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External events, domestic policies and structural adjustment

Carlos Massad*

This article examines the drop in the per capita product of the region from 1981 onwards due both to the stagnation of per capita production capacity and the fact that the effective product was less than the potential product. Production capacity stagnated because investment fell to levels which were not high enough to ensure growth in the potential per capita product. This decline in investment, in turn, was due basically to the net transfers of resources abroad caused by the debt crisis and the severe deterioration in the terms of trade as from 1982.

The article posits that, in order for the region to grow at the rate of 5% per year, it would be necessary to invest between US$ 75 and US$ 85 billion more than is currently being invested. These resources could not be obtained from a single source. Solving the debt problem to the point of eliminating the net outward transfer of resources would supply only a third of the additional investment needed. Likewise, recovering the 1980 levels of the terms of trade—for which arduous negotiations and the application of difficult domestic policies would be needed—would provide only another third of the necessary financing. In any case, the fact that such resources were available would not automatically guarantee the necessary increase in investment, for which purpose strict specific policies would be required. The remaining third of the additional investment needed would require either greater indebtedness, or more saving, or both these things at once. It would also require increases in productivity and would need to be backed up by suitable domestic policies.

* Deputy Executive Secretary of ECLAC. The author wishes to express his thanks to Jaime Campos for his assistance in computation and general matters, and to Osvaldo Rosales for his comments and assistance with the bibliography.

Introduction

The hard facts of the situation, including political events, have obliged most of the nations of Latin America to apply structural adjustment policies. The measures taken in this respect were in a sense a shot in the dark, as no body of theory had been prepared in advance, and the countries of the region were not in a position either to choose their policies freely or to bother too much about their timeliness and the most suitable rate and sequence for their application.

Although a limited consensus is now beginning to emerge on this matter, economic theory is still not able to answer all the queries regarding the dynamics of the economic adjustment or the timeliness and sequence of the necessary reforms (World Bank, 1985; Feinberg, 1986; Helleiner, 1986).

Thus, for example, the scope and sequence of reforms aimed at trade and financial liberalization raise dilemmas with regard to economic policy, and the net effect continues to be the subject of a good deal of uncertainty in the theoretical analyses made on the subject (Zahler, 1980; McKinnon, 1982; Blejer and Sagari, 1988).

Edwards (1987) is in favour of liberalizing the current account before the capital account and proposes a specific policy sequence: first, getting the fiscal deficit under control; secondly, reforming the domestic financial market and increasing interest rates, and finally, liberalizing the capital account.

A different view is taken by Lal (1987), who suggests first of all tackling the fiscal deficit and the distortions in the domestic capital market and then going on to a simultaneous drastic liberalization of the current and capital accounts, maintaining a floating exchange rate during these operations. The reasons for this would appear to be connected with political economics, since as these reforms would affect sectoral interests it would be necessary to act quickly to prevent the latter from organizing themselves.

Among the issues still under macroeconomic debate are those concerning matters such as the links between financial liberalization and saving and investment (Massad and Held, 1990) and between saving and interest rates (Khan and Knight, 1985; Massad and Eyzaguirre, 1990); the degree of intensity of the liberalization processes, that is to say, the final levels of the variables and
the periods of adjustment (Edwards, 1988); the optimum dimension and degree of government intervention (Ram, 1986), and the complementation or conflict between public and private investment (Blejer and Khan, 1984). Without a firm theoretical base, it is very difficult to clarify which costs could be attributed to the reform policies and which should be blamed on external or domestic events which may take place at the same time.

This paper examines the influence of such events on the product, distinguishing between the effects on production capacity and those on the effective product, and seeking to identify the main elements affecting these phenomena and the options open to the countries of the region for returning to a climate of faster and sustainable growth.

Section I below explores the effects of external events on production capacity. Section II examines the factors behind the drop in the rate of utilization of that capacity. Section III seeks to give some idea of the growth needs and the resources that could be available for meeting them, and finally, section IV brings considerations of equity into the analysis and presents the main conclusions. The study covers Latin America and the Caribbean as a whole, but the main conclusions have been verified through studies of particular countries which are not presented here.

