indicated.

[a] Data from the Association of Metalworking Industries of the Argentine Republic (ADIMRA).

[b] Data from the Association of Argentine Tractor Manufacturers (AFAT).

[c] Data from the Argentine Association of Manufacturers of Machine Tools, Accessories and Related Products (AAFMHA).

[d] Prepared by the Latin American Economic Research Foundation (FIEL), on the basis of data from the Motor Manufacturers' Association (ADEFA).

[e] National Institute of Statistics and Censuses (INDEC).

chinery. In these two cases, much of the competitive pressure from imports comes from MERCOSUR (which accounted for 70% and 50%, respectively, of imports in these categories in 1992).[15] In these cases, as noted in section III, the new policy does not cause any major reduction in the cost of imports, so that the drawback system does not operate as a form of partial compensation but as a fully-fledged subsidy for local producers.

iii) In the case of machine tools, there was a sharp drop in production. Here, unlike the preceding case, the bulk of the competitive pressure comes from imports from the rest of the world. The process of general economic openness begun in the early 1990s, together with an excessive supply of machine tools on international markets and a severe recession in Brazil, has tended to give rise to a critical situation for this industry, and the greater trade openness furthered by the new capital goods policy has probably made the situation of most of the firms in this branch even more critical. As we were able to note from some of the interviews with firms in this sector, however, there are some machine tool firms which have succeeded in carrying through their restructuring process and are now in a good position to compete with foreign products. All in all, this segment seems to fit in quite well with the second case set forth in section III, where some firms remain competitive and are favoured by the new policy, whereas a certain proportion (in this case, a significant proportion) of the remaining firms are forced to leave the market or change over to the marketing of imported goods.

Leaving aside the question of the marked heterogeneity observed among the different segments of capital goods production, let us try to determine what the aggregate behaviour of the sector has been. A first approximation in this respect may be provided by the official statistics on gross domestic fixed investment (table 5).[16] These data confirm fairly conclusively that Argentine capital goods production (with the obvious exception of transport equipment) has not only not been able to win part of the increased demand for investment goods but has actually been displaced in absolute terms by imported goods. Although the statistics for 1990 and 1991 have not been published, through consultations with national accounts special-

[15] It should be added, in this respect, that in the agricultural machinery segment the systems of marketing and after-sales service tend to give rise to some degree of natural protection, so that according to the estimates of specialists in this sector the general share of imports in the market is not more than 25%.

[16] This information is presented by way of illustration because it is the only aggregate information available. It should be borne in mind that the data on this investment cover a much broader universe of goods than that affected by the new capital goods policy. At the same time, there is some doubt about the reliability and consistency of these figures in the case of some indicators of the physical volume of production.

TABLE 5

Argentina: Variation in the components of gross domestic fixed investment, at constant prices[a]
(Percentages)

	1992/1993	1993/1994	1992/1994
Machinery and equipment	18.5	22.6	45.3
Domestic	7.4	-1.8	5.5
Transport equipment	15.0	13.4	30.4
Other machinery, equipment, etc.	3.9	-9.4	-4.8
Imported	33.0	48.4	97.4

Source: Argentina, Ministry of the Economy and Public Works and Services, *Informe económico*, various issues.
[a] The series at current prices show the same trends, although slightly less marked, reflecting the decline in the relative prices of capital goods.

ists we were able to establish a fact which is extremely important for our analysis: between 1990 and 1991, and again between 1991 and 1992, the behaviour of the domestic machinery and equipment branch was less dynamic than that of imported machinery and equipment, but it registered positive growth rates rather than the negative rates registered in 1994 and the whole of the two-year period 1993-1994. These trends would appear to be confirmed by estimates of the sectoral GDP –at the five-digit level of the Standard International Trade Classification (SITC)– which have not yet been published either, on account of problems of reliability.

To sum up, then, empirical analysis of domestic capital goods production and its evolution tends to corroborate the assumption that the aggregate performance of the sector was negative and that there was a high level of heterogeneity within it.

3. Estimation of the fiscal cost of the new capital goods policy

The direct fiscal cost of the new policy includes the amount paid in respect of drawbacks on domestic sales and the loss of tariff revenue due to the exemptions from import duties. It is estimated that the drawbacks due in 1994 came to 259.1 million pesos, corresponding to domestic sales of 1,700 million.[17] The indirect effects mentioned in section IV cannot be quantified, but they nevertheless should not be ignored in an overall evaluation of the new policy.

According to the available data, the share of local supply in the branches covered by the new capital goods policy is around 30%.[18] For the subset of goods covered by resolution 501 (which are merely those where it is presumed that domestic production exists), the share of local supply in the total market is estimated to be 45.6%.

