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**THE RELATIONSHIP BETWEEN DEBT PRESSURES,  
ADJUSTMENT POLICIES AND DETERIORATION  
OF TERMS OF TRADE FOR DEVELOPING COUNTRIES  
(with special reference to Latin America)**

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This paper served as background to a Public Lecture given by Professor Singer at the Institute of Social Studies on 16 May, 1989, under the same title, and to an address at a conference in honour of Raúl Prebisch organized by the Fundación Raúl Prebisch, at the University of Santa Fé, Buenos Aires, 14-17 June, 1989.

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Overview

The Prebisch-Singer (P-S) hypothesis suggested that, contrary to classical teaching, the terms of trade of primary products in international trade - and hence the terms of trade of countries more dependent on export of primary products than their trade partners - would tend to deteriorate rather than improve. From the beginning this hypothesis had two elements, initially not clearly distinguished. The first element related to the characteristics of primary commodities (inelastic demand, liability to substitution etc) whereas the second element related to the characteristics of primary producing countries (surplus labour leading to high supply elasticity, weak labour organisation leading to low wages etc) compared with their industrialised trade partners (strong trade unions, technology leadership leading to monopoly rents etc).

The first of these two elements relating to barter terms of trade of primary products was hotly debated, mainly in statistical rather than analytical terms, but this debate has now died down. At least for this present decade there is little dispute that the P-S hypothesis has a better projection record than most other economic projections (including the commodity projections of the World Bank and the IMF). But the essence of the P-S hypothesis was always in the second element which should have led to debates on income terms of trade and factoral terms of trade rather than barter terms of trade (as emphasised by Spraos, 1980). This second element of P-S which also emphasised the greater scope for technical progress in industry compared

with primary production, has analytically led to the development of theories of unequal exchange and dependency, and in policy terms to strategies of ISI (import-substituting industrialisation) leading on to ESI (export-substituting industrialisation), ie, substituting manufactured for primary exports.

This paper deals with both aspects, but in the new context of debt. This new context affects both elements of P-S. It will be shown that both barter terms of trade and factoral terms of trade are closely interwoven with pressures arising from debt payments. In particular the paper maintains that in addition to the resource burden there is an additional transfer burden of debt payment in the form of deteriorating terms of trade. This is also the position which was maintained in the debate over German post-World War I reparations by Keynes (based on John Stuart Mill), but contested by Ohlin (based on Ricardo). The paper argues that not only is there a transfer burden but that in fact it forms a very important dimension of the debt problem. In relation to the second element of P-S, the paper argues that diversification or shifts into manufactured exports under debt pressure do not provide a satisfactory escape from the transfer burden but in fact form a part of it. This emerges particularly in relation to factoral terms of trade. Thus the debt situation unleashes forces which tend to make for immiserizing growth in the Periphery and for widening income gaps between the Centre and the Periphery.

## II

The debt situation and the terms of trade problem are deeply entangled with each other in a process of mutual causation - much more so than is usually realised. The rise in indebtedness can be attributed to changes in terms of trade in various ways:

- (a) Historically, the debt crisis can be attributed to the failure at Bretton Woods to embody commodity price stabilization in the new Bretton Woods system as Keynes had intended. In addition to the World Bank and IMF, the Bretton Woods system was to have included an International Trade Organisation (ITO), with the main function of stabilizing and maintaining primary commodity prices. Even further, Keynes had imagined a world currency based on 30 primary commodities including gold and oil; this would have prevented first the fall in real oil prices between 1948 and 1973, and then their abrupt rise in 1973 and 1979 (as well as their subsequent fall). The Bretton Woods system was also to include a system of soft aid under UN auspices, as well as automatic liquidity for deficit countries provided by the IMF as well as pressure on surplus countries - in fact, taxation of their surpluses. The fact that the Bretton Woods system remained incomplete contains the germ of the current debt crisis. Only very minor attempts were made to replace the yawning gaps in the system; these include the creation of GATT, of IDA in 1960, compensatory financial mechanisms in the IMF even later, etc. But these remained very weak and ineffective mechanisms often perverted to serve quite different, sometimes opposite, purposes from those intended. Thus GATT became more an instrument for legitimizing trade barriers, and the IMF and World Bank (which stood on the sidelines while the debts accumulated or even applauded the "efficient recycling" of surpluses) have now become agencies for debt collecting rather than suppliers of liquidity for

deficit countries. The present debt burden is a legacy of the incompleteness and perversion of the Bretton Woods system in the area of commodities and commodity prices.

- (b) More immediately, the debt crisis goes at least partly back to the rapid increases in oil prices in 1973 and 1979, resulting in enormous OPEC surpluses which were then recycled through the commercial banks in the US, Europe, and Japan. Thus the unfavourable terms of trade of the oil-importing countries were one of the immediate causes of their debt accumulation, especially after 1975/76 when the temporary boom in primary commodities other than oil collapsed. In the oil-exporting countries such as Venezuela and Mexico the causation and role of terms of trade in debt accumulation was obviously different. But even there terms of trade played a vital although indirect role: the favourable terms of trade and financial surpluses engendered a growth and investment optimism for the future which seemed to make debt accumulation safe (on the assumption of continuing high prices for oil); at the same time it made these countries particularly credit-worthy in the judgment of the commercial banks so that they were even more beleaguered by the banks to accept loans than the oil-importing countries. For developing countries as a whole, according to calculations by Cline, of the total debt accumulation of \$500 billion between 1973 and 1982 about \$260 billion were directly attributable to increased costs of oil (Cline, 1985).
- (c) The debt burden has predictably been added to by an additional "transfer burden" in the form of pressure on terms of trade. "Predictably", because we have been there before - at the end of the First World War when the Treaty of Versailles imposed heavy "reparations" on Germany. At that time, Keynes (based on John Stuart Mill) demonstrated that there was a secondary burden in the form of worsened terms of trade, on top of the primary burden of mobilising and transferring savings at the expense of domestic investment. The case