I

External events and the stagnation of production capacity

There were two main external events which affected the Latin American economies in the 1980s: the debt crisis, and the deterioration in the terms of trade. It was during this period that most of the adjustment policies were applied. The debt crisis in the 1980s and its consequences have been extensively analysed in recent economic publications, while the variations in the terms of trade and their effects on developing economies have been studied for more than half a century.

One way of getting an idea of the consequences of both the debt crisis and the deterioration in the terms of trade is to examine the historical behaviour of the gross domestic product.

Figure 1 shows the evolution of the per capita GDP of the countries of the region for the period between 1970 and 1989. It will be noted that in 1989 that product was lower than it had been in 1980. Such discouraging facts have led to the assertion that the 1980s represented a lost decade as far as development was concerned.

This is not the whole story, however. There are two main factors that can explain the unfavourable evolution of the per capita GDP: the stagnation in production capacity, and a level of effective production which was lower than the existing capacity. In order to distinguish between the effects of these two factors, we can carry out a very simple exercise involving the estimation of the latter capacity by using figures on net investment and certain assumptions on the product/capital ratios (Ramos and Eyzaguirre, 1989). If we consider the product/capital ratio registered in the 1970s as being valid for the 1980s, then we can calculate the production capacity for the latter decade, assuming also that the employment level of 1980 remains unchanged (see Appendix). Figure 1 also shows the results of this exercise and gives a comparison of the effective GDP with the potential GDP (or production capacity). It will be seen from this that in 1989 the potential per capita GDP was some 17 percentage points higher than the effective level.

It is clear from this result that the policies

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1 According to data supplied by ECLAC in December 1990, the results for 1990 were even worse (ECLAC, 1990b).
applied by the countries of the region in the 1980s did not manage to make full use of the available production capacity. Indeed, figure 1 shows that the potential per capita product also stagnated as from 1983, remaining far below the expectations based on the trends of the 1970s, shown by the upper line of the graph.

Why was there this stagnation in the per capita potential product? One possibility is that investment (as a percentage of GDP) went down because of the decline in per capita GDP. Indeed, the most generally accepted consumption functions assume that in the face of a transitory drop in income, consumers reduce their saving rather than their consumption. It would therefore be reasonable, given the lack of external financing, to expect a decline in saving and a consequent drop in investment, in the best traditions of classical and neoclassical analysis.

There is also another possibility: that investment went down in line with the disappearance of opportunities for profitably expanding production capacity. The drop in the product leads to a deterioration in investment opportunities because it reduces the marginal productivity of capital: that is to say, for a given interest rate the desirable stock of capital goes down and there is consequently a reduction in net investment. As, however, the interest rate went up, achieving a balance in the demand for investments called for a further drop in net investment in order to equalize the real rate of interest and the net yield on investments. Figure 2 shows the relation between saving and investment and the gross domestic product, from 1980 to 1989. It can clearly be seen that saving continued to increase during the 1980s as a percentage of the gross domestic product (at given terms of trade), and that in
1988 it stood at the highest proportion of the whole period: over 25%. In other words, in 1988 the countries of the region as a whole reduced their consumption more than at any other time during the period under consideration. However, investment had fallen to a very low level of less than 16% of GDP in 1983, and its recovery was only modest, so that by the end of the period it had only reached a level of around 17% per year. In this respect, it may be recalled that previously, in order to attain a steady GDP growth rate of around 5% per year, it was necessary to invest around 24% of the product annually.

The surplus of saving over investment during the 1980s is shown in Table 1. It can be seen from this that net payments of interest and profits abroad and the effects of the deterioration in the terms of trade, less external saving, come to an amount substantially equal to that surplus: in 1988, each of these two factors accounted for around 50% of the difference between saving and investment.

