Contractive Adjustment in Mexico, 1982-1989 *

To cope with the debt crisis, the IMF and other international agencies have prescribed an economic policy for Latin America which has been partly or wholly implemented in most of these countries. Since its emphasis lies in the reduction of domestic demand – coupled with drastic changes in relative prices – analysts have labelled the strategy contractive adjustment.[1]

The purpose of this paper is twofold. Firstly, I would like to make an assessment of the macroeconomic effects of this strategy in Mexico's recent evolution.[2] However, rather than a detailed account of that evolution, I will present an overall picture of its most relevant aspects. On the other hand, I would like to raise some theoretical challenges to several of the underlying assumptions that have sustained the Mexican government's recent economic policies.

Thus the paper is organized as follows. Section I presents an overview of the strategy and of Mexico's main economic policy measures. Section II deals with the evolution of effective demand. Section III appraises the effects of contractive adjustment on Mexico's growth performance. Section IV concludes with a general discussion of the problems related to this strategy.

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[1] Although the label may be not very precise, for the sake of brevity it will be adopted in this paper.

[2] In order to concentrate on the growth performance and due to space limitations, I will not deal with inflation here.

I. Contractive adjustment and Mexico's recent economic policy measures

1. - The main stress of contractive adjustment lies in the overall deregulation of the economy and the opening of the country to external markets and competition.

This economic policy sought to cope with the immediate problem of the debt crisis and to lay the foundations for a new economic model. It was assumed that the external transfer following the curtailment of foreign credits could be achieved in the short run through devaluation and the resulting increase in exports and import substitution.[3] Imports would be further reduced by tightening domestic demand – to be achieved by reducing the public deficit and credit to the private sector, and by cutting wages.

Such economic policy was also expected to bring about structural change whose macroeconomic impact would be the following. On the one hand, the share of the tradable goods in output should increase. Furthermore, exports and private investment would substitute government expenditure as leading demand components, while simultaneously improving the supply conditions. Finally, the capital/output ratio should fall and labour intensity of investment should increase – thus improving the overall efficiency of the economy. The long-run growth rate should then be raised.

Mexico is a particularly interesting example, since contractive adjustment has been pursued almost since the onset of the crisis. Hence the interest in analyzing its performance.

2. - Immediately after the onset of the debt crisis, Mexico implemented a contractive adjustment strategy, which was intensified after 1983. Some of the principal economic policy measures undertaken can be grasped from Table 1. (See also Table 2 below.)

In 1982 several nominal devaluations took place, raising the real exchange rate by over 50% with respect to the previous year. From then on, fluctuations notwithstanding, the peso has been kept persistently undervalued. Indeed, in spite of a 25% decline in the real exchange rate between 1987 and 1989, that rate was still 19% below its lowest value since the seventies – *i.e.* its real value in 1977.[4] Thus the relative price of tradable goods grew about 15% between 1981 and 1988.

Real wages have also been dramatically reduced.[5] It can be noticed from the table that the worst fall occurred after 1982; again in 1988 and 1989 strong reductions occurred. All in all, average real wages in 1989 were 49% below their 1981 level, while real minimum wages had fallen by 52%.

Monetary restraint has been an important policy objective since the beginning of the debt crisis. Policy makers have thus persistently raised nominal interest rates, expecting real interest rates to follow suit. Nevertheless, the table shows that this goal has not been easy to

[3] Import substitution has not been as emphasized as export promotion in this strategy.

TABLE 1

ECONOMIC POLICY MEASURES

	1981	1982	1983	1984	1985	1986	1987	1988	1989
I) Nominal exchange rate [a]	100	234	613	755	1268	2607	5747	9345	10909
II) Real exchange rate [a]	100	151	199	152	166	201	206	167	162
III) Real minimum wage [a]	100	96	73	68	68	62	58	51	48
IV) Average real wage [a]	100	98	72	68	67	61	55	53	51
V) Real interest rate (%)	3.1	−24.9	−3.8	3.6	5.6	6.3	−4.1	27.3	29.5
VI) Licensed imports [b]	13.4 [d]	na	na	na	25.4	18.7	0.6	0	na
VII) Average import tariff [c]	22.8 [d]	na	na	na	23.5	24.5	11.8	11.0	na

Notes: [a] Index; [b] Share of the value of production; [c] Weighted by the value of production; [d] April 1980.

Sources: I to V Author's estimates, on the basis of *Economía Aplicada;* VI and VII, TEN KATE, A. and F. DE MATEO (1989)

[4] Real devaluation brought about an improvement in Mexico's competitiveness both with the USA, its main trading partner, as well as other competitor semi-industrialized countries, who also devalued their currency in the period 1980-1987 (*e.g.* Brazil, Hong Kong, Korea, Malaysia, the Philippines, Singapore and Taiwan). *Cf.* MARIO DEHESA, 1988.

[5] Wages are considered here a policy instrument, since different studies have shown that the evolution of average wages is strongly dependent upon minimum wages, which are fixed by the government.

achieve. In fact, the real rate declined drastically in 1982 and was negative in 1983 and 1987. That was the result of inflation accelerating and nominal interest rates lagging behind. When inflation finally came under control – *i.e.* in 1988 – the process reversed and real interest rate increased greatly. Accordingly, monetary restraint was achieved mainly through quantitative credit targets. Thus, from 1983 to 1988 M1 grew systematically below the inflation rate.