With regard to the first component of the fiscal cost, the breakdown of drawback applications prepared by the Department of Major Domestic Taxpayers shows the degree of concentration existing among the firms in the sector that use the system. These data (which likewise underestimate the real degree of concentration) indicate that 3.4% of the applications account for 41% of the total amount paid. To put it another way, while the average value of each drawback applied for by the major taxpayers of the sector amounts to 522,000 pesos, in the case of the rest of the firms the corresponding figure is only 26,000 pesos. This fact, together with the high fixed costs (especially administrative costs) involved in handling drawbacks, indicates that there are big economies of scale which make the system much less favourable for the small and medium-sized firms in the sector.

The second component in the fiscal cost is the loss of tariff revenue. We have calculated this using the same criterion that was used in sub-section 1 above to estimate the reference value of what the level of imports of capital goods would have been if the new

[17] In order to make this estimate, we took the total drawbacks paid in 1993 and 1994 and allocated 66% of them to 1994. Because of the lack of statistics on the drawbacks due, the cut-off date was set at 3 January 1995 (by which time it is assumed that most of the applications in respect of sales made in 1994 had already been entered) and the values were adjusted to include pending applications (i.e., applications in respect of which the corresponding drawbacks had not yet been paid).

[18] This figure underestimates the real share because of the voluntary self-exclusion of some local producers who have not used the drawback system (either for fear of the fiscal investigations implicit in the system or because they have captive markets).

TABLE 6

Argentina: Costs and benefits of the new policy for the capital goods sector (excluding transport equipment)[a]
(Millions of dollars)

	Benefits		Costs		
	Subtotal	Total	Subtotal	Total	A+B-C
Variation in imports	251				
Variation in domestic sales	-53				
Total variation in demand (A)		198			
Reduction in total costs	423				
Reduction in costs, without transfers (B)		187			
Fiscal cost of loss of tariff revenue			260		
Fiscal cost of drawbacks			168		
Total fiscal cost (C)				428	
Benefits, less costs (A+B-C)					-43

Source: Prepared by the author.

[a] The variation in imports was estimated using the same method employed to deduce the fiscal cost of the new policy (second method set forth in section VII.1). Domestic sales were estimated by applying the variation in gross domestic fixed investment estimated by the Ministry of the Economy (see section VII.2) to the value of domestic production, as estimated from the drawbacks paid out (see section VII.3). The cost reduction effect is equal to the public transfer to the sector purchasing capital goods (i.e., equal to the fiscal cost of the measure), and the proportion which went to the tradeables sector was estimated by applying the shares of the different sectors in imports of capital goods, as estimated by the Ministry of the Economy (see section VII.1). The share of capital goods as a whole (excluding transport equipment) in total drawbacks and in the equivalent value of production was estimated at 65%, according to calculations made by the staff of the Ministry of Industry.

policy had not been applied. Only imports from the rest of the world were taken into account (i.e., we excluded imports of capital goods from MERCOSUR, which already enjoyed major preferences).

Thus, assuming that the level of imports in 1994 would have been 1,029 million pesos if the new policy had not been applied, we estimate that the loss of tariff revenue (fifteen percentage points of tariffs plus ten percentage points of the "tasa estadística" surcharge) would amount to 257 million pesos.

To sum up, then, the direct fiscal cost of the new capital goods policy in 1994 may be estimated at US$ 500 million, divided more or less equally between payments of drawbacks and loss of tariff revenue.

4. Aggregate costs and benefits

It is of interest to bring together the three elements of empirical analysis in respect of which we were able to make more or less consistent estimates, in order to get an idea of the overall costs and benefits of the new policy. The points of particular interest in this respect are the increase in demand for capital goods attributable to this policy, the direct reduction in costs obtained by the tradeables sector of the economy, and the direct fiscal cost of the new arrangements. Although some other components of the cost-benefit analysis which are difficult to quantify have been left out of this exercise (such as the effects of the deterioration in the external sector accounts on the monetary reserves and the expectations of the economic agents, the private and public management costs of the new system, its effects on employment, etc.), we must not forget their importance for a truly integral appraisal of the new policy. As the behaviour of the transport equipment branch is strongly influenced by the existence of the special system for the motor industry, it was decided to exclude it from this analysis. Likewise, as imports from MERCOSUR already enjoyed substantial tariff preferences, only the imports and loss of tariff revenue corresponding to imports from the rest of the world were taken into account.

While the estimates (not included in this article) which include transport equipment give a positive result, the exclusion of this branch gives a negative picture.[19]

[19] Table 6 is only designed to illustrate the very limited effectiveness of the new capital goods policy: it does not represent an estimate of the social costs and benefits in terms of efficiency. The analysis of the increase in demand, for example, includes the total value of the increase in purchases, and not the "triangle" that would measure the net gains of the consumer surplus. Likewise, the table shows the total fiscal outlays, but not the costs of collection or distortional effects.

