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# THE ECONOMIC CONSEQUENCES OF THE APRIL 25TH REVOLUTION

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# THE ECONOMIC CONSEQUENCES OF THE APRIL 25TH REVOLUTION*

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"Les à - coups d'accéleration de l'histoire marquent la vie des peuples comme les sacrements celle du chrétien. Ces periodes extraordinaires sont aussi la bibliothèque où, qui en a compris la grammaire, peut lire a livre ouvert les lois du changement social profond" Serge-Christophe Kolm, La Transition Socialiste--La Politique Economique de Gauche, Paris: Les Edition du Cerf, 1977.

"In the study of social phenomena, disorder is, it is true, the sole substitute for the controlled experiments of the natural sciences. But it sometimes happens that, in the midst of disorder, events move so rapidly that we are not able properly to observe them; disorder may be excessive even to the most detached of scientists." Frank D. Graham, Exchange, Prices, and Production in Hyper-Inflation: Germany, 1920-23, Princeton: Princeton University Press, 1930.

In the last few years, a unique combination of drastic internal and external shocks has turned Portugal into a testing ground for social and economic theories. But the ground is dangerous; nations are not laboratories where the effects of different factors can be studied in isolation. If there are lessons to be learned from Portugal's experience, they must be based on a theoretical framework which enables one to disentangle events in which several forces operated simultaneously.

In this paper we present an interpretation of the economic experience of Portugal since the revolution. We believe that the enduring consequence of April 25 has been the transformation of Portugal into what one might call a politicized market economy. In any market economy prices of goods and factors perform the dual role of allocating resources and determining the distribution of incomes. A politicized market economy is one in which the distributional role of prices becomes a justification for their manipulation, but in which the allocative role of prices is not replaced by a centralized allocation of quantities. Examples of the resulting dilemma are present even in relatively non-interventionist countries: e.g. the problems of EEC agricultural prices or U.S. oil prices. But in Portugal the dilemma has economy-wide consequences, for the crucial politicized price is the price of labor.

The real wage determines the distribution of income between capital and labor, yet it is also a price determining supply and demand. If the real wage is left to the market, it may not settle at a level which is regarded as just; if it is set politically, it will not fulfill its allocative role.

The paper is organized as follows. Section 1 gives some background on Portuguese economic development before the revolution. Section 2 develops an analytical framework based on two "strategic variables"--output and the real wage--whose evolution is analyzed in Sections 3 and 4 respectively. Section 5 contains a brief conclusion.

## 1. Background: Portugal before 1974

In 1973 Portugal's economy was fairly typical of the group of middle income nations sometimes referred to as newly industrializing countries or "nics".[1] These countries were able to achieve rapid economic growth during the 1960's and early 1970's via increased trade, exploiting their relatively abundant supplies of semiskilled industrial workers in textbook fashion: exporting labor-intensive manufactured goods, and also exporting labor directly in the form of emigrant workers. Portugal, with its 700,000 emigrant workers, relied more than most nics on direct export of labor, but substantial exports of textiles, electronic components, and other labor intensive manufactures had also emerged by the early 70's.

Table 1 presents some statistics on Portuguese economic growth before 1974, with comparable statistics of Spain and Greece for comparison. All three countries grew in somewhat similar fashion, so that these "soft

TABLE 1

Growth in Southern Europe Before 1974

| | Portugal | Spain | Greece |
| --- | --- | --- | --- |
| Rate of Growth of GDP Per Capital, 1968-73 | 7.4 | 5.8 | 7.5 |
| Exports/GDP, 1968 | 24.2 | 13.0 | 9.6 |
| Exports/GDP, 1973 | 25.8 | 14.3 | 14.2 |
| Imports/GDP, 1968 | 29.2 | 15.6 | 18.2 |
| Imports/GDP, 1973 | 33.2 | 15.6 | 25.2 |

Source: International Financial Statistics underbelly" countries form a natural group. Several points stand out. First, growth was quite rapid, with real GDP per capita growing at rates which, if not up to South Korean or Taiwanese standards, were still much higher than less developed countries in general have managed. Second, growth was pro-trade biased. In all of the countries exports and imports rose relatively to gross domestic product; i.e., the economies became more "open" as they grew. In 1974-77 Portugal diverged from the others; Spain and Greece continued to grow more open, while Portugal did not.

In saying that Portugal achieved fairly rapid growth, we are not implying that all was for the best. One problem with the economic development of Portugal is suggested if we notice that in qualitative terms Portugal was moving into an economic relationship with respect to industrial Europe similar to that of Puerto Rico with respect to the mainland of the United States. In other words, Portugal was becoming a dependent economy. One need not interpret "dependence" in a Marxist way, certainly not in a way that suggests that what was happening was economically bad for Portugal. The problem was (and is) simply the fact that Portugal's economy is strongly affected by economic policy decisions of the industrial countries, decisions in which it has no voice.

The other problem with Portuguese growth was distributional. While it is probably true that nearly all Portuguese gained from growth, the gains were distributed unequally, both between city and countryside, and between the population at large and the elites which controlled economic and political life. There is little hard evidence on this, but Portugal by 1973 appeared to be a "dualistic" economy whose traditional sector had not shared fully in growth.

Despite these problems, it is difficult to avoid regarding the Portuguese economy before 1974 as a successful one. Portugal was still, in 1973, a poor country; but it was steadily catching up with the industrial west.

This qualified success story came to an abrupt end in the fall of 1973. The oil embargo had a particularly strong effect on Portugal, despite her claim on the abundant oil of Angola. In February 1974 inflation shot up to over 30 percent at an annual rate, supplies of some foodstuffs in Lisbon were disrupted, some white collar trade unions went on strike and it was in a political vacuum that an 'Armed Forces Movement'--of ambiguous economic ideology--took power on April 25.

Suddenly, then, the Portuguese economy was subjected to a unique combination of shocks. Political and social revolution at home, in addition to its direct effects, triggered a massive return of settlers from Africa. At the same time the crisis in the world economy raised the prices of imports, depressed the demand for exports, and provoked a return of emigrant workers.

We will, once again, attempt to isolate a few crucial aspects of these complex economic events. We now turn to an explicit discussion of the theoretical framework determining our choice of points to emphasize.

## 2. A Framework for Analysis

Our method in this paper will be to concentrate on two "strategic" variables, the real wage rate and the level of output; or more precisely, on output relative to potential and the real wage relative to its "warranted" level, a concept which will be explained below. Other aspects of Portugal's economy will be considered either as affecting these strategic variables or as being affected by them. In other words, we will attempt to sort out the tangle of events by first tracing the path of the strategic variables; then working backward to the major causes of changes in these variables; and finally moving forward to the effects of the changes.

The idea of concentrating on a few strategic variables is probably worth justifying, although this is not the place for an extended methodological discussion. Our basic suppositions are that, while the number of variables which have been subject to changes in recent years is large, the number of variables which are of crucial policy importance is fairly small. At the same time, we suppose that some of these crucial variables can be regarded as determined by the others, so that the structure of the economy looks something like this:

Exogenous and Policy Variables ⟶ Strategic Variables ⟶ Other Crucial Variables

where the strategic variables are thus both important in their own right and the intervening variables through which other important variables are determined. Among the exogenous and policy variables we would put oil prices, the exchange rate, government spending, and so on; the main crucial but not strategic variables are the balance of payments, unemployment, and the distribution of income.

The virtue of this scheme is that it lets us focus on a relatively limited number of channels of cause and effect. The defect is, of course, that it involves a simplification, and may give a somewhat misleading transparency to events. However, when there are a few shocks as drastic as those which Portugal has experienced, even very simple analysis can be enlightening.

Let us begin, then, by discussing the crucial relationships which we believe obtain in the Portuguese economy. First, and most obvious, is the relationship between output and unemployment. Other things equal, higher output will mean higher employment, and there is some level of output which corresponds to "full employment" (which includes allowance for some normal level of unemployment).