Opening the economy to imports was not an initial objective of the strategy but since 1984 it has been a manifest goal. This has been attempted through various measures, notably reduction in import licensing and decrease in tariffs. The table shows that import licensing was initially raised, but in 1986 and 1987 dramatic reductions occurred. Since 1988 import licensing has been very low. On the other hand, the (weighted) average import tariff drastically declined to 11% in 1988 – from 22.8% in 1980 and 24.5% in 1986.[6] It should also be noticed that the (implicit) real effective protection, which was 42% in 1981 (average for all branches, excluding the oil industry) had fallen to −29% in 1987.

To foster exports, policy makers have regarded both devaluation and import liberalization as the most prominent measures, since they consider that domestic entrepreneurs should be put on at least an equal footing with foreign competitors. As already stated, the real exchange rate has been considerably raised. On the other hand, it should be mentioned that, before the overall liberalization of imports, temporary import permits were granted to exporters on generous terms. But, besides these measures, other steps have been taken to stimulate exports. Thus, financial and tax incentives have been awarded to exporters (and their suppliers of intermediate goods), regulations have been simplified, public and private institutions to support export efforts have been created, etc.

Finally, Table 2 provides information regarding the fiscal policy stance. It is well known that in order to measure the impact of public spending over total internal demand, both the amount of that spending and its financing should be considered. Accordingly, the table includes figures on the real internal spending, as well as on the sources of government revenues.[7]

[6] The unweighted average import tariff declined from 27% in 1982 to 9% in 1987.

[7] The conceptual and methodological basis of this breakdown is a slightly modified version of Kalecki's theory of finance in a capitalist economy. *Cf.* M. KALECKI 1971 (ch. 7) and 1972 (chs. 3 and 5). The ensuing analysis also follows Kalecki's theory.

TABLE 2

MEXICO'S FISCAL POLICY STANCE

	1981	1982	1983	1984	1985	1986	1987	1988	1989
Real internal spending[a]	100.00	92.08	74.05	75.68	81.69	81.01	66.54	65.95	63.61
Real internal deficit[b]	10.75	8.36	3.64	3.04	3.17	1.46	0.29	3.02	0.52
Taxes on consumption[a]	100.00	102.67	113.52	117.50	113.11	89.91	116.14	104.11	102.86
Taxes on savings[a]	100.00	74.75	70.79	78.51	63.23	61.25	56.36	80.95	93.95

Notes: [a] Index; [b] Percentage of GDP.

Source: Author's estimates, based on statistics from *Economía Aplicada*.

Real internal spending is defined as real total spending less the public sector's imports. The sources of public finance are split into real internal deficit, taxes on consumption, and taxes on savings. *Real internal deficit* is defined as the difference between real internal government spending and government revenues from domestic sources. *Taxes on consumption* include indirect taxes, direct taxes on wages and wage-earners' contributions to social insurance, less the (net) government transfers to the personal sector. Finally, *taxes on savings* include taxes on entrepreneurial profits, less the (net) government transfers to the entrepreneurial sector.[8]

For any given decrease in real internal public spending, it can be assumed that: *a)* if combined with a decline in the real internal deficit it has a strong contractionary effect; and *b)* if associated with an increase in taxes on consumption, it has a strong negative impact on internal demand (because the decline in public spending is reinforced by a fall in private consumption).

The pattern of Mexico's recent fiscal policy can be readily grasped from the table. First, real internal public spending consistently declined, both in absolute terms and as a proportion of GDP (from 25% to 15%).[9] Equally important, while the real internal deficit fell in practically every year, taxes on consumption increased both as a share of GDP and in absolute levels all through the period – even when taxes on savings declined slightly. If the years 1985 and 1986 (when real internal spending was raised even when taxes on consumption declined) are excluded, it seems clear that the fiscal policy must have contributed to restrain domestic demand. Of course, this pattern of fiscal – and monetary – policy stance was to a large extent conditioned by the external constraint: fiscal and monetary policies needed to adjust in order to make room for the public repayment of the external debt and to cope with inflationary pressures. This was even more necessary, given the negative evolution of Mexico's terms of trade which declined by almost 45% in the 1982-1986 period.[10] But the extent of the adjustment seems to have gone too far.

[8] It should be noticed that these revenues do not add up to total public revenues.

[9] However, there was a huge increase in the government's internal interests payments in 1988 and 1989 as a consequence of the rise in real interest rates. This had a certain expansionary effect on internal demand.

[10] On the other hand, the implicit rate of interest on Mexico's outstanding foreign debt persistently fell (in the 1982-1989 period its evolution was 14.3%, 10.7%, 11.8%, 10.1%, 8.1%, 7.6%, 8.3% and 9.6%).

II. Effective demand and the performance of the economy

3. - Table 3 provides the basic information concerning the proximate determinants of Mexico's overall economic evolution for the 1981-1989 period.

From the table it can be seen that GDP growth was quite modest – *i.e* 0.4% average yearly growth rate for the 1982-1989 period – with large fluctuations. Nevertheless, from 1987 onwards expansion seems to have resumed (preliminary estimates suggest a growth rate around 3.9% for 1990).

Government consumption fluctuated but grew slightly for the whole period and public investment systematically declined.[11] Thus government internal demand diminished 4.4% between 1981 and 1989. Private consumption also fluctuated, but resumed growth from 1988 onwards. Private investment declined abruptly in 1982, 1983 and 1986 but recovered forcefully from 1987 onwards. Overall, internal final demand declined 3% due mainly to the decrease in public investment, while net external demand expanded dramatically.