VIII

General appraisal

A general appraisal of the new policy indicates that it has both favourable and unfavourable effects. Among the former are the increase in the investment rate and in the general productivity of the economy, and the reduction in costs due to the lower cost of capital goods. Among the latter are the effects on the evolution of the domestic supply of these goods (except transport equipment), the macroeconomic impacts on the fiscal sector, the external sector and unemployment, and the higher public and private management costs of the new system compared with the previous one.

The initial difference between the drawback rate and the trade protection rate which was eliminated suggests that the impact on domestic production was not initially given much weight. Thus, the drawback system may be seen as a safety net for local producers to palliate a prior decision to open up the sector, rather than as a policy designed to provide support for an offensive industrial restructuring exercise. The drop in the levels of production of the capital goods sector, which is subject to considerable externalities, the management costs of the new instrument, and the new distortions generated in the relative price of capital goods versus labour are factors which call into question the advisability of the new system from a microeconomic standpoint.

Even if we conclude that the cost-benefit ratio of the new policy is favourable from this standpoint, it would still reflect the contradiction analysed by Fanelli and Frenkel (1995) between the positive microeconomic effects of some structural reforms and the aspect of the macroeconomic sustainability of the stabilization and growth process.

The fiscal and external costs of the new policy were given little weight in the initial cost-benefit appraisal, probably because of the abundant finance available in 1993 and 1994 for both the government and the external sector. The question of whether the extremely high discount rate used (implicitly reflecting the lack of concern for the fiscal and external adjustments that would later be necessary) was correct or not is something that can only be determined *ex post* through a joint analysis of the process of convergence of the economy towards a stable growth model. The question that we *do* need to ask is whether –within the same government economic policy framework– it would not have been more advisable to use other industrial policy instruments.

As already noted in section V, fiscal constraints make it impossible to carry out all the policies which might be considered appropriate. Consequently, we must ask ourselves not only whether the change in policy has a positive impact on the above-mentioned process, but also whether the new instrument is more effective than other alternative industrial policies. The exercises effected in section VII.4 above would seem to indicate that if the priority aims of the measure were to increase the investment and reduce the costs of the tradeables sector of the economy, then the cost-benefit evaluation ceases to be favourable if the transport equipment branch is excluded from the analysis. The low price-elasticity of demand for capital goods revealed in the empirical analysis gives grounds for thinking that the State could have raised the investment rate more either by making direct public investments or by inviting tenders from the private sector for the operation of production investment funds established with public resources. If it is possible to ensure efficient allocation of resources and appropriate channelling to infrastructural projects, there can even be a parallel increase in private investment, due to the crowding-in effect that public investment can have on private investment, as more recent studies tend to acknowledge (Schmidt-Hebbel, Serven and Solimano, 1996).[20]

[20] The advocates of the supply-side approach tend to assume that any resources procured by the State for the design of industrial strategies to promote investment in industry and the restructuring of production will automatically tend to be wasted through inefficiency and corruption. Although it is true that these problems do exist, they tend to be self-generated by this economic philosophy itself, because it rejects the need to make the necessary efforts to strengthen the institutions responsible for handling industrial policy instruments.

At all events, the new capital goods policy does not seem to have sufficiently grasped the fact that the investment rate is influenced by other factors which are just as important as the price of those goods, or even more so: these factors include the level of growth of income (the acceleration effect), the situation as regards the expectations of the economic agents, and the financing terms associated with the supply of capital goods.

With regard to the function fulfilled by the new policy in terms of reducing costs, and its direct impact on the competitiveness of the economy, it may be wondered whether a better cost-benefit equation would not have been secured by the application of the same policy, but limited selectively to the tradeables sector of the economy.[21] Generally speaking, this policy has taken a very narrow view of the factors conditioning competitiveness. Thus, the efforts made to reduce the prices of capital goods are out of all proportion to the efforts to promote retooling through suitable credit and technology policies. Except in the case of the special system for the motor industry, the fiscal resources devoted to the new policy are much greater than those allocated to all the other policy instruments of the Ministry of Industry. Thus, for example, US$ 500 million are allocated to this policy each year, in contrast with the US$ 30 million annual budget of the National Industrial Technology Institute or the US$ 60 or 70 million allocated each year to subsidize interest rates on loans to small and medium-sized firms.

The same lack of proportion is to be observed between the fiscal cost of the new policy and the virtually insignificant budgetary and policy efforts aimed at strengthening the institutions responsible for its management, which raise doubts as to whether the effective control capacity required by the new system really exists. The by no means insignificant share of local production in the total supply of capital goods, as estimated in section IV.3, means that the new policy involves higher management costs than the previous trade protection system.

(Original: Spanish)

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[21] In other countries, for example, there have been various cases where capital goods have been exempted from import duties only when intended for use in export industries. With regard to the South-East Asian countries, see Bekerman, Sirlin and Streb, 1995b.

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