made by Keynes was later supported, in different ways, by Pigou, Harry Johnson and Samuelson, but opposed by Ohlin (based on Ricardo). Today, the Latin American countries in paying their reparations (debt service) demonstrate the validity of Keynes's views: apart from negative ("reverse") transfer of capital there is the invisible, but connected, additional burden of terms of trade deterioration due to "desperation exports". The association between the German World War I reparations and the hyper-inflation of 1922-23 was more than accidental; it contains warnings for today's debtor and creditor countries - we have been there before! Irving Fisher wrote in support of Keynes in Econometrica (1933) "The liquidation of debts cannot keep up with the fall in prices which it causes. In that case, the liquidation defeats itself. While it diminishes the number of dollars owed, it may not do so as fast as it increases the value of each dollar owed ... then we have the great paradox: The more debtors pay the more they owe". Mutatis mutandis, translating from the deflation of the early thirties to the inflation of the eighties, these words seem a prophetic forecast of the current debt trap. In fact, the debt burden (representing, as it does, a tax on export earnings and a reduction of import capacity), amounts to a deterioration of terms of trade - of income terms of trade rather than barter terms of trade - in all but name. When Raul Prebisch wrote of vulnerability of the Periphery to deteriorating terms of trade and a widening gap vis-a-vis the Centre, he could have written of the Debtors vis-a-vis the Creditors, and his warnings against reliance on exports of primary products could be extended to warnings against falling into a debt trap (at least of the type characteristic of the "Potemkin years" of the 1970s).

The effects of such multiple taxation of export earnings can be readily illustrated. If we just take three sources (triple taxation): debt service represents a 30% tax on export earnings in Latin America today, terms of trade deterioration over the decade is at least 20%, and loss of exports due to the slowed-down growth of the industrial countries

cumulatively for 1980-88 compared with the "Golden Years" of 1950-1973 is another 20%. Successive cuts of 30, 20 and 20 per cent will result in a total cut of 55% or over one-half of export earnings. This means that less than half the potential export earnings are available for the financing of development imports.

- (d) The worsening terms of trade for primary products after 1975 have been a major contributory factor in the present dimensions of the debt problem. Of the total accumulation of debt by Latin American countries of \$179 billion between 1980 and 1988, the cumulative loss due to deterioration of terms of trade for non-oil countries accounted for \$75 billion or 42 per cent. It also represented over half of the total negative transfer of resources since 1982 (of \$146 billion). Similarly, of the total increase of \$66 billion in the current account deficit of non-oil developing countries in 1981 compared with 1978, terms of trade deterioration accounted for \$21 billion (32%), more than the rise in oil prices (27%) and almost as much as net interest payments (36%). These calculations are based on the difference between actual export earnings and export earnings as they would have been if terms of trade had remained constant and assuming all other things, particularly export volume, had remained the same (ie assuming zero price elasticity of demand). This overstates the loss to the extent that the volume of exports was greater at the worsened unit values than it would have been without the deterioration.

For the non-oil Latin American countries (excluding Ecuador, Mexico, Trinidad and Venezuela), over the seven years 1980-86 the average deterioration in terms of trade was 19%, equivalent cumulatively to the loss of 16 months (1 year and four months) of exports. This compares with average net resource transfers during the 1982-86 period of 25% of total exports of goods and services. Thus, for the non-oil Latin American countries the "tax" on export earnings due to terms of trade



deterioration was comparable in magnitude at 19% to the "tax" represented by net resource transfers at 25%. In terms of the old Mill-Keynes versus Ricardo-Ohlin controversy, there was an additional transfer burden in addition to the resource loss (as argued by Mill and Keynes). Moreover, the resource loss would have been reduced from 25% to 20% if conjecturally calculated on the higher exports undiminished by terms of trade losses; this would virtually equalise the two burdens. Conjectural as this calculation is, it serves to emphasise the size of the burden of deteriorating terms of trade.

Within this contribution of deteriorating terms of trade to debt accumulation, the main factor clearly was in relation to deteriorating terms of trade for exports of primary products. However it is not often realised that the recent deterioration in terms of trade also applies to trade in manufactures. The period 1975-1988 saw the share of manufactures in Latin American exports increase from 12% to 19%. This shift from primary exports to manufactured exports mitigated but did not eliminate the role of deteriorating terms of trade in debt accumulation. The neglected subject of terms of trade in manufactures will be considered in more detail in a later part of this paper.

In the world economy as a whole, real commodity prices fell during the current decade (1980-87) by an average of 23%, compared with the previous decade of 1970-79 and also the decade 1960-69 (these two comparisons are identical since there was no change between 1960-69 and 1970-79). This average decline of 23% per annum during 1980-87 adds up to a cumulative decline or cumulative loss over the 8-year period of 185% of primary exports earnings. In other words, almost two full years of primary export earnings were lost as a result of the decline in real commodity prices.