It can be also noticed that in the 1982-1989 period there was a huge downfall in capital accumulation, with investment declining at 4.7% yearly average rate. In absolute terms, gross fixed investment has invariably been below its 1981 level, and in 1989 it was about 30% below that level. Both private and public investment shared that decline (with 2% yearly rate of decrease for the former and 10.6% for the latter). It should be mentioned that gross investment levels were, in general, above real depreciation levels so that capital stock expanded, though at a declining rate:[12] from an annual rate of 9.7% in 1981, to 1.2% in 1989 and expanded by 23% overall between 1981 and 1989.

The table shows that for the period as a whole exports were the most dynamic demand factor. It seems interesting to estimate how much of exports growth was due to external causes and how much was the consequence of internal policies and forces.

[11] Estimates suggest a dramatic change in this pattern from 1990, with public investment growing at an annual rate of over 20%.

[12] No figures for capital stock for the overall economy are available. Here capital stock was estimated as the sum total of gross fixed investment undertaken during the previous 15 years – *i.e.* a 15-year life span of capital equipment was assumed.

TABLE 3

MEXICO'S GROWTH RATE OF DEMAND COMPONENTS
(in percent)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1982-1989
Gross Domestic Product	7.9	- 0.6	- 5.3	3.7	2.8	- 3.5	1.8	1.5	3.0	0.4
Private Consumption	6.4	2.6	- 8.0	3.5	2.4	- 3.8	0.2	2.5	7.3	0.7
Government Consumption	10.0	2.3	- 1.3	6.8	1.3	0.7	- 1.3	- 0.4	- 1.1	0.8
Gross Fixed Investment	14.8	-16.8	-26.2	4.3	9.9	-12.0	- 1.3	5.4	6.3	- 4.7
Private Investment	14.0	-17.9	-23.2	8.2	16.4	-10.9	5.7	10.2	10.0	- 1.2
Public Investment	15.8	-15.3	-30.9	- 1.0	0.0	-14.0	14.3	- 5.7	- 3.3	-11.1
Exports	10.1	3.6	32.4	2.6	- 3.5	22.0	15.3	4.7	- 0.7	8.9
Imports	17.5	-39.1	-32.9	11.9	22.8	-11.4	1.4	35.6	-15.3	- 2.9

Source: National Accounts Statistics.

For this estimation, Mexico's "own export growth" – *i.e.* export growth over and above that induced by the external demand pull – or the period 1981-1989 was calculated. Mexico's "own export growth" is defined here as the difference between actual export growth and "demand-driven export growth". I define the latter as the export growth which would have originated if Mexico's share in its main foreign markets had not changed.

To estimate "demand-driven export growth", I took the growth rate of imports (in real terms) of the OECD.[13] The effect of that drive would have meant an export volume in 1989 65% higher than in 1981 for Mexico – *i.e.* total exports would have amounted to 111.2 billion (instead of 133.8, the actual figure) of 1970 pesos. Thus, Mexico's "own export growth" would amount to 22.6 billion of 1970 pesos (133.8 – 111.2). The figure is high, and confirms that Mexico was quite successful in its attempt to gain external markets.

The table also shows that both imports and the import/GDP coefficient fell dramatically. This has been sometimes taken to imply that import substitution advanced in that period. In fact, that fall was the result of the reduction in investment and in the share of investment in GDP.[14]

Thus, the external transfer was aided by an otherwise negative feature of Mexico's industrial structure: its relatively low degree of industrial integration. This feature implies a high import coefficient related to investment demand, and thus a more than proportional import decline – with an ensuing improvement in trade balance – in the business downturns, when both investment and the share of investment fall. Thus, when investment recovered after 1987, the import coefficient abruptly rose – *i.e.* up to 9.2% in 1989, from 5.9% in 1987.

[13] In the period 1981-1989, Mexico's exports to the OECD countries represented about 90% of total exports.

[14] A close statistical association can be found between both total imports and gross fixed investment, and between the share of imports and the share of investment in GDP (adjusted correlation coefficient of .83 for the 1970-1986 period).

III. Implications of contractive adjustment on Mexico's economic performance

4. - There are several elements to be considered when evaluating the adequacy of an economic policy scheme. In the first place, it is important to appraise whether that policy contributed to satisfying the main short-run objectives put forth for the period. Besides this, one ought to evaluate if that policy brought about such structural changes as were pursued. Finally, the effects of the scheme on growth and economic welfare, on utilization of the available resources and – last but not least – on income distribution have to be assessed.

One of Mexico's chief short-run objectives was to be able to service its debt and thus avoid confrontation with its creditors. Another related objective was to increase exports, especially of manufactured goods. It has been so far shown that both these objectives were attained; and in this connection adjustment in Mexico did in fact succeed.[15]

The question arises now as to whether that adjustment policy brought about beneficial structural transformations. The answer to this question is somewhat difficult not only because the time elapsed is brief but also because the concept of structural transformation itself is rather elusive. Nevertheless, an answer to this point is attempted in the following.

As stated before, one of the long-run objectives of the adjustment strategy was to substitute exports and private investment for government expenditure and consumption as leading demand components. The figures show that this objective has been achieved – amply concerning exports, but somewhat more modestly and belatedly in connection with private investment. Indeed, as already mentioned, the latter resumed growth and has maintained expansion since 1987 at a very high rate (preliminary estimates put private investment growth at about 8% for 1990). Nevertheless, in 1990 private investment was still below its level achieved in 1981.