The magnitude of the effect of the deterioration in the terms of trade comes as something of a surprise, since most analysts attribute the whole of the decline in per capita GDP to the debt crisis, domestic policies or a combination of the two (Corbo and de Melo, 1987). If we look at the evolution of the terms of trade, however, most of the doubts are dispelled. Figure 3 shows the terms of trade for the non-oil-exporting Latin American countries between 1930 and 1989. It shows a slight negative tendency for the period as a whole but also reveals that in the 1980s the terms of trade dropped to levels as low as or even lower than those registered during the great crisis of the 1930s. If the oil-exporting countries are included (see Figure 4), the results improve a little but the general conclusion remains the same. Although the loss due to the deterioration in the terms of trade cannot be allocated exclusively to consumption and saving, there can be no doubt that an improvement in these terms would increase the resources available for saving.
without adversely affecting consumption to any significant degree.

It is not clear whether this behaviour in the terms of trade is a change in a long-term trend which had previously not displayed major variations, in which case there would be ample justification for a suggestion that there should be a change in strategies of production, or whether it is simply another transitory period of "leanfleshed kine". Whatever the answer to this question, figures 3 and 4 also show that both the positive and negative movements in the terms of trade tend to be grouped in long cycles. This fact, in itself, points to the need to change the structure of production so that the economies of the region are less vulnerable to such movements.

If the recent evolution of the terms of trade of the Asian economies and those of Latin America are compared, then it is seen that the developments have clearly been unfavourable for the latter. This evolution is closely related with the structure of exports, since it adversely affects exporters of primary commodities and favours exporters of manufactures (table 2). Thus, while in 1988 the developing countries which export manufactures registered a terms-of-trade index of 103 (1980=100), for those which exported primary commodities the index was only 83 (IMF, 1988).

In this respect, it may be concluded that the production capacity (in the terms in which it is defined here) stagnated from 1983 onwards because of two basic external factors: the debt crisis and the deterioration in the terms of trade. These factors may also be interrelated: the simultaneous efforts of a number of countries to export similar products in view of the debt crisis may have had some influence on the decline in export prices, which has taken place even though the world economy has registered the longest period of growth in its recent history. I already made this comment some six years or so ago, at a conference on the occasion of the fiftieth anniversary of the Central Bank of El Salvador. Empirical research supports this assertion (Schmidt-Hebbel and Montt, 1989). This means that if several countries simultaneously carry out structural reforms aimed at expanding their exports, this may actually turn out to be counterproductive, as it will have adverse effects on export prices. Part of the deterioration in the terms of trade may be due precisely to such structural reforms and may therefore represent one of their costs.
Figure 3
LATIN AMERICAN NON-OIL-EXPORTING COUNTRIES: TERMS OF TRADE

Figure 4
LATIN AMERICA: TERMS OF TRADE
Table 2
ASIA AND LATIN AMERICA: COMPARATIVE EVOLUTION OF TERMS OF TRADE
(1980=100)

<table>
<thead>
<tr>
<th></th>
<th>1985</th>
<th>1987</th>
<th>Primary commodities</th>
<th>Machinery and transport equipment</th>
<th>Other manufactures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korea</td>
<td>106</td>
<td>105</td>
<td>7</td>
<td>33</td>
<td>59</td>
</tr>
<tr>
<td>Philippines</td>
<td>92</td>
<td>98</td>
<td>38</td>
<td>16</td>
<td>56</td>
</tr>
<tr>
<td>Malaysia</td>
<td>86</td>
<td>72</td>
<td>61</td>
<td>27</td>
<td>12</td>
</tr>
<tr>
<td>Taiwan</td>
<td>104</td>
<td>103</td>
<td>7</td>
<td>30</td>
<td>63</td>
</tr>
<tr>
<td>Argentina</td>
<td>90</td>
<td>81</td>
<td>69</td>
<td>6</td>
<td>25</td>
</tr>
<tr>
<td>Brazil</td>
<td>89</td>
<td>97</td>
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<td>17</td>
<td>28</td>
</tr>
<tr>
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<td>84</td>
<td>51</td>
<td>98</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Colombia</td>
<td>98</td>
<td>70</td>
<td>-</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Chile</td>
<td>94</td>
<td>61</td>
<td>96</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Ecuador</td>
<td>87</td>
<td>70</td>
<td>65</td>
<td>3</td>
<td>92</td>
</tr>
<tr>
<td>Guatemala</td>
<td>93</td>
<td>83</td>
<td>88</td>
<td>-</td>
<td>12</td>
</tr>
<tr>
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<td>98</td>
<td>73</td>
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<td>28</td>
<td>19</td>
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<tr>
<td>Mexico</td>
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<td>Peru</td>
<td>95</td>
<td>54</td>
<td>92</td>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>