Another way of picturing the contribution of deteriorating terms of trade and resulting shortfalls of export earnings on debt accumulation is as follows:-<sup>1</sup>

During 1980-85 the average debt service ratio of developing countries (debt service as percentage of total exports) increased from 12.5% to 20.1%. Of this total increase in the debt service ratio of 7.6 percentage points, loss in export earnings accounted for 1.1 percentage point, i.e. some 15% of the total increase in the debt service ratio. In addition to volume factors due to slowdown of growth in the industrial countries, trade obstacles etc, the decline in commodity prices obviously played a major role in this 15% contribution to the increase in the debt service ratio through loss of export earnings.

In some Latin American countries the fall in commodity prices had a much bigger effect in raising the debt service ratio than the average of 1.1 percentage points. For example, the figure for Bolivia is 12.9 percentage points; Chile 12.1 percentage points; Peru 6.1 percentage points.

Taking Latin America as a whole the contribution of losses in export earnings to the increase in the debt service ratio is almost twice as large as for all developing countries (2.0 percentage points compared with 1.1 percentage point), and its relative contribution is 43% rather than 15%. This clearly illustrates the major role which the export earnings factor, and the terms of trade factor implicit in it, has played in Latin America specifically, much more so than in the rest of the Third World. The significant exception is Africa where the loss of export earnings in fact accounted for 3.1 percentage points, even more than in Latin America, although in relative terms at just under 40% slightly less than in Latin America. In Asia, on the other hand, export earnings improved (largely because of a larger share of manufactures in exports and also because of heavier increases in export volume) and the increases in the debt service ratio, which were in fact quite heavy compared with Latin America, were entirely due to the increase in debt volume.

In those Latin American countries where the debt service ratio fell during 1980-85 (Brazil, Peru, Nicaragua, Paraguay, Venezuela, Dominican Republic) export earnings were better maintained during 1980-85 than in the Latin American countries for which the debt service ratio increased (Colombia, Argentina, Uruguay, Jamaica, El Salvador, Guatemala, Bolivia, Mexico, Costa Rica, Chile, Barbados, Honduras, Ecuador, Trinidad, and Panama). In the countries with falling debt service ratios loss of export earnings added 0.15 percentage points to the ratio, whereas in Latin American countries with rising debt service ratios changes in export earnings added 2.6 percentage points. This is still another indication of the crucial role played by the changes in export earnings in determining debt service ratios. Within the change in export earnings, movements in terms of trade played a crucial role in the primary sector.

For the 13 largest debtor countries as a whole, loss of export earnings accounted for 0.6 percentage points out of a total rise in the debt service ratio by 7.9 percentage points during 1980-85, ie rather less than 10%, less than for developing countries as a whole. For the Latin American countries among these 3 largest debtor countries, in Argentina loss of export earnings accounted for a 3.3 percentage points rise in the debt service ratio, although this was compensated by other factors so that the debt ratio in fact declined. Chile had the largest loss of export earnings as a contributory factor to the increase in debt service (12.1 percentage points), accounting for more than the whole of the total increase in the ration. In Peru, as in Venezuela, a big loss in export earnings (6.1 percentage points on the debt service ratio) was over-compensated by other factors. In Mexico and Brazil due to heavy increases in volume of exports and diversification into manufactures, export earnings helped to reduce the debt service ratio by 10.3 and 8.3 percentage points respectively. In the case of Brazil this improvement accounted for about 50% of the total fall in the debt service ration,

while in the case of Mexico it was over-compensated by the heavy increase in the volume of debt, raising the debt service ratio sharply.

The authors of the above calculations<sup>2</sup> also find a negative correlation between the impact of export earnings on the debt service ratio and the contribution of changes in rates of interest of amortization, indicating that countries worst hit by falls in export earnings have received relief in the form of rescheduling and softer borrowing. Expectedly, there is significant positive correlation between the share of primary exports in total exports and the contribution of falls in export earnings to the debt service ratio indicating that the terms of trade problem is centred on primary commodities rather than on manufactures.<sup>3</sup>

#### Impact of debt pressure on terms of trade

So far, we have dealt with the direct role of deteriorating terms of trade and the associated fall in export earnings as a contributory factor to the accumulation and escalation of debts during the last 15 years or so. Perhaps less well known is the opposite connection, ie the way in which debt pressures have been a causative factor in the decline in commodity prices and deterioration of terms of trade. All the same, this opposite connection should also be fairly clear. Under the pressure of debt payment obligations, developing countries have to try to achieve export surpluses. Theoretically, such surpluses could be achieved by way of import reduction combined with effective and efficient import substitution. In fact, there have been heavy import reductions in the 1980s in Latin America - a fact too well known to need much documentation. The volume of imports for Latin America as a whole fell between 1980 and 1988 by 24%; over the whole period 1980-88 the average reduction during these 8 years was 25% per annum amounting to a cumulative reduction over the 8 years of 203% equivalent to a loss of two years of imports. Unfortunately, this did not represent effective import substitution, but was at the expense of growth and development. This is shown by the fact that over the decade of the 1980s the cumulative loss

of per capita GDP amounted to 10%, literally a "lost decade". Thus, the reduction in imports represented import strangulation, and not constructive import substitution.