Concerning the sectoral changes, the first aspect to be noticed is the fact that the production of tradable goods (agriculture, mining

[15] It also succeeded in achieving another important objective, not analyzed in this paper: reduction of inflation. The consumer price index peaked in 1987 (a yearly rate of 131.8%) to fall to 20% in 1989. In this area Mexico has fared much better than most Latin American countries.

and manufacturing) has only slightly increased its share in GDP – *i.e.* from 36.9% in 1981 to 37.8% in 1989. Notice also that the performance of agriculture was far from satisfactory and that in 1988 and 1989 agriculture GDP in fact declined (6.5% overall). This is rather puzzling behaviour, since the tradable sector ought to be stimulated thanks to the real devaluation and the ensuing improvement in its internal terms of trade and profitability.

It should be also mentioned that expansion of exports has been unevenly distributed. The performance of manufactured goods was particularly outstanding: in real terms, its yearly rate of growth reached 18.4% on average in the 1982-1989 period; with a (current) dollar rate of 18.7%, which raised the share of manufacturing exports in total exports to 57% in 1989, up from 18% in 1981; and the share of exports in manufacturing GDP from 7.1% in 1981 to 19.3% in 1989.

The above proves that pessimistic views arguing the incapability of the industrial sector to compete in foreign markets, due to its having been originally created to substitute imports rather than to export, and to its inefficiency, were ill-founded. It might be thus concluded that – contrary to some contentions – structural modernization was not a prerequisite for exporting manufacturing goods (although it certainly is a condition for maintaining its high rates of expansion). It is also worth mentioning that this expansion was not in agreement with the conventional theory of international trade. The share of metal products and machinery in total exports rose from 27.6% to 38% in the period 1982 to 1988, even when the share of traditional and labour-intensive industries such as food and beverage, footwear and textiles declined from 28.5% to 19.3% (Lilia Dominguez, forthcoming).

On the other hand, a detailed statistical analysis undertaken for the manufacturing sector shows that the most transnational sectors took the lion's share in the export expansion. Between 1982 and 1987 exports from transnational firms increased fivefold in current dollars and accounted for about 80% of the total expansion of manufactured exports from the private sector. Auto exports alone grew from 0.2% to 2.2% of GDP (Clemente Ruiz, 1990).

Still, it should be noticed that exporting also increased in industries led by local business or in those in which earlier investment processes had not been launched with primarily the foreign market in view, and that practically all manufacturing branches increased their

export growth rate above their trend value, as well as their export/gross value of production ratio.

Agricultural exports lagged behind. Their outstanding average growth rate of 11% for the 1982-1989 period is entirely explained by the results achieved in two exceptional years, 1984 and 1986; the increase in the share of exports in agricultural GDP – *i.e.* from 3.7% in 1981 to 6.9% in 1988 – was modest compared with the accomplishment of the manufacturing sector.

Concerning the pattern of capital accumulation, available data do not show any change in the structure of investments toward the tradable goods sectors. A detailed statistical analysis on investment and capital stock undertaken for almost all manufacturing branches for the period 1980-1987 shows the decline in investment to have been a widespread phenomenon, affecting practically all branches. Furthermore, no association was found between the export growth rates and investment growth rates in the different branches.[16]

In other words, though the expansion of exports did presumably stimulate investment in selected firms, a large part of that expansion was based on already existing production capacities. In spite of almost all productive branches having shared in the impressive export hike, that does not seem to have stimulated faster accumulation of new capital in those branches where exports grew faster. Thus, no reorientation of capital accumulation (at least within the manufacturing sector) seems to have taken place.

But the above should not be taken to imply that Mexican firms and entrepreneurs did not react to the new strategy and opportunities. Actually, several case studies carried out among manufacturing firms show interesting changes at the microeconomic level. These changes have raised efficiency at the plant level even though they do not seem to have required huge investments. Hence they may account for the capacity shown by many Mexican as well as foreign-owned firms to gain competitivity in the internal and international markets without heavy investments.

For example a study based on a sample of firms from modern industries – *i.e.* automobile and auto-component, electronics, electric appliances, machine tools and "maquiladoras" (in-bond industries)

[16] A cross-section regression was run for the period 1983-1987 between investment and export growth rates at a branch level for manufacturing, but no association was found between the two variables (*cf.* J. López, 1988).

– found important modernization efforts. Thus the author detected that "both Mexican and foreign firms have become more conscious of quality and efficiency. They feel compelled to take measures for rationalisation: *e.g.* the adoption of F(actory) A(utomation) machinery, the improvement in the plant layout, the introduction of the team work and Q(uality) C(ontrol) circle systems and the training of workers in quality control methods". Also many exporting enterprises introduced product, process and organizational innovations (L. Dominguez, forthcoming).

This process of upgrading seems not to have been confined to the modern industries or the export-oriented ones, but appears as a rather pervasive phenomenon. A case study concerning the footwear industry – which is a very traditional one in Mexico and has been under severe pressure from foreign competition – also found interesting changes. The authors conclude that "Technical change is mainly addressing organisational aspects of the production process...The sequence of changes...has started with aspects which may be considered as obvious and simplistic. In fact they are not. The introduction of inventory controls, changes in work place distribution, integrating lines of production which were far apart...imply a radical transformation in managerial and labour attitudes towards production and management" (*cf.* Lilia Dominguez and Flor Brown, forthcoming).

5. - It can be thus concluded that the main short-run objetives, as well as some important structural transformations pursued by Mexico's government with its new economic strategy have been achieved during the period. Nevertheless it was also noticed that this meant economic stagnation, accompanied by a decline in domestic absorption. Thus, with respect to growth performance, the economic policy was not extremely successful.