Less often emphasized but also crucial is the relationship between output and the real wage, on the one hand, and the current account of the balance of payments on the other. Clearly, increasing output will swell the demand for imports and, other things equal, worsen the balance of payments. Holding output constant, an increase in the real wage will normally involve increasing the price of domestic relative to foreign goods, so that there will also be a negative effect of the real wage on the balance of payments.

When, for simplicity, the level of output consistent with full employment is independent of the real wage, these relationships can be illustrated with a diagram like Figure 1.[2] In the diagram, one axis measures X, the level of real output, while the other measures the real wage rate W. The vertical line IB indicates the level of output consistent with full employment, while the line XB indicates the combinations of real wage and real output consistent with current account balance. The diagram shows that, given full employment output Y*, there is a unique level of the real wage W*, which is consistent with external balance. We will refer to W* and Y* as the "warranted" real wage and "potential" output respectively. They are the only levels of W and X which are consistent with equilibrium in both the labor and foreign exchange markets. Departures from these levels always involve a situation of disequilibrium--that is, a situation of economic or social stress.

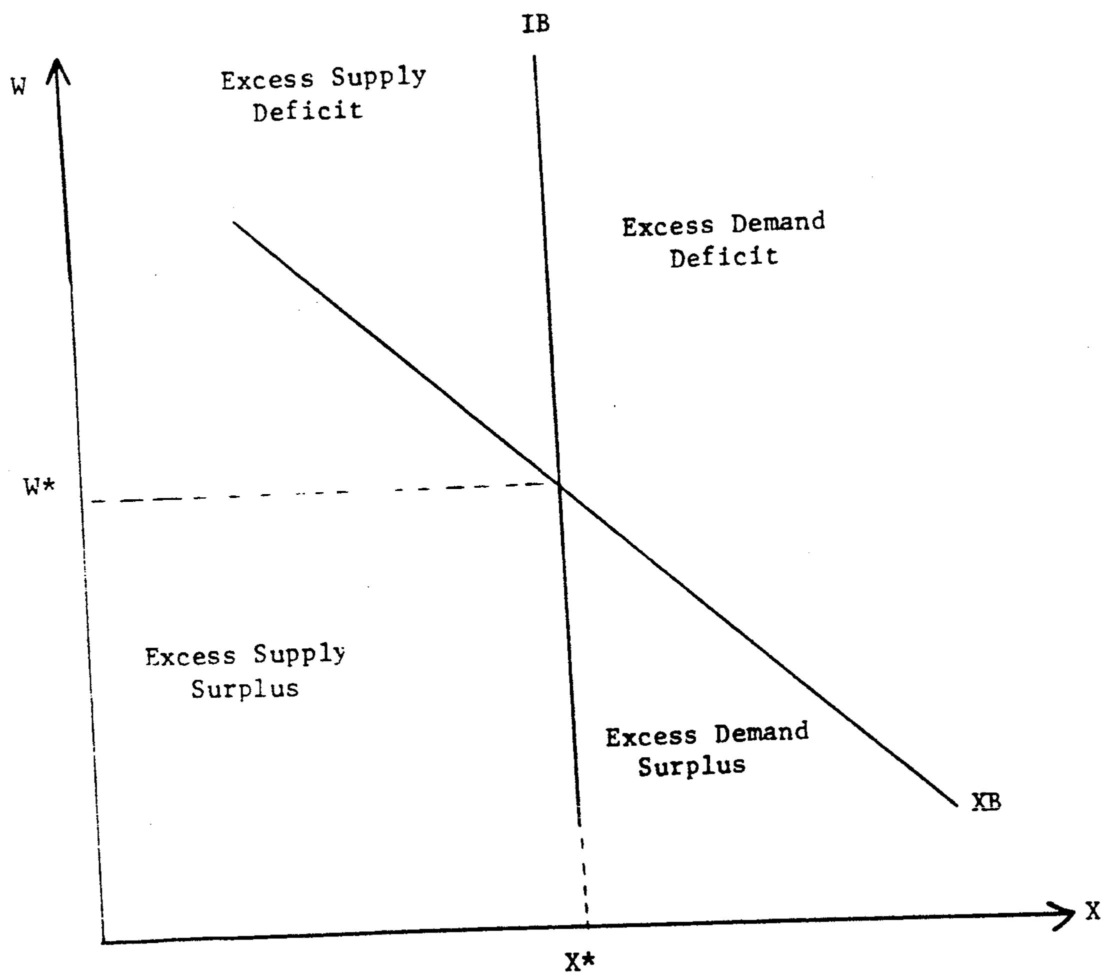
The possible kinds of disequilibrium are illustrated by the "zones of economic unhappiness" surrounding the equilibrium point. For each zone the state of the labor market and of the balance of payments are indicated. On the eve of the revolution Portugal was in a situation of tight labor markets and payments surplus, i.e., it was in the southeastern zone of the diagram. Since late 1974 the characteristic state of the economy has been more like that in the northwest zone--persistent unemployment and current account deficits.

While a diagram like Figure 1 is of considerable diagnostic use, it has some defects if one tries to use it to discuss events in Portugal. The problem is that the schedules have undoubtedly shifted drastically. For example, the arrival of the returnees must, by increasing the supply of labor, have increased potential output and reduced the warranted real wage. In order to trace out the path of the economy one would not only have to keep track of W and X but of the shifting IB and XB schedules as well. This would destroy the simplicity of the scheme.

What we will do to avoid this problem is replace W and X as our variable by W/W* and X/X*: that is, by the actual values relative to their equilibrium values. To a first approximation, one would expect the XB and IB schedules to remain unchanged when drawn in this space. Thus the effect of, say, a rise in oil prices--reducing the warranted real wage--would be to raise W/W* for a given W, not to shift the XB curve. The variables W/W* and X/X* become our strategic variables, and the starting point of our analysis is a story about their path over time which

Figure 1

The "Zones of Economic Unhappiness"