This leaves export expansion as an alternative route. In fact, the debt pressures created a need for earning foreign exchange at any price, even at heavy cost - "desperation exports" in the graphic words of Senator Bradley. This pressure was further added to by the neo-classical, anti-Keynesian and anti-Prebischian ideology of "outward orientation" as representing the only recipe for healthy, "sustainable" growth and development, governing the stabilisation and adjustment procedures of the IMF and World Bank. Under the double pressure of the "facts of life", ie the need to make debt payments in a hostile international environment, and of the neo-classical adjustment ideology Latin American countries were pressed to undergo processes of stabilisation and structural adjustment, prominently including exchange depreciation and other incentives for intensified exports. Latin American countries generally underwent depreciation of their real exchange rates, ie, even after taking into account domestic inflation in excess of that of their main trade partners. Real exchange rates now are typically 30-40% lower than at the opening of the decade. The 1985 real effective exchange rates showed the following rates of depreciation compared with 1980: Argentina 45%, Brazil 29%, Mexico 31%, Venezuela 33%.

The currency depreciations increased export supplies but also made exports cheaper to the customer countries, thus increasing export volumes at the expense of deteriorating terms of trade. This amounted to a "reverse" transfer of capital, similar and additional to the better known reverse transfer of capital represented by the debt payments themselves.<sup>4</sup> To the extent that the growth in export volume was bought at the expense of deteriorating terms of trade, it represented a case of "immiserizing growth".

The data for this decade confirm the existence of a transfer burden in the form of worsened terms of trade, in addition to the budgetary and investment burden of the debt payments and reverse capital transfer which has taken place (See Table 1).

Table 1  
Volume and Unit Value Indices of Exports of  
Different Parts of the Market Economy World  
1980-1987

Regions & Indices	Years							
	1980	1981	1982	1983	1984	1985	1986	1987
I. First World (Developed Market Economies)								
Volume	100	102	101	104	114	118	121	122
Unit Value	100	96	92	88	86	85	97	108
II. Third World								
Volume	100	94	88	91	96	93	114	119
Unit Value	100	105	97	88	87	85	64	71
Terms of Trade*	100	109	105	100	101	100	66	66
A. Major Petroleum Exporters								
Volume	100	84	72	68	67	61	78	72
Unit Value	100	112	106	93	91	89	52	61
Terms of Trade*	100	117	115	106	106	105	54	56
B. Other Third World Countries								
Volume	100	113	119	128	141	144	156	174
Unit Value	100	93	84	82	83	80	78	83
Terms of Trade*	100	97	91	93	96	94	80	77

\* Relative unit values : unit values of exports of the different regions of the Third World inflated by the unit values of exports of the First World.

Source: UNCTAD, Handbook of International Trade and Development Statistics, 1987.

On the basis of 1980=100, the terms of trade of Third World countries had worsened in 1987, by 34%; if major oil exporters are excluded the drop was 23%. This was associated with a terrific export drive by the non-oil Third World countries, with volume increasing year by year in the decade to a 74% expansion in 1987. Thus, the terms of trade deterioration cut the capacity to import from rising export volume from 74% to 34% ( $174/0.77=134$ ), or by over half (confirming earlier results as to the serious magnitude of the contribution of terms of trade deterioration to debt burdens). For the Third World as a whole (including major oil exporters), this contribution is actually over 100% since the terms of trade deterioration (34%) is greater than expansion of export volume (19%) so that capacity to import was actually reduced. For the oil exporters taken alone, the deterioration in terms of trade (44%) was the major factor in the decline of capacity to import exceeding the drop in export volume (28%). By contrast, the OECD (First World) countries were in the happier position of combining increased export volumes with improved terms of trade with the Third World.

Most of the growth of exports of the OECD countries was due to trade among themselves where the question of overall terms of trade does not arise (improvements by some countries automatically cancelling out deterioration in others), whereas most of the export volume expansion of the Third World countries was to the OECD countries, with exports among themselves hardly expanding at all (0.5% pa). This is further analysed in Table 2. It should be noted that Table 2 relates to a different time period and base period from Table 1, and no direct comparisons should be made.

Table 2  
Growth of Exports between Different Regions of the World  
1981-1983/1984-1986

(Annual Average Percentage Rate)

Origin	Destination				
	World	First World	Third World		
			Total	OPEC	Others
First World (Developed Market Economies)	3.7	6.1	- 3.7	-12.8	0.8
Third World					
Total	- 2.6	- 3.1	- 4.2	- 4.5	- 4.2
OPEC	-14.0	-16.0	-10.6	- 5.5	-11.1
Others	5.5	7.0	0.5	- 4.2	2.1

Source: UNCTAD, Handbook of International Trade and Development Statistics, 1987, pp. 62-63.

Even the non-OPEC developing countries increased trade among each other only at a rate of 30% of that of trade expansion with the First World (2.1% per annum against 7% per annum). Including OPEC countries, the Third World reduced trade volumes both with the First World and among themselves, but more so among themselves. South-South trade remains the poor relation of the world trading system, still the hope of tomorrow rather than today. At the same time, it remains a "black box" of the world economy whose lowly status remains inexplicable - inexplicable that is on purely economic grounds. Classical theory would lead us to believe that today Third World intra-trade should be more intensive than the intra-trade of industrial countries since they differ more in comparative advantage and resource structure - but then classical theory also told us that the terms of trade of primary exporting countries would improve vis-a-vis industrial countries.



Hence the World Bank and IMF frantically produced commodity price projections consistently diverging from reality.<sup>5</sup> For the Bank and Fund, P-S was "the truth that dare not speak its name" - the Great Satan!

The overall data of Table 1 may be supplemented for the Latin American major countries (Table 3).