But then it may be argued that the poor macroeconomic results were the consequence of the harmful evolution of the international economy. This statement is not entirely wrong: Mexico's terms of trade dramatically declined during the period, thus worsening its already huge transfer problem.[17] However, even a large external

[17] Still, it should be noticed that the transfer problem was somewhat alleviated thanks to the enlargement of Mexico's external – particularly the US – markets.

transfer such as the one Mexico was forced to accomplish need not entail economic stagnation. If productive capacities are fully utilized, domestic absorption should be reduced. In the short run, this may entail some fall in production and in the degree of utilization of capacities. But that situation should not persist for very long. On the other hand, if idle resources do exist and if an external demand is forthcoming, that transfer may be paid for increasing exports and output – indeed, even domestic absorption need not decline. But this obviously depends upon expanding output through an adequate policy mix, which utilizes available resources.[18] An analysis of the effects of contractive adjustment on resource utilization is thus called for.

6. - Table 4 assesses the recent evolution of utilization of resources. It includes indices of employment and underemployment – *i.e.* open unemployment and "informal" employment. It also incorporates estimates of the index of capacity utilization.[19] Finally, to estimate whether and to what extent foreign resources were utilized or dissipated, I include figures on the share of capital flight over GDP (in percent).

The table shows that both open unemployment and underemployment grew dramatically. The rate of underemployment (open unemployment and informal employment) in the urban areas amounted to about 30% in 1989. As a matter of fact, the crisis induced a huge transfer of the working force from the formal to informal activities – the latter absorbing 22.4% of employment in 1988.[20]

On the other hand, the index of capacity utilization decreased about 20% from 1981 to 1988. Indeed, full utilization of material productive capacities could have enabled GDP to be about 23% higher in 1989 than it actually was.

Finally, it can be seen that capital flight has been a persistent phenomenon. It peaked with US$ 12,100 and US$ 10,980 million in

[18] During the oil boom there was some discussion as to whether the Mexican economy was overheated. Without going into details, I can only mention that several reports concur in that managers thought that firms still had some spare capacities and could expand production.

[19] Figures on capacity utilization are almost impossible to come by. In the table it is assumed that productive capacity grew *pari passu* with the capital stock.

[20] An interesting survey conducted by the *Instituto del Consumidor* (a government agency) among urban low- and middle-income workers in Mexico City in the years 1985-1988, found that during the crisis poor families relied on expansion in informal employment in order to maintain their living standard and counterbalance the decline in employment and real wages.

TABLE 4

MEXICO'S UTILIZATION OF RESOURCES

	1981	1982	1983	1984	1985	1986	1987	1988	1989
Employment Urban Sector									
Open employment (%)	3.9	4.1	6.2	5.9	6.1	7.1	7.3	7.5	7.1
Informal employment (%)	4.1	7.7	11.9	13.8	15.8	18.9	20.8	22.1	22.1
Rural Sector									
Open unemployment	3.2	3.9	3.9	3.7	3.6	4.4	4.7	6.9	8.7
Capacity Utilization (index)	100	94	86	86	86	81	81	81	81
Capital Flight (% of GDP)	4.1%	4.2%	1.1%	0.9%	1.2%	–	0.4%	0.8%	–1.4%

Source: Author's estimates.

1981 and 1982 respectively, but still averaged US$ 2,350 million in the 1983-1988 period. Only in 1989 (and apparently in 1990) did part of this capital came back to Mexico. The cost of this can be readily assessed if it is considered that had this flight not occurred, for example in 1988, total imports (and so GDP, assuming the same import coefficient of that year) could have been about 7.5% higher than they actually were without worsening the balance of payments.

Furthermore, this waste of resources persisted for so long that it cannot be ascribed to frictional elements. Labour underemployment has continued to increase; the rate of utilization of material productive capacities is still very low; and seven years of crisis (and a real interest rate of about 30%) were necessary before private capital movements reversed.

This is certainly an unsatisfactory evolution. The social cost of labour unemployment is obvious. But the economic consequences of underutilization of resources are also far-reaching: their greater use would have made it possible to service the debt at a lower cost. When a country has to meet an external transfer, it needs to make more and better utilization of its resources. But exactly the contrary occurred in Mexico's recent experience.

7. - Finally, the effects of contractive adjustment on income distribution will be assessed. No comprehensive figures on the recent evolution of income distribution in Mexico exist. Nevertheless, Table 5 provides some useful information on the subject. It includes figures on the share of wages and the share of operating surplus in GDP for 1981 and 1989, as well as indices of total real wages and surplus levels.

TABLE 5

INCOME DISTRIBUTION

	1981	1989
Wages		
Share in GDP	37.4%	23.4%
Index	100.0	62.5
Operating Surplus		
Share in GDP	56.0%	66.8%
Index	100.0	119.3

Source: Author's estimates, on the basis of National Accounts Statistics.

It can be seen that the share of wages in GDP declined about 14 percentage points, and total wages fell almost 40% in real terms. On the other hand, surplus share increased from 56% to 68%, and the surplus level rose about 20%.[21]

It should be recognized that the evolution of the share of wages in value added overestimates the increase in income concentration during the period: operating surplus includes income received by informal workers, which have increased both in relative and absolute terms. As stated earlier, workers have developed strategies to survive the crisis by taking additional jobs, and more members of the household have gone into the job market.

Accordingly, in order to arrive at a more precise estimate of income distribution, I did the following exercise. I assumed that each year informal workers receive an average per capita income equal to average real wages, and a figure on annual informal total income was calculated.[22] That figure was deducted from surplus, and an estimate of *genuine surplus* was obtained. Table 6 reports the estimate of the share of genuine surplus in GDP, and its index for the extreme years of the period.