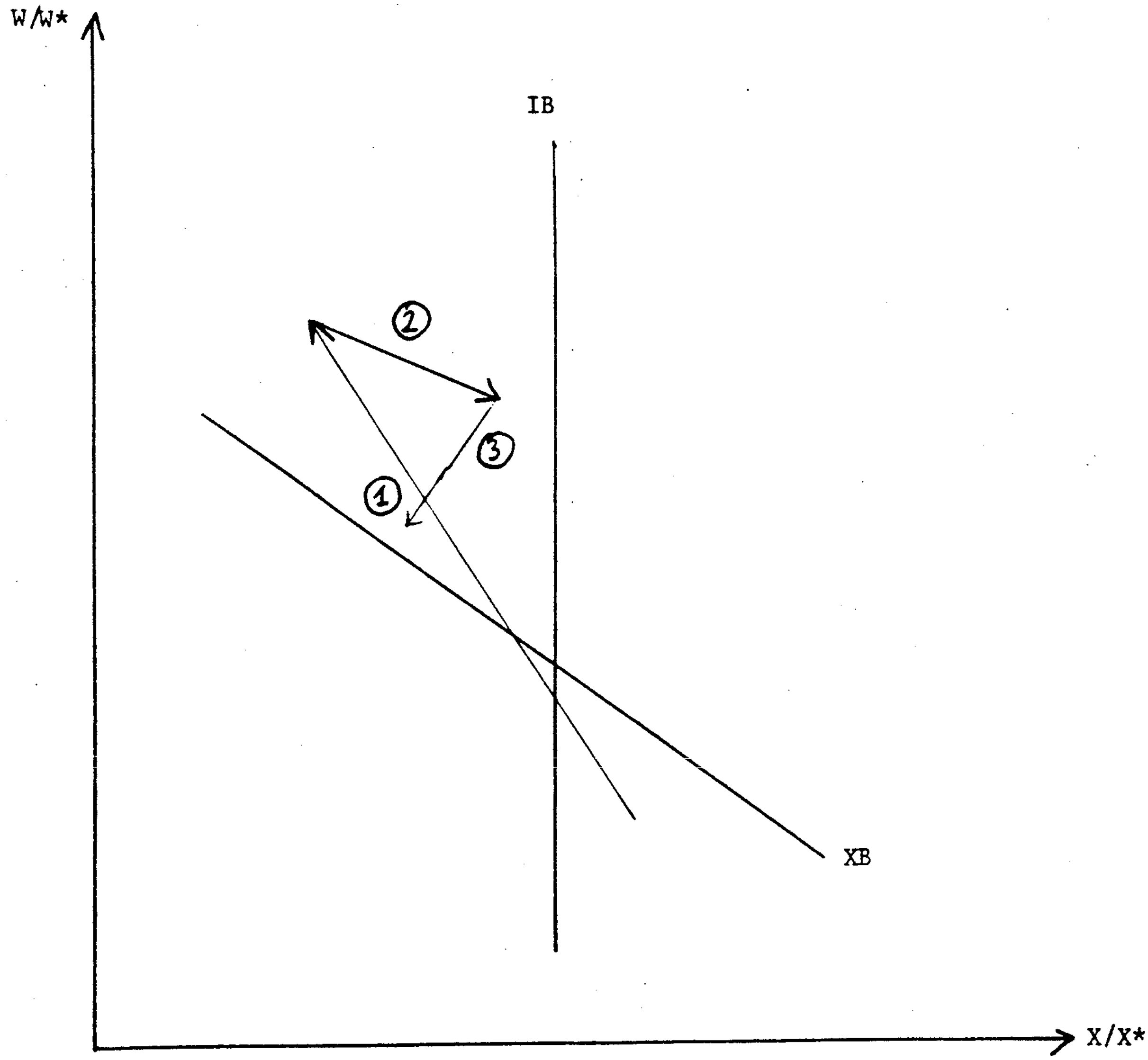
makes sense of the observed economic developments.

This may be an appropriate place to say something about the "structural" aspect of Portugal's economic difficulties.[3] It is often argued that conventional macroeconomic analysis is not applicable to Portugal because the problems are not primarily due to increases in real wages or domestic demand, but are rather the result of real shocks such as the rise in oil prices and the loss of the colonies. What this amounts to saying is that in our Figure 1 the schedules have shifted; or, equivalently, in Figure 2 the movement of the economy has been due primarily to changes in $W^*$ and $Y^*$. In fact, we would agree that such "structural" changes have been large and important. But the attempt to use the cause of disequilibrium to determine the remedy is a mistake. Suppose that external shocks--such as an oil price increase--were to lead to a combination of balance of payments deficit and unemployment, the real wage having remained unchanged. Even though real wage increases would not be the cause of disequilibrium, it would still be the case that the real wage would have to fall to achieve internal and external balance. Whatever the cause of disequilibrium, conventional macroeconomic analysis can still be used to determine the way back to equilibrium.

Returning to the analytical framework, in Figure 2 we indicate schematically the course we believe Portugal has followed since 1973. In 1973 the Portuguese economy was in a situation of tight labor markets, as shown by the low unemployment rate, and was running a current account surplus; thus our starting point, as shown in Figure 2, is one of disequilibrium. There followed a series of events which we would divide into three phases, shown in our schematic as 1, 2, and 3.

Figure 2

Three Phases of Macroeconomic Adjustment



(i) Phase 1 (1974-75): There was a rise in real wages and a slump in output (in 1975 only). Unemployment increased and the current account moved into deficit. Because of the oil price increase, the world recession, and the increase in Portugal's labor force, the warranted real wage dropped considerably. The last factor may also have increased potential output. Thus we suppose in Figure 2 that 1974-75 was marked by a sharp rise in $W/W^*$, as the numerator rose and the denominator fell, and also by a decline in $X/X^*$.

(ii) Phase 2 (1976-77): Under pressure from wage controls, devaluations, and the overhang of unemployed, real wages fell. But an explosion of credit produced rapid growth in output. The effect of output expansion was enough to worsen the external balance in spite of the decline in real wages.

(iii) Phase 3 (1978- ): Real wages continued to decline; but this was now accompanied by tightened credit, producing slower output growth. As we show in Figure 2, the effect has been to move Portugal close to external balance.

To explain why Portugal has followed this path requires a more detailed examination of events. This is done in the next two sections: Section 3 analyses the course of expenditure, output, and the capacity of the economy; Section 4 discusses movements in real wages and their relationship to changes in the equilibrium real wage rate.

3. Output

The evolution of output in Portugal since 1973 is summarized in Table 2. Until 1977 real gross domestic product in 1975 prices grew on an average at a rate of 2.4% p.a., much less than the growth rates of the late 60's and early 70's but still above the comparable EEC figure of 1.8%. As is apparent from the table, however, the variability of Portuguese output was also higher.

The figures for 1977 and 1978 are still first round official estimates and some earlier figures are included to show the precarious nature of these estimates. First-round official estimates of 1973-75 output available in mid 1976 were substantially revised twice and led to underestimating the strength of the 1976-77 recovery. Forecasts have been even less reliable. The best 1976 forecast for 1977 was a supposedly "optimistic" one which assumed a 10 percent increase in investment, regarded as extreme at the time. Yet output growth was less than forecast.

The Plan forecast of growth for 1979 is 2.8 percent; given the rise in oil prices and the downward revisions in estimates of OECD growth, this is probably over-optimistic.

Chart 1 shows that the decline in the growth rate in 1974 and 1975 was also accompanied by a sharp fall in the share of output devoted to investment. This obviously tended to reduce the rate of growth of potential output. And the investment figure--which is in any case highly unreliable[4] --understates the problem. A large part of capital formation in the post 1973 period has gone to public sector projects of questionable productivity, particularly the immense Sines project. The decline in private investment is thus far larger than these numbers would suggest. In 1976, for instance,

TABLE 2

Output Estimates
(million Contos)

| | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 |
|---|---|---|---|---|---|---|---|
| 1. Current prices GDP f.c. | 254.2 | 309.0 | 342.1 | 422.6 | 563.8 | 715.4 | 874.8 |
| 2. GDP m.p. | 281.1 | 338.4 | 376.2 | 467.6 | 622.2 | 781.9 | 953.0 |
| 3. GDP m.p. 1975 prices Estimated in | | | | | | | |
| 3.1 1979 | 388.8 | 393.2 | 376.2 | 402.0 | 423.4 | 437.1 | |
| 3.2 1978 | 389.3 | 393.7 | 376.7 | 406.7 | 426.6 | | |
| 4. Forecast in | | | | | | | |
| 4.1 1976 | 377.8 | 389.0 | 373.5 | 390.3 | 408.0A<br>414.4B | | |
| 4.2 1977 | | | | 383.3 | 397.4A<br>402.5B | | |
| Growth rates % p.a. | | | | | | | |
| 5. Portugal | 11.9 | 1.1 | -4.3 | 6.9 | 5.3 | 3.2 | 2.0 |
| 6. EEC average | 5.9 | 1.6 | -1.5 | 5.0 | 2.3 | 2.8 | 3.2 |

Sources: 1. a) 1973-76 Instituto Nacional de Estatistica (except for construction in 1976, source 1b)
b) 1977-78 Banco de Portugal and Departamento Central de Planeamento
c) 1979 DCP forecast in Grandes Opçoes do Plano, 1979

2. a) 1973-78 same as above
b) Adjusted for 1978 collected indirect taxes and 1979 budget with own estimate for subsidies based on same ratio to indirect taxes as 1977.