Table 3

Value, Unit Value and Volume of exports and Terms of Trade  
of Some Major Latin American Debtor Nations, 1980-1986

	1980	1981	1982	1983	1984	1985	1986
<b>Argentina</b>							
Value	100	114	95	98	101	105	85
Unit Value	100	98	83	76	83	78	71
Volume	100	117	115	128	122	134	120
Terms of Trade	100	102	88	84	92	87	75
<b>Bolivia<sup>x</sup></b>							
Value	100	95	87	79	75	65	52
Unit Value	100	80	71	74	67	66	56
Volume	100	118	121	107	111	98	93
Terms of Trade	100	85	77	82	77	75	59
<b>Brazil</b>							
Value	100	118	100	109	134	127	111
Unit Value	100	89	84	83	85	81	88
Volume	100	132	120	130	158	157	127
Terms of Trade	100	88	86	91	94	90	111
<b>Chile</b>							
Value	100	84	79	82	78	82	90
Unit Value	100	82	73	75	67	67	66
Volume	100	102	109	110	117	122	136
Terms of Trade	100	85	78	82	75	75	75
<b>Colombia</b>							
Value	100	75	78	78	88	90	129
Unit Value	100	83	87	82	83	84	109
Volume	100	90	90	96	106	107	119
Terms of Trade	100	86	93	89	93	94	119

Table 3 (continued)

Costa Rica								
	Value	100	101	87	86	98	99	102
	Unit Value	100	81	77	75	82	80	85
	Volume	100	124	113	115	120	123	120
	Terms of Trade	100	84	82	83	92	90	95
Ecuador <sup>x</sup>								
	Value	100	102	94	89	104	112	88
	Unit Value	100	100	94	88	87	88	67
	Volume	100	102	100	101	119	128	131
	Terms of Trade	100	105	100	96	98	97	69
Jamaica								
	Value	100	101	80	76	78	59	62
	Unit Value	100	91	84	82	77	64	66
	Volume	100	111	94	92	101	91	94
	Terms of Trade	100	92	89	91	87	73	83
Mexico <sup>x</sup>								
	Value	100	131	117	135	154	143	103
	Unit Value	100	106	101	92	89	88	62
	Volume	100	123	116	147	173	161	165
	Terms of Trade	100	112	109	101	101	99	66
Nicaragua								
	Value	100	111	90	95	86	67	62
	Unit Value	100	72	63	61	63	65	69
	Volume	100	154	143	155	136	103	90
	Terms of Trade	100	74	68	69	72	74	80
Peru								
	Value	100	83	82	77	80	69	63
	Unit Value	100	93	81	78	75	74	65
	Volume	100	90	102	99	106	93	97
	Terms of Trade	100	99	89	88	87	85	70
Uruguay								
	Value	100	115	97	99	87	81	103
	Unit Value	100	97	81	75	85	76	73
	Volume	100	118	119	131	103	105	141
	Terms of Trade	100	98	84	81	93	84	85
Venezuela <sup>x</sup>								
	Value	100	101	83	75	72	62	50
	Unit Value	100	113	105	92	89	87	51
	Volume	100	89	78	82	80	70	98
	Terms of Trade	100	120	114	103	102	99	54

<sup>x</sup> Export structure dominated by 'fuels' (SITC code 3).

Source: UNCTAD Handbook of International Trade and Development Statistics, 1987, pp. 529-547.

The aggregate pattern of expansion of export volume partially wiped out by deterioration of terms of trade can be seen to apply clearly only to Costa Rica and to Uruguay. In a number of countries the deterioration in terms of trade either comes on top of a reduction in export volume (Bolivia, Jamaica, Nicaragua, Peru and Venezuela) or else wipes out the whole rather than only part of the increase in export volume (Argentina, Chile, Ecuador, Mexico). The best-looking cases are those of Brazil and Colombia where improved terms of trade went hand in hand with increased export volume. (However, it will be noted that in both countries the improvement in terms of trade applied only to the terminal year 1986; in previous years and over the average of the decade there was terms of trade deterioration compared with 1980). These two countries are the only ones out of 13 Latin American debtor countries where terms of trade actually improved. The situation for Latin America is more diffuse than for other Third World countries, practically all of which reflect the overall pattern of an expansion of export volume greatly weakened in its impact on capacity to import by deterioration in terms of trade.

Between 1980 and 1985, the quantity of copper exports of the Third World rose by 12 per cent and its price fell by 35 per cent so that the value of exports fell by 28 per cent. For 10 'core' commodities mainly exported by Third World countries, volume of exports rose by 8 per cent while export unit value fell by 26 per cent so that the value of exports fell by 21 per cent (see UNCTAD Handbook of International Trade and Development Statistics, 1987, pp. 242-243). The implied elasticity of demand (around 0.3 in each case) agrees with other empirical findings. It creates an assumption that simultaneous supply expansion by producers leads to aggregate immiseration.

From the viewpoint of this paper, the important question is whether this pattern of export volume expansion combined with terms of trade deterioration is in fact related to debt pressure. For the Latin American countries this seems to be the case: cross-country calculations show that higher debt pressure (as measured by the debt service export ratio) was positively

correlated with expansion of export volumes but negatively correlated with unit values and terms of trade. Export volume is also negatively correlated with terms of trade. Thus the signs are in line with the "desperation sale" hypothesis. The correlation though significant is not very close and the coefficient of determination is low - this again is expected since obviously many factors other than debt pressures influence export volumes and terms of trade, in particular the composition of exports, both between different commodities and between commodities and manufactures.