II

The decline in the rate of utilization of existing production capacity

In addition to the stagnation of potential production already referred to, it is necessary to take account of the difference which exists between potential production (the production capacity) and effective production (see figure 1). This difference may be due partly to the same factors responsible for the gap between the figures for saving and investment. When interest payments abroad cannot be financed with resources drawn from the private sector, governments are obliged to adopt inflationary policies which have negative effects on investment and, in the long run, on the level of activity. On the other hand, even if governments succeed in obtaining non-inflationary financing by increasing the domestic debt with the private sector, this causes a rise in interest rates and thus reduces domestic investment (an effect already taken into account earlier), which also has the effect of reducing the rate of utilization of existing capacity.

I have no doubt, however, that the difference between potential and effective production is also influenced by other policies applied with excessive haste. Among these are: i) rapid reductions in import tariffs without appropriate corresponding management of the exchange rate; ii) rapid deregulation of the financial system without adequate supervision and in a context of policies of "crowding out", which causes interest rates to rise to incredibly high levels in real terms as well as leading to deterioration of the portfolios of the financial system; and iii) reductions in the size of the public sector which cause unemployment precisely at moments of depression for the economy as a whole.

Please do not misunderstand my arguments.
All the foregoing policies are necessary and appropriate in certain circumstances. However, it is necessary to take into account both the general economic context in which they are to be applied and the already mentioned fact that there are serious doubts regarding the sequence in which they should be applied.

An aspect which has not been given so much attention is the time needed for these and other policies to give results. The Chilean experience seems to indicate that quite long periods are needed for policies to achieve their objectives. Thus, for example, the diversification of Chilean agricultural exports really began in the mid-1960s, when a programme of expansion of fruit production was initiated and the agrarian reform process was launched, creating a real market for agricultural land. The starting-point for the growth of forest industry exports, for its part, must be sought in the early 1960s, when an ambitious programme of subsidies for the planting of new afforested areas was established, leading to a rapid increase in the planting of pine trees. Tariff reductions, too, began in Chile in the second half of the 1960s: they were interrupted at the beginning of the 1970s but were resumed in the mid-1970s and reached the target levels fixed, after a temporary setback in the early 1980s. All this gives us a lesson: structural reforms take some time to give results and, without adequate financing, they may involve high costs in the short term.

III

The cost of recovering past growth rates in the 1990s

Some idea of the problems currently faced by the countries of Latin America can be gained from the fact that the difference between current saving and the investment needed to raise the gross domestic product by 5% per year amounts to some 7% or 8% of the latter, which, at the present levels of the product in the region, represents between US$ 75 and US$ 85 billion per year, assuming that the productivity of the economy remains unchanged.

Obviously, resources of this magnitude cannot come from a single source. It would be quite unrealistic to expect major increases in saving, and considerable amounts of new loans cannot be expected either. Consequently, it is necessary to adopt policies which attack the problem on several fronts at once.

The following examples may be useful for illustrating the kind of policies that the Latin American countries need in order to resume the pace of growth that they had in the 1970s: a) if the debt problem could be solved to the point of eliminating the outward transfer of resources from the region to the developed world (for example, through debt reduction or reduction of interest rates to around half their present levels), this would make available for investment between US$ 25 and US$ 28 billion, which would, however, solve only one third of the total problem, and b) if the terms of trade returned to their 1980 level this would add a further US$ 25 billion to the investment funds, covering another third of the overall problem. Such a solution will not emerge by magic, however: it will call for the opening up of foreign markets, rapid growth of the world economy, and suitable domestic policies for taking advantage for the opportunities created in the external sphere.