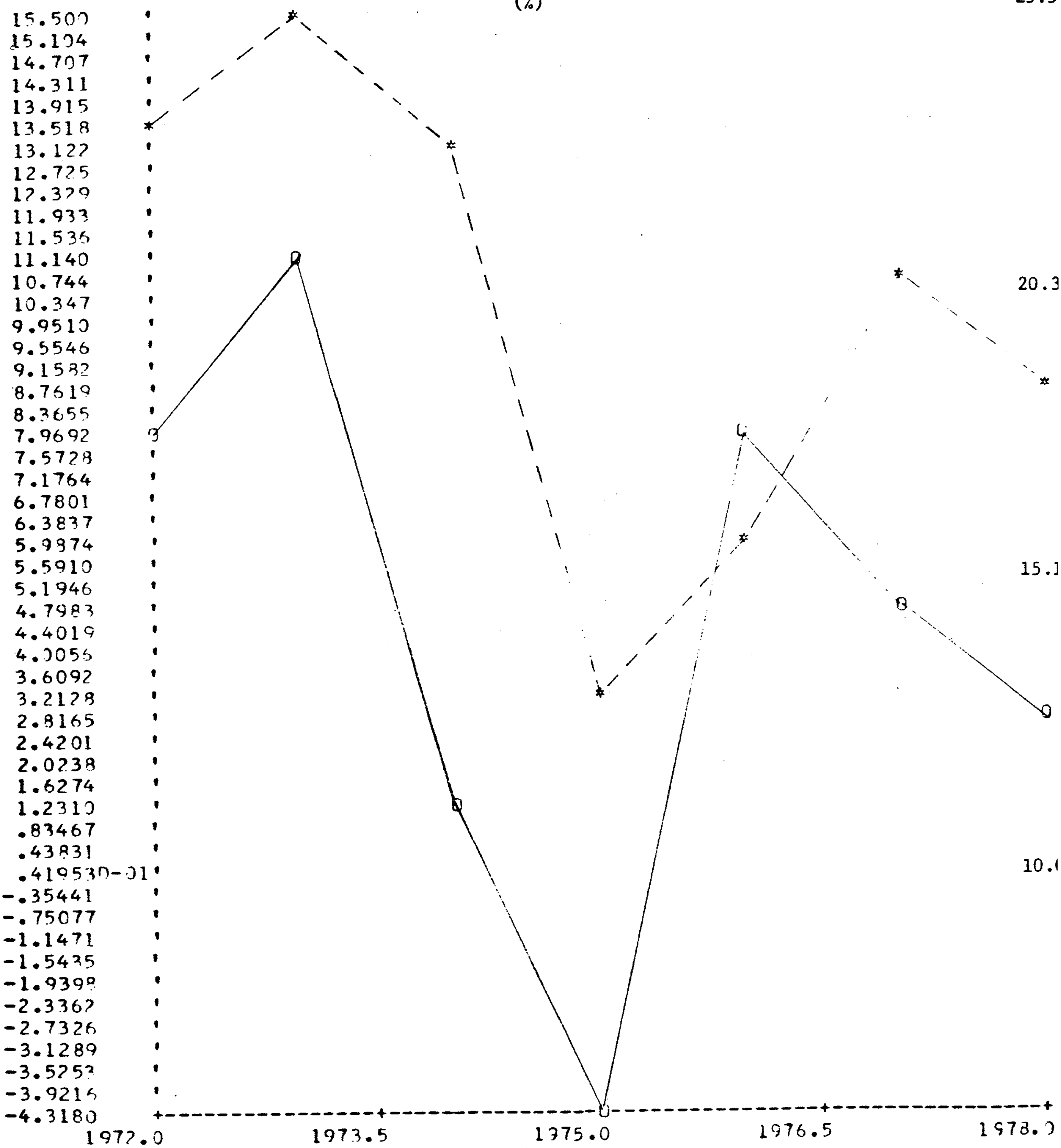
3. IFS (line 99b.p) same as 2. with numbers from 1978 Banco de Portugal Report for the 1979 estimate (corrected in August 1979 issue of IFS)and 1977 Report for the 1978 estimate.

4. Based on DCP numbers for 1973-75 and projection from model in Abel et al. (1977) for 1976 forecasts and Abel and Beleza (1978) for 1977 forecasts. Forecast A (pessimistic) assumes constant investment, B (optimistic) assumes 10% increase.

5. From 3.1; 1979 OECD (1979c) forecast

6. OECD (1979c)

Chart 1
Real Growth Rate and the Investment Share
(%)




—Annual Growth Rate of Real GDP (left scale)
--Real Investment Share in Real GDP (right scale)
Source: Same as Table 1, Line 3

public (state) investment increased by 19 percent, whereas housing declined by 6 percent and "productive" investment (itself mainly in the nationalized firms) declined by 6.7%, giving rise to the total decline of 3.4%. In 1977 the 12% increase was more evenly spread between "productive" (13.3%) and public (14.6%) but housing continued to lag at 5.5%. Plan figures show very little growth in investment in 1978-79.

The effect was, apparently, a sharp reduction in the productivity of investment. A crude but suggestive indicator of this decline is the gross incremental output-capital ratio, which was .41 in 1969-73 but only .13 in 1974-5. We should note, however, that this measure of the productivity of investment has declined world-wide. For example, in Japan it declined from .29 in the period 1967-73 to .12 in the post 73 period. In the U.K. the decline was from .17 to .05.

The swings in output in Portugal were also reflected in the crucial balance of payments. Table 3 shows the changes in that balance since 1973. In 1973, as we have already mentioned, Portugal was in surplus. The deterioration in the external environment produced an abrupt deterioration in the trade balance. Slump in 1975 temporarily reduced the demand for imports, but the boom of 1976-77 led Portugal into a severe deficit and forced the adoption of austerity measures.

The dramatic reversal of the external deficit in 1978 was a definite surprise. A major part of the improvement was a surge in emigrants' remittances, and it is possible that this was in part dishoarding of accumulated savings held abroad as confidence in Portugal's political stability returned and nominal interest rates on deposits were raised. If this is the case, remittances will fall again, so that part of the improvement will turn out to be only temporary. However, exports have also surged, indicating that

Table 3

THE BALANCE OF PAYMENTS

(in millions of dollars)

| | (1) TRADE | (2) CURRENT ACCOUNT | (3) NON MONETARY TRANSACTIONS |
|---|---|---|---|
| 1973 | -914 | 351 | 345 |
| 1974 | -2002 | -829 | -638 |
| 1975 | -1674 | -819 | -1016 |
| 1976 | -2115 | -1246 | -1179 |
| 1977 | -2533 | -1500 | -1437 |
| 1978 | -2300 | -775 | 157 |
| 1979 | -740* | -276* | 723** |

Notes: * Jan.-June
** Jan.-August

Sources: 1973-1977 OECD

1978 Banco de Portugal

1979 Banco de Portugal and Cardoso (1979) there has been a fundamental improvement in competitiveness.

The external current account is related to national saving by the identity saving = investment + current account. It is natural, then to consider along with the current account the public sector deficit, which is a major source of dissaving, as is evident from Table 4. In fact, since investment has been so predominantly undertaken by the public sector, the overall deficit of the public sector is the appropriate measure of the gap between private savings and private investment, where nationalized firms are included in the private sector.

Chart 2 shows a remarkably close relationship between the external current account and the public sector borrowing requirement, measured in dollars. The surprising turn of the external account in 1978-9 is again evident there, since the available evidence suggests a substantial worsening of the public sector deficit.

In output and expenditure, then, Portugal experienced some sizeable fluctuations. These fluctuations were somewhat larger than those of other European countries, and the balance of payments problem has been severe. Nonetheless, Portugal has not been too far out of line with the experience of other semi-industrialized countries. What makes the Portuguese experience unique is the developments in the labor market.