During the 1981-86 period as a whole, the terms of trade of developing countries as a whole deteriorated by 13.9% but for the group of "Highly indebted countries" by 17.3% - yet another indication of the link between debt pressures and terms of trade deterioration. If the figures are recalculated for the non-highly indebted countries separately, the gap becomes one of 11.5% for this group as against the 17.3% deterioration for the highly indebted countries. On this (admittedly conjectural) reckoning, an additional 6.8% deterioration could be considered as the transfer burden of debt payment.

Senator Bradley's characterisation of "desperation exports" could also serve as a reminder that the export pressure and associated terms of trade pressure, representing the transfer cost of debt payment, has a political as well as a purely market dimension. The industrial countries tend to resent the additional exports of developing countries as a threat to employment and market control and take protectionist action in the name of "anti-dumping". The threat may be more perceived than real, but the protectionist reaction is real enough. There also lurks here one of the vicious circles (Gunnar Myrdal's "cumulative causation") so frequent in development economics: as there is protectionist reaction to the increased exports of debtor countries at reduced prices, prices have to be even further reduced to get in underneath the protectionist barriers, in turn feeding more protectionist action, and so ad infinitum. An even more important vicious circle stems from the fact that a deterioration of terms of trade makes the country less

"creditworthy" and reduces its chances of paying debts with the help of new resources rather than exports; this in turn leads to more cut-price "desperation exports", etc, recalling Irving Fisher's dictum that "liquidation defeats itself". The road to debt repayment, no less than the road to development, is truly paved with vicious circles!

The harmful case of "immiserizing growth" is increasingly recognised as a weakness resulting from the present approach to stabilisation and structural adjustment - by the IMF and World Bank (IMF WB). The present IMF WB approach is designed as a country-by-country approach: that is to say the task of IMF WB conditionality is to ensure that each individual country separately, within a negotiated standby or structural adjustment agreement, is expected to increase its own exports by real exchange rate depreciation, added incentives to exporters etc. No account is taken of the impact of such an export expansion by Country A on the export of Countries B, C, D etc, which produce competing exports. Yet, at the same time, countries B, C, D etc are also separately advised to push their exports, through broadly identical measures of exchange rate depreciation, outward orientation, etc: this will be partly at the expense of Country A and take away the intended benefit to Country A. At the end of the process all the countries involved, A, B, C, D etc, would be no better and may be worse off than before. The real beneficiaries are the importing countries (although on a broader view they may also be ultimate losers in such a no-win anti-development approach).

This is no rational way of running international affairs. We are getting the worst of both possible worlds. The IMF WB approach is too country-specific in the sense that the country missions are not given any mandate to study the impact on other developing countries; yet at the same time the approach is not country-specific enough in the sense that the recommendations addressed to various countries show a surprising similarity to each other. It is evident - and has been shown - that the measures recommended to various countries show a 70-80% overlap of identity. It is frankly

unbelievable that the great variety of circumstances among different developing countries should justify such identical policy packages, unless the measures are more inspired by ideology and preconceived theory than derived from concrete analysis of specific country situations. But this is exactly what one would expect when major policy shifts are based on three-week visiting missions of IMF WB Staff members with qualifications in financial analysis closeted with debtor country officials of central banks and ministries of finance with similar concentration on financial analysis (many perhaps themselves former IMF WB staff members).

This "fallacy of composition" of expecting that what may be good for individual debtor countries must also be good for debtor countries as a whole, is particularly serious in the case of competing exporters of primary commodities, facing inelastic demand so that large price cuts are necessary to achieve given increases in export volume and where there is often an oligopolistic supply situation, where three, four or five producing countries may each have a market share sufficient to have a marked influence on other countries. For example, if Chile devalues and expands its share of the copper market, this is bound to affect the shares of Zambia and Zaire and vice versa; and if all three try to do this simultaneously the results would be general "immiserization". The same situation exists in coffee, tea, cocoa, rubber and other markets for primary commodities of great importance to developing countries. The current adjustment approach lags behind other areas of economic policy where the existence of "externalities" has long been recognised. Professionally there would be agreement that such circumstances call for export taxes in the context of devaluations - but that is not part of the ideology of "outward orientation".

Evidence of such a link between expansion of export volume in the service of adjustment programmes and deteriorating terms of trade is not lacking. The most recent and most striking piece of evidence comes from an impeccable source - the World Bank itself - although it applies to Africa rather than Latin America. In its report on "Africa's Adjustment and Growth in the

1980s" the World Bank presents data designed to show that countries with "strong reform programmes" are doing better than the countries without such programmes. Yet in fact we find that, on the Bank's own figures the much better export volume performance of the "good boys" has been purchased at the expense of a marked deterioration in their terms of trade, both absolutely and in comparison with the "bad boys" who failed to expand their export volumes. This in fact is only to be expected and confirms the view that the outward orientation and export drives associated with debt pressures and IMF World Bank type of adjustment programmes put downward pressure on export prices, making the debt burden to that extent heavier rather than lighter. The accelerated growth of export volume from -0.7% per annum to +4.9% per annum of the "good" countries (always comparing the recent period 1985-87 with the earlier period 1980-84) was bought at the expense of a sharp acceleration in the deterioration in their terms of trade, to 4.7% per annum in 1985-87, as against 0.5% per annum in the earlier period. Thus, in that more recent period, the increase in export volume was practically fully wiped out by the deterioration in terms of trade, so that the growth in import volume of 6.1% must have been entirely attributable to non-trade factors, ie additional external support. By contrast the "bad boys", although they also achieved a certain improvement in their export volume performance (from -5.7% per annum to -3.3% per annum) were compensated for this smaller improvement by seeing their terms of trade improved by 1.4% per annum so it must follow that the fall by 4.0% per annum in their import volume was mainly due to their being cut off from external support.<sup>6</sup>

Elsewhere I have examined more general claims that "outward orientation works".<sup>7</sup> The general finding is that statistical claims to this effect must be taken with a grain of salt. The connection breaks down for the unfavourable climate of the 1980s; it also breaks down when we apply it to low-income countries as distinct from middle-income countries. Altogether as in the case of the African report, a good deal of suspect manipulation of data is needed to make a case. We shall see that even in the case of manufactured exports and of the Latin American middle-income countries,

export expansion under debt pressure has exacted a price in the area of terms of trade.