Thus, we see that even if it were possible to achieve both these advances, with all the difficulties involved in them, this would still only cover two-thirds of the difference between current investment and the level which is effectively needed. Generating the remaining third would be essentially a domestic responsibility calling for the application of policies to increase the efficiency of the national economies and the deployment of fresh efforts to obtain some external financing.

Likewise by way of example, an increase in productivity which raised the growth of the gross
domestic product by half a percentage point over the growth rates registered in the 1970s would reduce the investment needed in order to obtain growth of 5% per year by around US$ 15 billion. Among the policies which can raise productivity are privatization, appropriate price policies, the elimination of economically unjustified subsidies, stimulation of technical innovation, etc.

If the above-mentioned policies on debt, trade and productivity fulfilled their objectives, this would provide some US$ 65 to US$ 70 billion for investment. The remaining amount needed (US$ 10 to US$ 15 billion) could be obtained from private and international organizations in the form of fresh indebtedness, since it only represents between 2.5% and 3% of the present debt and between 5% and 7% of the debt balance after its reduction. Naturally, the positive effects of the interaction between these three approaches could, in themselves, greatly help in the solution of the problem.

Even if the financing needed for increasing investment were available, however, that would not necessarily mean that it would automatically be assigned for that particular purpose. It would still be necessary to apply policies to discourage private and public consumption, in order at least to maintain the present saving effort. This topic will not be pursued in the present paper.

The policies referred to above with regard to trade and productivity involve changing production patterns in the region. This issue was dealt with in detail in a recent ECLAC study entitled Changing production patterns with social equity (ECLAC, 1990), which was presented at the twenty-third session of the Economic Commission for Latin America and the Caribbean held in Caracas in May 1990.

IV
Equity and competitiveness
In the foregoing arguments, I have taken no account of considerations of equity, although everything indicates that the lower-income groups of the population have borne the brunt of the reduction of consumption. Household surveys indicate that there has been an increase in both the absolute and relative number of families living below the poverty line in Latin America. In 1980, the number of people living below that line was 136 million, while in 1986 it was over 170 million, and as a percentage of the population the figures rose from 41% to 43% between those years (ECLAC/UNDP, 1990). There was a pronounced increase in unemployment during this period, while the ratio between the real minimum wage and the per capita gross domestic product deteriorated still further, providing yet another indication of the unequal distribution of the burden.

It has not been possible in this case, either, to find an easy way of distinguishing which effects on equity and on social costs are due to the structural reforms, and which should be attributed to other events. It would seem, however, that the variations in the exchange rate and interest rates which take place in an adverse external environment tend to lead to levels of real wages and employment lower than those compatible with a democratic system of solving conflicts. The life expectancy of the kind of competitiveness acquired through the reduction of real wages will necessarily be only short in a democratic system. Moreover, it will rapidly deteriorate in any case, due to changes in consumer preferences, in the growth rate of the world economy, or in technology, and still worse, it will encounter rapid reprisals in the main markets, as recent Latin American experiences seem to show.

Long-term competitiveness in external trade is a systemic matter which does not only involve exchange rate policies and actions by particular firms, but also the functioning of a whole system of reciprocal relations within the economy: highway systems, ports, price and tax systems, domestic and external security, the financial system, the absorption of technology, education, and even the legal system and its capacity to settle disputes. It involves the degree of integration both of the different sectors of the economy and of countries and regions.
In conclusion, I would simply like to say that structural reforms aimed at increasing competitiveness within the world economy involve much more than tariff reductions, deregulation, price corrections and reduction of the size of the public sector. I would also like to stress that such reforms cannot be expected to give positive results within a short space of time. These aspects are important when considering the cost of the reforms. The same is true of financing, since the reassignment of resources is financially onerous and involves lengthy periods of waiting for results and reducing consumption, depending on the terms and availability of financing. All this deserves the most serious consideration, which in my opinion it has not yet received in either bilateral or multilateral financial forums.
Appendix

PROCEDURE FOR CALCULATING THE GROSS DOMESTIC PRODUCT,
THE POTENTIAL GROSS DOMESTIC PRODUCT AND THE
(PER CAPITA) TREND GROSS DOMESTIC PRODUCT

The effective gross domestic product (GDP) is that which is obtained from the national accounts.