Portugal in 1973 was a country with an unusually high proportion of its population working outside the country. Emigrant workers were 17.5% of employed Portuguese in 1975. When recession came to Europe, emigration halted and partially reversed. At the same time, the returnees began

Table 4

PUBLIC SECTOR ACCOUNTS

(in million contos)

| | (1) Current Balance | (2) Overall Balance | (3) Central Administration Budget (OGE) | (4) Central Administration Balance (CGE) |
|---|---|---|---|---|
| 1973 | 9.0 | 2.6 | 5.2 | -2.4 |
| 1974 | 1.2 | -7.0 | 8.1 | -9.7 |
| 1975 | -9.3 | -18.5 | -13.9 | -25.4 |
| 1976 | -13.0 | -32.9 | -31.8 | -38.7 |
| 1977 | -12.6* | -45.5* | -59.9 | -49.0* |
| 1978 | -28.5* | -79.3* | -60.5 | -76.6* |
| 1979** A | -12 | -62 | -66.0 | n.a. |
| B | n.a. | -113.0 | -120.0 | n.a. |

* Estimates

** Forecasts

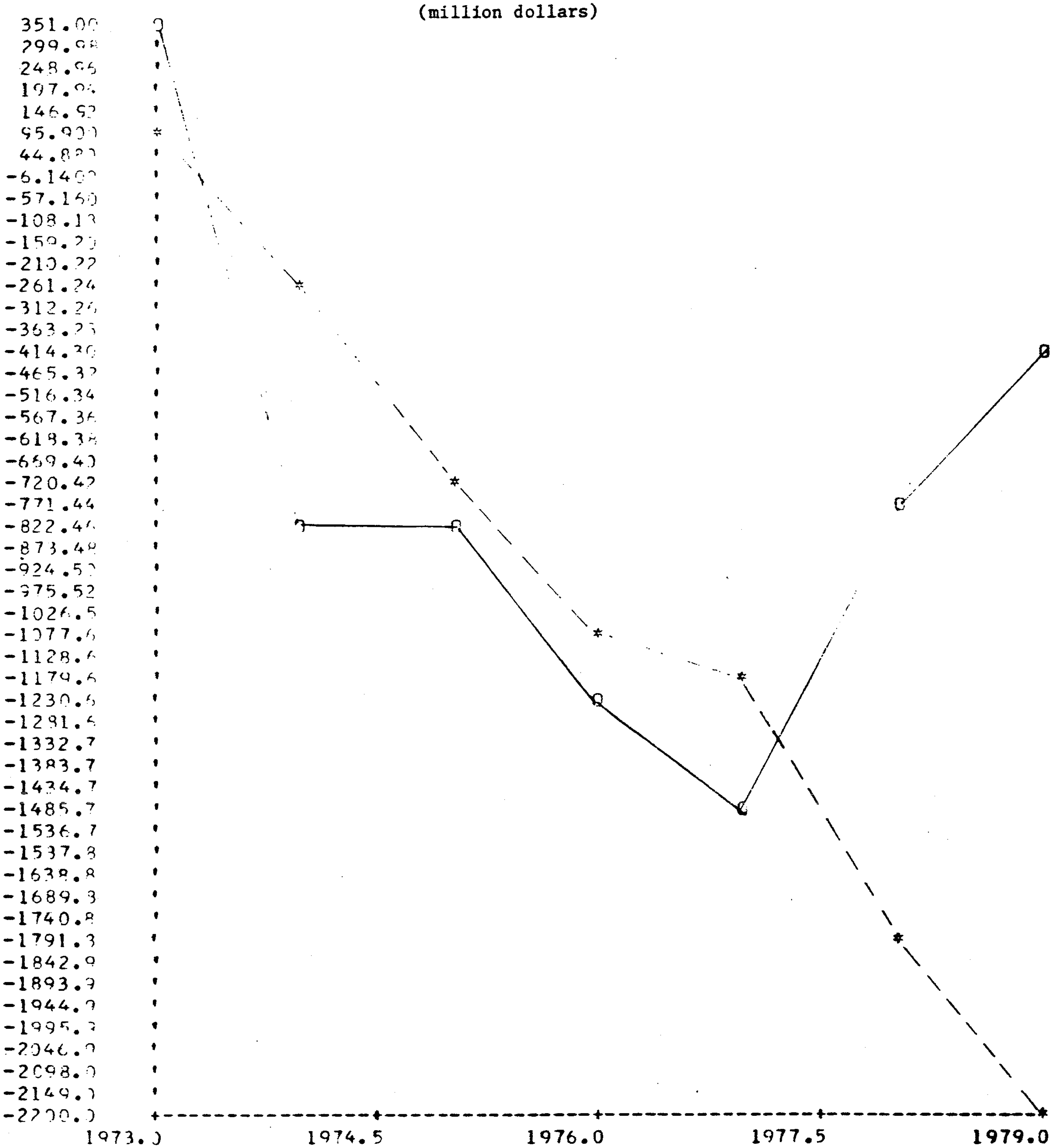
Sources: 1973-76 Estatisticas das Finanças Publicas

1977-78 Banco de Portugal using data from Ministerio das Financas

1979: A OECD (1979b, p. 34).

B Revised official forecast for (3) Expresso, 10/13/79 and June ratio (2)/(3) as in B.

Chart 2
Current Account and Public Sector Deficit
(million dollars)




Current Account Deficit, Table 2, col. 2

Overall Deficit of the Public Sector, Table 3, col. 2
converted into dollars at average exchange rate from IFS

arriving from Africa. The result is shown in Table 5: there was a huge growth in the labor force, some 13 percent from 1973 to 1977, according to the only available estimate (source A).

Because of the growing labor force, and because employment grew only slightly, unemployment rose to very high levels. (We are not confident in these figures, for reasons discussed in Section 4). A gap thus emerged between actual and potential output. We make an effort to measure potential output and the output gap in Table 6. Several assumptions are made. First, we assume that potential employment is 97 percent of the labor force: i.e., that the 3 percent unemployment of 1973 represents "full employment". Second, we assume that the ratio of the marginal productivity of labor to average productivity is one-half, based on the 1973 labor share. Thus we compute "full-employment" employment as 97 percent of total labor force, and assume that the additional workers would have one-half of the average product of those already employed.

The numbers produced by this rough calculation show a large output gap, only slightly narrowed by the 1977 boom. While the output gap is large, however, even closing it completely would still leave the growth rate of per capita GDP since 1973 quite low. In other words, potential output has grown slowly given the rise in the population. The chief reason for this is the slow growth in productivity. From 1973 to 1978 GDP per employee rose 10%, an annual growth rate of only 1.9%. This is, of course, the counterpart of the low output-capital ratio already mentioned.[5]

On balance, then, averaging over the fluctuations, output has failed to keep up with potential, while potential output has in turn grown disappointingly slowly.

Table 5

EMPLOYMENT AND UNEMPLOYMENT
(Thousands)

| | (1) Employment | | | (2) Unemployment | | | (3) Civilian Labour Force | | |
|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | A | B | C | A | B | C |
| 1973 | 3046 | n.a. | n.a. | 99 | n.a. | n.a. | 3145 | n.a. | n.a. |
| 1974 | 3061 | 3767 | 3621 | 180 | 86 | 47 | 3241 | 3853 | 3668 |
| 1975 | 2980 | 3735 | 3714 | 396 | 222 | 133 | 3376 | 3957 | 3847 |
| 1976 | 3005 | 3820 | 3759 | 504 | 276 | 244' | 3509 | 4096 | 4003 |
| 1977 | 3097 | 3781 | 3787 | 455 | 326 | 291 | 3552 | 4107 | 4078 |
| 1978 | n.a. | 3809 | 3736 | 450* | 348 | 319 | n.a. | 4157 | 4055 |

Note: (1) = (3) - (2)

Sources: A - Gabinete de Estudos, Planeamento e Organização, Ministry of Labour as reported by Banco de Portugal

B - INE, 1st. semester survey as reported in Banco de Portugal

C - INE, 2nd. semester survey as reported by Banco de Portugal

*as reported in BPA, Conjuntura, nº12.