### III

While the early terms of trade debate was conducted in the context of exchange of primary commodities against manufacture, there has since been a tremendous expansion in the exports of manufactures by developing countries. While the manufactured exports of the First World countries (the 'developed market-economy region') rose in value at an annual average rate of 17 per cent during 1965-1980 (and 13 per cent during 1970-1984), the manufactured exports of the Third World (the 'developing market economy region') increased at annual average rates of 24 per cent and 22 per cent respectively during the same periods.<sup>8</sup> These manufactures of the Third World found their destination also in the First World: during 1965-1980 and 1970-1984, manufactured exports of the Third World to the First World rose at annual average rates of 25 per cent and 22 per cent respectively. Even the tremendous rise in oil prices during the 1970s and early 1980s cannot overshadow the fact that the share of manufactures in the exports of the Third to the First World rose above 23 per cent (if we include fuel exports) or 58 per cent (if we consider only non-fuel exports) during 1980-1984. See Table 5.

For this reason it is important to look at the relationship of trends in terms of trade in manufactures and debt pressures. In particular it is important to answer the question as to what extent, if any, the shift towards manufactured exports has offered an avenue of escape for developing countries from the vicious circle between debt pressures and deteriorating terms of trade.



Table 5

Shares of Manufactures\* in Total Exports of the Third World Countries  
during 1965-85 (Selected Countries)

(Average Percentages)\*<sup>1</sup>

Country or Region	Periods						
	1965- 1967	1968- 1970	1971- 1973	1974- 1976	1977- 1979	1980- 1982	1983- 1985
Argentina	10.0 (11.7)	15.7 (15.7)	21.5 (24.3)	27.1 (30.7)	27.9 (27.4)	28.6 (27.8)	19.5 (19.0)
Bolivia	65.4 (60.6)	59.6 (55.7)	54.2 (45.5)	42.4 (41.7)	41.3 (33.8)	33.1 (34.4)	26.9 (32.1)
Brazil	11.6 ( 9.8)	13.7 (10.5)	21.4 (14.7)	28.0 (22.8)	35.0 (34.1)	42.1 (40.4)	44.9 (44.6)
Caribbean Group	18.6 ( 8.4)	19.84 ( 8.9)	21.6 (10.30)	18.8 (15.9)	23.0 (19.5)	25.6 (26.62)	13.4 (14.7)
Chile	75.7 (65.1)	79.8 (62.8)	72.9 (58.8)	68.7 (63.5)	63.5 (61.0)	54.4 (59.0)	49.0 (54.9)
China	46.1 (48.9)	48.3 (48.7)	52.2 (51.2)	49.6 (45.0)	51.6 (46.1)	54.2 (57.4)	50.5 (56.6)
Ecuador	7.5 ( 5.9)	9.7 ( 7.1)	6.4 ( 2.7)	6.2 ( 3.7)	7.8 ( 5.8)	18.5 (16.3)	1.8 ( 1.4)
Egypt	24.2 (26.3)	29.9 (35.0)	30.5 (33.5)	31.9 (31.8)	33.6 (28.5)	36.1 (39.4)	13.8 (14.4)
Ghana	8.2 ( 3.9)	15.6 (10.5)	15.3 (10.1)	13.3 (11.3)	19.7 (21.4)	42.5 (34.8)	16.3 (11.6)
Hong Kong	89.9 (86.9)	93.1 (90.5)	93.8 (90.3)	93.5 (91.3)	93.6 (93.1)	93.2 (92.5)	96.5 (95.8)
India	50.5 (58.5)	55.1 (61.2)	53.9 (57.4)	54.9 (57.6)	60.9 (66.3)	57.5 (57.7)	52.3 (49.6)

(cont.)

Table 5 (continued)