TABLE 6

EVOLUTION OF GENUINE SURPLUS

	1981	1982	1988	1989
Genuine Surplus				
Share in GDP	54.0%	50.3%	59.2%	60.3%
Index	100.0	92.8	109.8	115.2

Source: Author's estimates.

[21] The decline in the share of wages can be easily explained on the basis of Kalecki's theory of income distribution (M. KALECKI, 1971, ch. 6). Recall that:

$$w = 1/[1+(k-1)(j+1)]$$

where w denotes the relative share of wages in value added, k denotes the ratio of price to unit prime cost and j stands for the ratio of materials bill to the wage bill.

Real devaluation raised the price of (imported and national) raw materials and hence increased the ratio of materials bill to the wage bill. Besides this, during the period the ratio of price to unit prime costs systematically grew. A detailed study shows the ratio of price to unit prime cost to have increased in 45 out of 49 branches of manufacturing between 1981 and 1988.

[22] I took the average rather than the minimum wage rate as a proxy for calculating income of the informal workers because some information suggests that the percentage of workers receiving the minimum wage has greatly declined.

It can be seen that income distribution seems to have actually worsened. Everything being considered, it appears that, the crisis notwithstanding, genuine surplus increased and its share in GDP expanded. The burden of the crisis was in fact very unequally distributed.

Thus it can be suggested that contractive adjustment was instrumental in stabilizing profits in the midst of the debt crisis. However, it was not equally successful in stabilizing the profit rate. Indeed, if we take into account the expansion of the capital stock – 23% for the whole period – it can be estimated that that rate fell about 19% between 1981 and 1989.

IV. Conclusions: the problems with contractive adjustment

8. - The previous analysis shows that Mexico's adjustment strategy has had mixed results. It has been successful in connection with export growth and reducing inflation, it has brought about important structural changes, and it seems to have enhanced the economic efficiency at a microeconomic level. But it has failed in some very important areas: GDP growth, material and import capacity utilization, employment and even the rate of profits have declined. The macroeconomic efficiency seems to have worsened even when income distribution has deteriorated.

This being the case, it is worthwhile to appraise whether the reasons for that poor macroeconomic evolution derive from flaws in the underlying theory. It would therefore seem useful to analyze what the logic and the assumptions of this theory are.

Supporters of contractive adjustment make – implicitly or explicitly – two alternative assumptions. Either domestic demand does not fall when public expenditure and/or the real wage rate decline; otherwise the eventual decrease in domestic demand directly induced by that decline could be offset or more than offset by a rise in domestic and international demand for tradable goods. Whatever the case, neither GDP nor capacity utilization or employment should diminish. The question then arises as to why this did not happen in Mexico. In other words, why did GDP stagnate even when the degree of utilization of the productive capacities and employment

fell? Perhaps the theory of effective demand may provide an answer to this question.

9. - Consider first the consequences of reducing the real wage rate and/or public expenditure. Since its inception, the theory of effective demand proved that under rather general circumstances this reduction would curtail domestic spending.

This theory accepted that under full employment conditions – or under full utilization of productive capacity, or under limited and rigid import capacity and import coefficient – an increase in public expenditure or in the real wage rate would normally generate inflation and provoke a fall in (private) domestic spending and profits.[23] But the theory also showed the process itself to be asymmetrical: reductions in public expenditure or in the real wage rate *will not* induce an immediate increase in private spending and investment. But if that immediate increase does not materialize, output will diminish. Moreover, even profits and the rate of profit are likely to decline.[24]

Whether or not proponents of contractive adjustment recognize the above asymmetry, they argue that the eventual decline in domestic demand brought about by reductions in the wage rate or public spending would be more than offset by expansion in foreign and domestic demand for tradable goods, provided only that the exchange rate is sufficiently raised. Hence the need for a (real) devaluation.

We know that this offsetting requires the elasticity of exports and imports to achieve some minimum values. This in turn depends upon certain conditions on the supply and demand side, namely:

a) Material and human productive capacities should be absolutely flexible and transferable, so that those freed by the fall in the domestic market can be moved without hindrance into the production of tradable goods. At the same time, firms should possess adequate marketing channels and capabilities.

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[23] This aspect emerged clearly in the debate over the financing of World War II, especially in England.

[24] The preceding argument follows from Kalecki's theory (M. KALECKI 1971, esp. ch. 7). In an open economy the situation is somewhat changed since, for example, a decrease in the real wage – which, under a constant mark-up and fixed nominal exchange rate, is analogous to a devaluation – may induce an increase in exports and will entail a decline in imports. The subsequent improvement in the trade balance will raise profits. This complication will be analyzed below.

b) Devaluation ought to raise, rapidly and adequately, the external demand for exports and the internal demand for import substitutes.

Clearly, if domestic demand declines productive capacity will be freed, but no assurance exists that capacities are freed precisely in the tradable goods sector. Furthermore, even if surplus capacities were to arise in or could be transferred to that sector, firms with surplus capacity may not necessarily be in a position immediately to increase their exports or to supply import substitutes. Goods sold in one market cannot easily find customers in another. Perhaps more important, managers may not know exactly if and where would-be foreign customers can be reached, may lack marketing channels, etc.

On the other hand there is no assurance that a large demand for additional exports or import substitutes would immediately appear. This will depend upon the evolution of our trading partners, upon the change in relative prices and upon the price elasticity of demand for our exports and imports.