The potential gross domestic product (PGDP) is that which would have been registered from 1980 onwards with the net level of investment generated in that period but at the employment level of 1980 and the mean productivity of the period 1970-1980.

The trend gross domestic product (TGDP) is that which would have been registered from 1980 onwards if the levels of net investment and productivity of the 1975-1980 period and the level of employment of 1980 had been maintained.

Before the series for the PGDP and the TGDP could be generated, it was necessary to calculate the marginal product/capital ratio (MPCR), that is to say, the variation of the product per unit of variation in net fixed capital formation. This latter concept excludes investment in stocks.

Net domestic fixed capital formation (NDF) is obtained by deducting from gross domestic fixed capital formation (GDF) the rate of depreciation, which is assumed to be equal to 10% of GDP. Thus:

\[ NDF_t = GDF_t - 0.1 \times GDP_t \]

In order to obtain the marginal product/capital ratio (MPCR), a special iterative method using the following assumptions was employed:

i) the Latin American economies operated at the same level of employment in the years 1970 and 1980, and
ii) that ratio was constant for the period under review.

The method consists in obtaining a marginal capital/product ratio such that, starting from GDP = PGDP for the year 1970 and considering the effective rate of net domestic fixed capital formation (NDF) for the 1970s, it gives a PGDP for the year 1980 which is equal to the effective GDP for the same year.

After the corresponding calculations have been made, the PGDP for the period 1981 onwards is projected. This is obtained by using the following formula:

\[ PGDP_t = PGDP_{t-1} \times (1 + MPCR \times k_t) \]

where: \[ k_t = \frac{NDF}{PGDP}_{t-1} \]

The next step is the projection of the TGDP for the period 1981 onwards, using the following formula:

\[ TGDP_t = TGDP_{t-1} \times (1 + MPCR \times k_t) \]

where: \[ k_t = \frac{1}{5} \left( \frac{NDF}{GDP}_{1975} + \ldots + \frac{NDF}{GDP}_{1980} \right) \]

That is to say, \[ k_t \] is the average of the net investment rate for the period 1975 through 1980.

The per capita calculations were made on the basis of population figures for each year supplied by the Latin American Demographic Centre (CELADE). The figures for the product and investment were supplied by ECLAC.
Bibliography


ECLAC/UNDP (1990): Magnitud de la pobreza en América Latina en los años ochenta (LCLC 533), Santiago, Chile, May.


Ramos, Joseph and Nicolás Eyzaguirre (1989): *Restauración y mantenimiento de los equilibrios macroeconómicos básicos*, Economic Commission for Latin America and the Caribbean (ECLAC), Santiago, Chile, November, mimeo. (To be published in *El Trimestre Económico*, Mexico City).

Schmidt-Hebbel, Klaus and Felipe Montt (1989): Impactos externos, devaluaciones y precios de materias primas, Nicolás Eyzaguirre and Mario Valdivia (eds.), *Políticas macroeconómicas y brecha externa: América Latina en los años ochenta (LCLC 1532-1)*, Economic Commission for Latin America and the Caribbean (ECLAC), Santiago, Chile, March. United Nations publication, Sales No.: S.89.II.C.10.


Zahler, Roberto (1980): *Monetary and real revaluations of financial opening-up to the exterior. The case of Chile 1975-1978*, *CEPAL Review*, No. 10 (CEPAL/ C.1110), Economic Commission for Latin America and the Caribbean (ECLAC), Santiago, Chile, April. United Nations publication, Sales No.: E.80.II.12.