Table 6

UNEMPLOYMENT RATE AND THE OUTPUT GAP

| | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 |
|---|---|---|---|---|---|---|
| 1. Unemployment(%) | 3.1 | 5.6 | 11.7 | 14.4 | 12.8 | 13.0* |
| 2. Output Gap (%) | .05 | 1.88 | 4.93 | 6.66 | 5.62 | 5.75 |
| 3. Potential Output (million contos) | 389.0 | 400.6 | 394.7 | 428.8 | 447.2 | 462.2 |

Sources: (1) - 1973-77: Table 5, Source A (1- (2)/(3) x 100.

1978: reported in OECD (1979b) from Source A.

(2) (((1) - 3.0)/(100-(1))) x .5

(3) ((3) from Table 2, line 3.1.) x (1 + (2)/100)

## 3. Real Wages

The movements in the real wage rate in Portugal, and the changes in the distribution of income which accompanied these movements, are perhaps the most striking feature of economic developments since 1973. As is shown in Table 7, Portuguese real wages rose sharply in the first eighteen months following the revolution, then began an extraordinary decline which left them, by 1978, well below their pre-revolution level. (There are-once again-problems with the figures, as discussed below). The labor share in national income paralleled this movement, although the rise in the labor share from 1973 to 1975 was much larger in percentage terms than the rise in real wages, so that in 1977 the labor share was still substantially above its 1973 level.

As we have already suggested, however, the crucial variable from the point of view of achieving internal and external balance is not the wage rate *per se* but the wage rate relative to its "warranted" or equilibrium level. While the warranted real wage rate is not directly observable, there can be little question that it fell sharply in the first two years following the revolution, for reasons discussed below. Thus, the ratio of the actual to the warranted real wage must have risen more steeply than the real wage itself. Where that ratio now stands is a difficult question which we will postpone to the end of this section.

Let us begin by discussing the factors affecting the movement of real wages since 1973. We will then turn to a consideration of the factors which must have affected the warranted real wage, making an effort to put at least an order of magnitude on the movements in this variable. Finally we will discuss the implication of the movements in both variables.

Table 7

REAL WAGES AND THE TERMS OF TRADE

| | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 |
|---|---|---|---|---|---|---|
| 1. Real Wage (1973 = 100) | 100 | 106 | 109 | 101 | 91 | 89 |
| 2. Labor Share in Income (%) | 51.6 | 57.0 | 68.9 | 66.6 | 60.0 | 56.4 |
| 3. Terms of Trade (1973 = 100) | 100 | 89.9 | 76.8 | 73.2 | 74.9 | 76 |

Sources: 1973-77: 1: IFS
2,3: World Bank (1978).
1978: 1: INE, Boletim Mensal
2,3: Banco de Portugal

Causes of Changes in Actual Real Wages

Since 1973 wages in Portugal have been largely a political phenomenon. The political climate affects wage settlement directly through its impact on bargaining and on public sector wage decisions. At the same time, government policy plays an important role in determining real wages through wage and price controls, taxation, and exchange rate policy. Market forces do have some effect, especially in the small-business sector. But the principal way that economic pressures affect real wages is by inducing the government to take action to push real wages towards a level which it regards as appropriate.

In 1974-75 the internal situation in Portugal naturally made for intense pressure for real wage increases, while the "war chest" of foreign exchange and gold left by the old regime allowed the successive governments to ignore external constraints for the time being. One can easily draw up a sizable list of factors making for wage increases. First, there were large increases in the minimum wage. Second, wages paid by the government--both in the traditional public sector and in newly nationalized firms--were sharply increased. Third, legal restrictions which were placed on dismissals *de facto* forced firms to continue paying the wages of striking workers, with obvious effects on the balance of power in wage bargaining. Even the threat of bankruptcy was not much of a limitation, since loss-making firms were often able to get low-interest loans--in effect subsidies--to cover their wage bills. Finally, the political climate itself made for worker militancy and employer timidity.

We should note that in addition to a redistribution of income from capital to labor there was a redistribution within the labor force to the less well-paid. In particular, changes in the tax system would have made it necessary for higher-paid workers to have received much larger percentage wage increases to keep up with inflation than those with lower initial wages, as shown by the figures reproduced in Table 8.

The fact that nominal wage increases were in part translated into real increases, instead of merely being dissipated in inflation, was also largely due to policy. For one thing, many prices were controlled under an elaborate system instituted in 1974. This system kept cost increases from being fully passed on in many areas, especially in rents. Price controls were supplemented by subsidies used to keep down the prices of some consumption staples. And import prices were kept down by the Bank of Portugal's support of the escudo.

With all of these forces working to raise real wages, it is somewhat surprising that the real wage index reported in Table 7 did not rise more. In part this may reflect the unreliability of the statistics,[6] but there were also some factors working to depress real wages, notably increases in taxation and the worsening of Portugal's terms of trade. These factors are considered in our discussion of movements in the warranted real wage, below.

From 1976 on many of the policies which had fostered real wage increases in 1974-75 were reversed. A catalogue of major actions would include the following:

(i) Ceilings were placed on wage increases.

(ii) Controlled prices were raised.

(iii) The escudo was repeatedly devalued.

(iv) Subsidies were reduced and taxes increased.

(v) Labor laws were changed so as to allow dismissals.

Table 8

CONSTANT REAL TAKE HOME PAY

| Equivalent nominal gross wage (contos/month) | | % share in increase | |
|---|---|---|---|
| 1974 | 1979 | Inflation | Tax |
| 4 | 12.2 | 86.5 | 13.5 |
| 8 | 25.8 | 79.8 | 20.2 |
| 15 | 55.7 | 65.3 | 34.7 |
| 30 | 267.7 | 22.3 | 77.7 |

Source: Banco Português do Atlantico, Conjuntura, 12, July 1979

Note: See also Cadilhe - Costa (1978)

(vi) The interest rates on loans to loss making firms were increased.

In addition to these policy actions, there was pressure on the wage rate from the overhang of unemployed workers, swollen by returnees from Africa and the halting of emigration to Western Europe.