Thus if the change in relative prices are modest and/or if no strong response come from the supply and/or the demand side, elasticity of exports and/or imports will be low. But if these elasticities are low, devaluation will not entail a strong increase in the trade balance. And if that balance does not improve substantially, then devaluation by itself will have a contractionary effect. This would follow from: i) the reduction of the share of wages in value added, and ii) the decline in private investment.[25]

Under these circumstances, then, the squeeze brought about by devaluation will add to the reduction in domestic demand provoked by the fall in the deficit and in the real wage rate. Thus, with the shrinkage of demand, not only will imports decrease, but output, capacity utilization, and employment will also fall. And unless the trade balance improves rapidly and strongly, private profits may also plummet.[26]

[25] The share of wages in value added will decline owing to the increase in the ratio of the aggregate cost of materials to the wage bill and because (probably) the price/prime cost ratio will be raised (see footnote 21). On the other hand, devaluation raises the supply price of capital goods and deteriorates the financial position of firms indebted in foreign currency. The greater the indebtedness ratio, the more likely is devaluation to trigger a decline in private investment.

[26] Recall that gross profits are equal to the sum total of private investment, capitalists' consumption, the budget deficit and the trade balance (*cf.* M. KALECKI 1971, ch. 7).

It also follows that fulfillment of the so-called Marshall-Lerner condition may be not enough to maintain the profit level (and rate) when a policy package comprising budget deficit reduction *cum* devaluation is implemented. Indeed, the trade balance should not only improve, it should improve by an amount large enough to counterbalance the decline in the budget deficit and private investment.

But proponents of contractive adjustment do not seem unduly worried about the recessive effects of their policies because they assume it will be a short-run phenomenon, and that the slump will be spontaneously overcome in the medium-long term. After a pause, they believe, growth will resume, albeit at a faster pace.

In fact, it is assumed, at least implicitly, that the long run price elasticity of exports and import substitutes are high, so that sooner or later the expansion of exports and the decline in imports so induced will raise overall demand and profits. This, together with the freeing of financial and material resources formerly absorbed by state spending, should spur private investment – especially in the sectors producing tradable goods. Thus, the latter should grow at a rate over and above their historical trend. Both export and private investment growth, coupled with a declining import coefficient, would thus guarantee growing demand and profits.

However, this need not be the case. As already argued, contractive adjustment will normally trigger a decline in profits (or at least in the profit rate) in the short run, due to a fall in the public deficit and private investment. The drop in private profits might be offset by tax cuts or subsidies to businesses and a rise in the external surplus. But even then it would be difficult to spur private investment within a reasonable time, due to the negative effect of the increase in idle capacity on private investment.

Thus, for all its refinement and its (valid) emphasis on the necessity to institute an adequate business climate to induce private investment, contractive adjustment strategy seems completely to overlook the fact that the most important elements in that climate are strong and expanding profits and high utilization of the productive capacities.

10. - The preceding reasoning may help us understand the macroeconomic problems faced in Mexico's recent experience.

In the 1981-1989 period, domestic demand fell from 935.2 to 907.1 billion of 1970 pesos – *i.e* about 3% in real terms. This is a rather odd situation because it was coupled with a large expansion in

the trade surplus.[27] Under normal conditions that expansion should have enlarged domestic demand.

The annullation of the positive effect of the increase in the external surplus can only be the consequence of the decline in the other autonomous components of internal demand, and/or the reduction in the multiplier of autonomous expenditures. In fact, the two phenomena occurred simultaneously.

The fall in government expenditure was combined with – actually contributed to precipitating – a reduction in private investment, the other autonomous component of domestic demand. As already suggested, devaluation raised the supply price of capital goods – even when the decline in the profit rate reduced their demand price – and also dramatically raised the indebtedness ratio of private firms.[28] The above, combined with the fall in the degree of utilization of productive capacities, deterred private entrepreneurs from undertaking new ventures.

Between 1981 and 1989, the autonomous components of demand – *i.e* the export surplus plus government expenditure plus private investment – increased 12.5%. The ensuing rise in private consumption was however more modest: 6.1%, thus evidencing a fall in the multiplier of autonomous expenditure. Probably this fall was due to the change in the method of financing government expenditure, and to the fall of the share of wages in value added.

11. - How close to the real course of events is this interpretation of Mexico's economic evolution? In the light of the statistical evidence it seems to be close enough. Below, I present econometric estimates of the private components of domestic demand. Both

[27] It is not clear how much of the expansion in the trade surplus can be credited to devaluation because figures on elasticity of exports and imports greatly vary (*cf.* for example N. LUSTIG, 1988, and R. PEÑALOZA and M. VOLJC, 1989). I would venture the opinion that devaluation strongly and swiftly stimulated exports and substitution of imports in the case of foreign owned firms which may have had recourse to intra-firm trade (*cf.* K. UNGER and L.C. SALDAÑA, 1989). The reaction to devaluation of national, and especially medium and small-sized firms, has been probably much more modest and delayed.

[28] Devaluation in 1982 had a shocking effect on Mexico's firms. A study conducted for large enterprises established the following results: between 1981 and 1982 – *i.e.* after dollar/peso rate devalued to 148.5 from 26.2 – the value of their foreign indebtedness grew by 275%; their total liabilities increased by 95%; the ratio of total liabilities to assets increased from 12% to 42%; and debt payments as a share of total turnover went up to 24% from 8% (*cf.* J. LÓPEZ, 1987, p. 218).

private investment (PI) and private consumption (PC) depend on government expenditure net of government deficit (GE), government deficit (GD), exports (X) and the real exchange rate (E). The results of OLS estimations were the following (an L before a variable denotes the logarithm of that variable; the figures in parenthesis are t-ratios):[29]

$$\underset{\text{I. - LPI}}{} = \underset{(10.7)}{3.94} + \underset{(3.6)}{0.26\,LGE(-1)} + \underset{(4.2)}{0.0028GD} + \underset{(6.2)}{0.51LX(-1)} - \underset{(-4.5)}{0.59LE(-1)}$$

R-Bar-Squared: .92

$$\underset{\text{II. - LPC}}{} = \underset{(18.3)}{4.28} + \underset{(6.4)}{0.36\,LGE(-1)} + \underset{(11.3)}{0.0054GD(-1)} + \underset{(6.1)}{0.29LX(-1)} - \underset{(-3.6)}{0.2LE}$$

R-Bar-Squared: .97

It thus appears that both government expenditure and government deficit, as well as exports, have a positive impact on private investment and private consumption. But increases (decreases) in the real exchange rate depress (stimulate) private investment and consumption. This is quite in agreement with the interpretation proposed above. The tight policy stance combined with real devaluation depressed private domestic expenditure. Expansion in the trade surplus ensuing from devaluation was not sufficient to offset the decline in domestic demand. Hence the stagnation in GDP and generation of surplus productive capacities.

In conclusion, the strong contractionist policy package brought about an immediate and vigorous deflationary process affecting not only the overall economy, but also almost all social actors – workers and capitalists – although with differing intensity. As a final result, at the macroeconomic level the Kalecki/Keynes deflationary process prevailed above the Shumpeterian creative destruction.

12. - The Mexican economy seems to stand back on its own feet again. But several years of crisis or stagnation had to elapse before growth could resume. Perhaps the Mexican experience has been less costly and in certain areas has been more succesful than similar efforts in other Latin American economies. However, the macroeconomic

[29] In the Appendix, I present information concerning the results of several tests carried out to prove the robustness of the estimates.

inefficiencies reflected in low degrees of utilization of capacities, underemployment and persistent capital flight cannot be ignored, and one cannot overlook the strong concentration of income which also originated: their social and economic costs have been too high. It is hard to believe that no alternative adjustment strategy exists. But to reflect on what an alternative strategy could have been is beyond the scope of this paper.

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TABLE 1

ESTIMATE OF PRIVATE INVESTMENT

Dependent variable is LPI; 18 observations used for estimation from 1972 to 1989

Regressor	Coefficient	Standard Error	T-ratio
INTERCEPT	3.9467	.3681	10.7214
LGE(–1)	.2610	.0733	3.5626
GD	.0028123	.0006667	4.2185
LX(–1)	.5080	.0815	6.2349
LE(–1)	.5889	.1310	–4.4963

R-Squared	.9203	F-statistic F (4, 13)	37.5218
R-Bar-Squared	.8958	S.E. of Regression	.0601
Residual Sum of Squares	.0469	Mean of Dependent Variable	4.5036
S.D. of Dependent Variable	.1860	Maximum of Log-likelihood	28.0133
DW-statistic	1.7679		

Diagnostic tests

Test Statistics	LM Version		F Version	
A: Serial Correlation	CHI-SQ(1) =	.1057	F (1, 12)	.0709
B: Functional Form	CHI-SQ(1) =	2.0830	F (1, 12)	1.5704
C: Normality	CHI-SQ(2) =	.6190	Not applicable	
D: Heteroscedasticity	CHI-SQ(1) =	.0490	F (1, 16)	.0437

A: Lagrange multiplier test of residual serial correlation.
B: Ramsey's RESET test using the square of the fitted values.
C: Based on a test of skewness and kurtosis of residuals.
D: Based on the regression of squared residuals on squared fitted values.

Besides these, addition and deletion variable test exogenity test, and tests to prove the stability of the parameters were carried out. In all cases the degree of confidence exceeded 95%.

TABLE 2

ESTIMATE OF PRIVATE CONSUMPTION

Dependent variable is LPC; 18 observations used for estimation from 1972 to 1989

Regressor	Coefficient	Standard Error	T-ratio
INTERCEPT	4.2790	.2335	18.3281
LGE(–1)	.3647	.0570	6.3952
GD(–1)	.0053731	.0004772	11.2599
LX(–1)	.2858	.0466	6.1353
LE	–.1966	.0553	–3.5539

R-Squared	.9731	F-statistic F (4, 13)	117.7639
R-Bar-Squared	.9649	S.E. of Regression	.0365
Residual Sum of Squares	.0173	Mean of Dependent Variable	6.2731
S.D. of Dependent Variable	.1948	Maximum of Log-likelihood	36.9761
DW-statistic	1.6768		

Diagnostic tests

Test Statistics	LM Version		F Version	
A: Serial Correlation	CHI-SQ(1) =	.3573	F (1, 12)	.2430
B: Functional Form	CHI-SQ(1) =	.7065	F (1, 12)	4902
C: Normality	CHI-SQ(2) =	.1080	Not applicable	
D: Heteroscedasticity	CHI-SQ(1) =	1.2997	F (1, 16)	1.2452

A: Lagrange multiplier test of residual serial correlation.
B: Ramsey's RESET test using the square of the fitted values.
C: Based on a test of skewness and kurtosis of residuals.
D: Based on the regression of squared residuals on squared fitted values.

Besides these, addition and deletion variable test exogenity test, and tests to prove the stability of the parameters were carried out. In all cases the degree of confidence exceeded 95%.