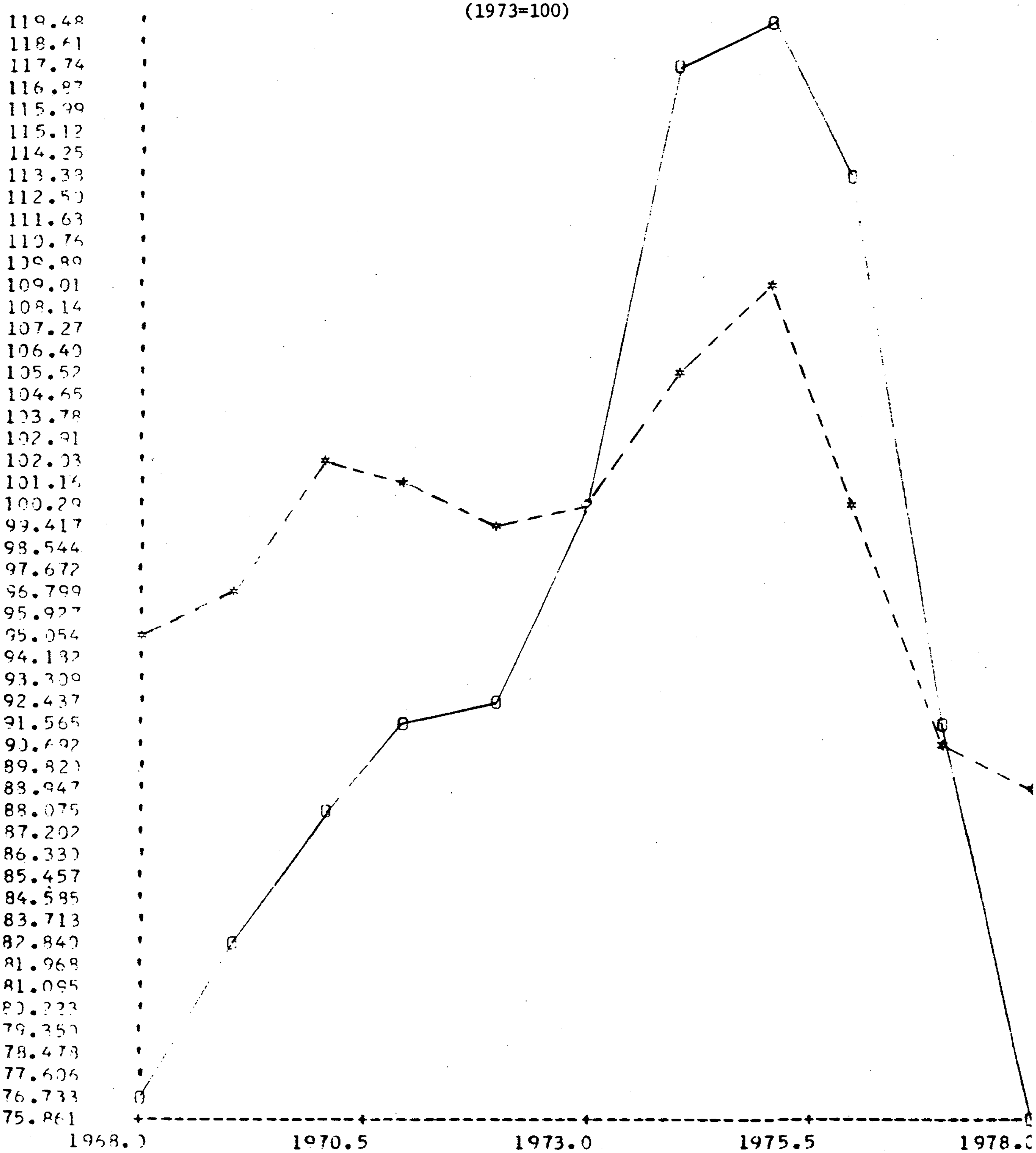
The most obvious way in which policy affected the real wage rate is, of course, through devaluation. Devaluation--if it is effective--has the effect of lowering the wage rate in terms of external prices. This in turn implies a fall in the real wage in terms of imports and other tradable goods. Chart 3 shows the Portuguese real wage in terms of external prices, as measured by a weighted average of the four principal trading partners, and in terms of the domestic CPI. It is clear that the large decline in the "external" real wage must have played an important role in the decline of real wage in terms of consumption goods.

What is surprising about the post-1976 period is how severe the decline in real wages has been.[7] The greater part of this decline took place under a socialist government, in a country where trade unions remain powerful. To make sense of the remarkable decline, we must consider the factors affecting the warranted real wage.

## Causes of Changes in the Warranted Real Wage

Since we cannot directly observe the warranted real wage, it is necessary to attempt to infer it from indirect evidence. This can be of two kinds. First, the nature of the disequilibrium a country finds itself in can be an indication of the position of the actual relative to the warranted real wage. If, for example, a country finds itself oscillating between unemployment and balance of payments deficits, this is an indication that the actual real wage exceeds the warranted. Second, one can attempt to

Chart 3
Internal and External Real Wage
(1973=100)




— Based on the escudo CPI of four main trading partners from <u>IFS</u> weights from Macedo (1979, p. 263)

--- Based on the Lisbon CPI including rent, Table 7, line 1 take account of the main factors which are likely to have affected the warranted wage. We will concentrate first on the second approach.

The factors affecting the warranted real wage may be divided into two groups. The more important group is the set of "external" shocks in 1973-75 which were not under the control of policy: the rise in oil prices, the onset of economic stagnation in industrial countries, and the growth in the labor force. Probably less important but still significant were policy actions: increases in indirect taxes and in Social Security contributions.

Let us start with the external shocks. The worsening in the international environment had the effect of reducing the real income of the Portuguese nation as a whole, and therefore presumably of reducing the warranted real wage. The size of this effect was quite large: as shown in Table 7, Portugal's terms of trade worsened by 24 percent from 1973 to 1978, which given the 1973 import share in GDP of 33 percent implies a reduction in real national purchasing power of about 8 percent.

At the same time, returnees and returning emigrant workers from Western Europe swelled the labor force by about 13 percent. Since the capital stock was not increased accordingly--indeed, the period since the revolution has been marked by low investment--the fall in the capital-labor ratio must also have acted to depress the equilibrium real wage.

Along with these external shocks came certain government actions which acted to further lower the warranted real wage. The most easily measurable of these were the increases in indirect taxes, from 13 percent of expenditure in 1973 to 15 percent in 1978, and the increase in Social Security payments from 11 to 15 percent of labour income. Both of these widened the "wedge" between the price of output and the remuneration received by factors of production.

Can we estimate the impact of these factors on the warranted real wage? There are a number of obstacles to any such calculation. First, there are the measurement difficulties: not one of the crucial numbers can be considered reliable. Second, there are technical difficulties arising from possible changes in the equilibrium share of wages in factor payments. If imports are a better substitute for capital than labor, the worsening in the terms of trade would tend to raise the equilibrium labor share (and conversely); the extent to which an increasing labor force lowers the equilibrium real wage depends on the elasticity of substitution between capital and labor.

The best we can do is to make a hypothetical calculation, which will give some indication of the order of magnitude of the effects. Such a calculation is presented in Table 9. We must emphasize that the assumptions on which the calculation is based are extremely shaky; the true number could easily be considerably more or less than our number. So as not to give a spurious impression of precision, we deal only in round numbers.

The first entry is the effect of the decline in the terms of trade. Here we assume that the proportional reduction in the warranted real wage is the same as the proportional reduction in real national purchasing power as a whole. The entry which follows is the effect of the 13 percent increase in the labor force. Two assumptions are made here: (i) The elasticity of substitution between capital and labor is taken to equal one, so that the equilibrium share of labor did not change;[8] (ii) We use the 1973 labor share of one-half as a measure of the elasticity of output with respect to labor input. The result, then, is an estimate of 6 percent for the effect on the warranted real wage. The effects of tax increases, shown by the remaining entries, add a further 6 percent.

Table 9

HYPOTHETICAL CALCULATION OF DECLINE IN WARRANTED REAL WAGE, 1973-78

| | |
|---|---|
| Decline in terms of trade | 8 Percent |
| Labor force growth | 6 Percent |
| Increase in indirect taxes | 2 Percent |
| Increase in Social Security payments | 4 Percent |
| Total | 20 Percent |
| Less: Productivity increase | 10 Percent |
| Equals: Decline in warranted real wage | 10 Percent |
| Decline in actual real wage from Table 7 | 11 Percent |

What is immediately apparent is that, without any deliberate inflation of the figures, we are able to come up with a quite large number for the decline in the warranted real wage. In fact, if we are concerned with the ratio of the actual to the warranted wage, this calculation suggests that the decline in the denominator of W/W* was more important in 1973-75 than the rise in the numerator. We must repeat, however, that what we have done here is purely a suggestive calculation, not something which can be treated as a reliable estimate.

The shocks we have considered must have led to a once-for-all decline in the equilibrium real wage. One would expect this to be offset over time by the normal, secular growth in the equilibrium real wage. There are some reasons for being pessimistic about this in Portugal's case, however. First, the years since 1973 have been marked by low productivity growth worldwide. Second, Portugal has had lower growth in investment since 1973 than before--and much of the investment has, as discussed in Section 3, been devoted to public sector projects of doubtful productivity. Finally, the institutional changes brought by the revolution have probably had at least the initial effect of hindering productivity growth. This is certainly true in agriculture, and may also be true for the nationalized firms.

We can get a rough estimate of the actual secular growth in the warranted real wage by looking at actual labor productivity. Our preferred estimate in Section 3 was that GDP per employee increased 10% from 1973 to 1978. But we suspect this may be too high. Official data on employment are "very heterogeneous and partially contradictory" (as generously described by the OECD). Growing employment in family enterprises, self-employment, and public administration has surely been understated.[9] Unless GDP is comparably understated (which is also possible) the productivity growth is exaggerated. In any case, even if we use the 10% estimate, we find that secular growth is much less than the impact decline in the warranted real wage.

The implication of this is that the warranted real wage is probably still, in 1979, below its 1973 level; 10 percent below, by our estimate. What this means for the appropriateness of the actual real wage is the next question.

## The Current Situation

Data for 1978 shows a real wage in Portugal down about 20 percent from its 1975 peak. At the same time, the disequilibrium state of the economy seemed to suggest that the real wage was still above its warranted level. That is, there was still some balance of payments disequilibrium (perhaps more than the current account indicated, since as pointed out in Section 3 some of the surge in emigrants' remittances may be temporary), together with high unemployment.

As we have seen, given the size of the shocks which have affected Portugal, it is possible that the real wage is still too high to allow simultaneous balance of payments equilibrium and full employment. It is too soon to judge, however; we may be witnessing delayed effects of the earlier period of high real wages.

In any case, there is no reason to believe that the real wage is currently very far from its warranted level. Indeed, if one compares our estimate of the decline in the warranted real wage with the estimated actual decline one sees that the two are almost exactly equal. Given the roughness of our methods, however, this seeming exactitude is a mildly embarassing coincidence.

5. An Assessment

In the years since April 25th, the realistic alternatives available to successive Portuguese governments have all been unpleasant. For the short run, the choice has always been between cutting real wages, increasing unemployment, and running a balance of payments deficit. As reserves have been drawn down and foreign indebtedness has grown, the last option has become increasingly difficult to manage. So the last five years have been marked by a narrowing of already binding constraints.

The eventual direction of Portuguese policy has thus been determined by the logic of the situation. Recent improvements in the external balance notwithstanding, the balance of payments constraint still precludes any sustained increase in either real wages or employment.

Given the constraints on policy, details of demand management are not of central importance. The actual record on stabilization is mixed. In 1974-75, although the slump in Portugal was deeper than in the rest of Europe, this is not surprising given the severity of the internal and external shocks. In fact Portugal did remarkably well: the actions of the government, even though not consciously planned, acted to support demand and limit the initial damage.

That in 1976-77, the demand expansion, and in particular consumption and public investment surge, were larger than in the industrial countries, despite the overhang of the 1974-75 disturbances, was also in part the result of lack of a consistent policy, but this time was clearly inappropriate. Indeed this expansion dissipated the remnants of the "war chest" and pushed Portugal deeper into debt, eliminating the country's remaining room for maneuver. More seriously, the implementation of poorly conceived investment projects in the public sector did not improve the country's prospects for long term growth.

The austerity program agreed upon with the IMF in May 1978 had thus to be more stringent than would have been the case, had it been implemented by the first constitutional government in the summer of 1976. Also, with rising private savings, the diversion of these savings to financing the rising deficits of the public sector and state the enterprises has probably become a major cause of continuing inadeqacy of private investment; an inadequacy which is an important brake on the growth of potential output and of the warranted real wage.

Real wages are at the heart of Portugal's experience in recent years. In 1974-75 a huge gap opened between the actual and the warranted real wage. Then an extraordinary decline in real wages set in, probably closing this gap. The downward flexibility of real wages in post-revolution Portugal is remarkable; the far smaller declines in the early 1970's may have been a cause of the revolution. However, the fall of the 4th constitutional government in June 1979 has been linked to the announcement of an extraordinary tax on labor income, which suggests that the downward flexibility may have a floor.

What can be learned from Portugal's experience? Perhaps the main lesson is in the "narrow limits of the possible" when one tries to redistribute income in a market economy. The allocative effects of disequilibrium real wages, manifesting themselves in a critical balance of payments problem, forced governments of pro-worker sympathies to engineer a steep decline in workers' standard of living. The dilemma of the politicized market economy could only have been eliminated by going over to a centrally planned economy. But this would have other and we believe far worse political and economic consequences.

FOOTNOTES

[1] OECD (1979a) lists as members of the group of newly industrializing countries the following nations: Greece, Portugal, Spain and Yugoslavia in southern Europe; Brazil and Mexico in Latin America; and Hong Kong, Singapore, South Korean and Taiwan, in Asia. Note that the grouping together of these countries is not meant to deny the significant differences in the growth process between, say, the "Gang of Four" in Asia and the southern European nations.

[2] This diagram draws on the well-known analysis by Swan (1960), as well as the recent discussion by Modigliani and Padoa-Schioppa (1977). Allowing for a positive effect of the real wage on output would not change the analysis.

[3] Stallings (1979) emphasizes this aspect.

[4] Portuguese estimates of fixed investment are based on sales of construction materials. Since administrative backlogs led to lax enforcement of building codes in this early post-revolution period, the composition of these sales changed, making estimation a hit-or-miss affair. Changes in stocks are estimated by even less reliable guesswork.

[5] Productivity calculated in this way diverges from the estimates reported by the Banco de Portugal. In the 1977 Report, the growth, productivity for 1976 and 1977 above was 11%. The 1976 figure, however, was 7.1% in the 1977 Report and 3.4% in the 1976 Report. See further estimates in Macedo (1979, p. 232, note 61).

[6] Thus the official figures for 1978 wage and price inflation are based on average annual earnings in manufacturing including social security payments and the new price index on the Continent whereas the series used in Table 7 line 1 and Chart 3 are the old indices of hourly wages and the Lisbon CPI including rent reported in <u>IFS</u>. The 1978 increase in the latter wage and price indices is 11% and 13% respectively, whereas the increase in the former is 18% and 21% respectively. The use of the Lisbon industrial wage index underestimates return to labour because both the Oporto industrial wage index and the agricultural index are higher, on the other hand the use of the Lisbon CPI including rent underestimates inflation. A weighted average of real wages in agriculture, men and women, Lisbon and Oporto using the respective CPI's (without rent) just about matches the one in Table 7, except in 1976 and 1977 where the values are 4 and 3 percentage points higher respectively.

[7] The levelling-off of growth in the internal real wage before 1974 suggests a "rising expectations" story of the Portuguese revolution, a hypothesis which has been advanced in the psychology and politics literature, namely by Davies (1962) and Gurr (1970). The inverted J shape of the real wage series after 1974 is used by Kolm (1977) Figure 1 p. 35 as a revelation of the effects of a political victory

of the right following a political victory of the left in the cases of Chile and Portugal. The effect of the external shocks is however crucial. Notice that the external real wage has a much more pronounced J pattern.

[8] Estimates of the elasticity of substitution between capital and labor have been made for Portugal by Sousa (1977) and Barbosa (1977). Sousa's estimate was 0.6; Barbosa's 0.8. In assuming a value of 1, we are biasing our results toward an understatement of the decline in the warranted real wage.

[9] (1979b, p. 10). The three sources indicated in Table 5 are not comparable with each other. Sources B and C, which are now the only ones used by Banco de Portugal begin in 1974 (See INE, Boletin Mensal, 1979 no4,supplement) and the values of source A for 1978 are not directly available. These values are close to the ones indicated by Moura (1979, Table 4) which include agriculture and public sector even though (OECD 1979b, p. 11 footnote 10) claims that the Ministry of Labour poll excluded these sectors.

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