(Average Percentages)<sup>\*1</sup>

Country or Region	Periods						
	1965- 1967	1968- 1970	1971- 1973	1974- 1976	1977- 1979	1980- 1982	1983- 1985
Indonesia	13.0 ( 6.4)	9.1 ( 4.0)	8.5 ( 3.7)	5.4 ( 4.4)	7.3 (5.5)	7.6 ( 9.2)	10.7 (14.5)
Kenya	24.1 (18.2)	18.1 (12.6)	19.6 (10.2)	21.2 (17.7)	18.6 (18.5)	24.9 (25.8)	12.0 (14.4)
Korea	63.9 (54.9)	76.5 (66.5)	83.8 (76.7)	85.1 (81.7)	87.8 (86.8)	91.0 (90.6)	91.6 (98.8)
Malaysia	29.3 (26.8)	29.0 (26.0)	29.7 (26.5)	30.8 (32.2)	29.7 (26.7)	30.9 (31.8)	29.1 (31.5)
Mexico	29.7 (22.0)	37.1 (25.2)	46.5 (35.0)	48.3 (37.5)	36.8 (31.0)	30.6 (31.7)	29.2 (28.6)
Morocco	10.1 ( 4.8)	12.5 ( 5.7)	17.1 ( 9.0)	16.6 (16.8)	26.7 (21.9)	34.0 (35.2)	41.5 (41.2)
Nigeria	11.1 ( 4.9)	11.2 ( 4.8)	7.9 ( 2.8)	4.2 ( 2.5)	5.1 ( 2.9)	4.8 ( 5.7)	1.5 ( 1.8)
Pakistan	44.1 (57.0)	55.9 (52.2)	59.7 (54.7)	57.3 (63.4)	59.0 (56.2)	55.6 (56.0)	66.4 (61.3)
Paraguay	12.3 ( 9.5)	12.8 ( 9.1)	16.9 (13.3)	19.7 (15.50)	21.0 (20.7)	16.5 (14.1)	11.1 ( 8.5)
Peru	34.8 (19.2)	35.6 (16.9)	31.8 (19.9)	38.9 (32.0)	44.1 (41.6)	41.5 (43.1)	37.4 (38.2)
Philippines	7.8 ( 5.6)	9.4 ( 5.2)	12.4 ( 8.2)	21.8 (16.1)	34.3 (30.8)	45.7 (45.0)	48.2 (48.5)
Singapore	33.7 (16.3)	30.1 (12.6)	43.8 (21.5)	44.7 (33.5)	49.0 (41.6)	57.7 (59.0)	55.5 (51.1)

(cont.)

Table 5 (continued)

(Average Percentages)<sup>\*1</sup>

Country or Region	Periods						
	1965-1967	1968-1970	1971-1973	1974-1976	1977-1979	1980-1982	1983-1985
Taiwan	41.3 (33.0)	65.6 (58.8)	78.1 (73.7)	80.2 (79.7)	84.3 (83.0)	88.1 (87.8)	91.7 (91.9)
Thailand	14.2 (16.5)	21.1 (25.6)	26.6 (30.6)	25.2 (33.0)	32.3 (33.1)	36.9 (34.6)	38.7 (37.0)
Tunisia	42.6 (21.0)	26.2 ( 7.2)	22.6 ( 6.5)	26.5 (17.3)	37.9 (26.1)	41.6 (45.4)	47.6 (52.0)
Uruguay	25.6 (33.1)	28.7 (32.7)	15.0 (19.0)	31.9 (32.8)	45.0 (45.7)	37.7 (36.9)	34.3 (32.2)
Venezuela	3.8 ( 0.7)	4.9 ( 0.9)	7.3 ( 1.7)	3.6 ( 2.2)	6.4 ( 4.5)	7.9 ( 9.2)	5.5 ( 6.8)
Yugoslavia	65.4 (62.1)	70.6 (66.1)	74.1 (72.9)	78.7 (76.8)	77.1 (74.7)	82.5 (83.3)	82.2 (82.6)

\* In the broad category, 'Manufactures', we have included all commodities classified in the SITC (Standard International Trade Classification) section 5 to 9. That means, unclassified items (SITC section 9) are also included.

\*\* Shares in total values of exports. Figures in parentheses are shares in total volume of exports.

Source: Calculated on the basis of unpublished data stored by United Nations and made available to us by Mr. Fred Campano, Chief, Perspective Studies Section, DIESA/DRPA, United Nations.

Relevant data are not easily available for examination of the behaviour of terms of trade for manufactures. The United Nations used to publish some data on unit values of commodities flowing between the two regions of the market economy world but after 1980 these data were discontinued. On the basis of the published data, one study has already been carried out to examine the behaviour of terms of trade of different categories of primary products exported by the Third World to the First World vis-a-vis different SITC (Standard International Trade Classification) sections of products exported by the First World to the Third World over the period 1950-1980 (see Sarkar, 1986a). It concluded that the terms of trade of the Third World deteriorated mainly due to exchange of primary products for manufactures, machinery (SITC Section 7) and other manufactures (SITC Section 6 and 8) of the First World. But the study could not cover the field of trade in manufactures between the two regions due to lack of data. The Statistical Office of the United Nations published unit value indices of manufactured exports of the two regions of the market economy world starting from 1970 (with a discontinuity over 1971-74). But these series are not strictly appropriate for a study of terms of trade between the two regions, just as the unit value of export and the terms of trade series for the two regions available in different UN publications are not relevant for a study of the behaviour of aggregate terms of trade between the two regions. This is so because these data are not generated after netting out intra-regional (South-South and North-North) trade. This intra-regional trade accounted for 75 per cent of total exports of the First World and 24 per cent of total exports of the Third World during 1950-1980 (Sarkar, 1988, Table 6).

Table 6

Trends in the unit values of manufactured exports of the Third World countries relative to those of major industrial countries, 1965-1985

	Estimates*				
	b	t-ratio	$\bar{R}^2$	F-ratio	D-W
<b>ARGENTINA vs</b>					
France	0.0166	3.93	0.57	13.72	1.79
Germany	0.0149	3.34	0.41	7.52	1.80
Italy	0.0175	3.46	0.55	12.51	1.80
Japan	0.0227	2.97	0.63	16.99	1.55
UK	0.0013	0.10	0.52	11.35	1.90
USA	-0.0094	- 0.33	0.60	15.54	1.55
<b>BOLIVIA vs</b>					
France	0.0281	4.22	0.70	23.36	1.82
Germany	0.0267	5.42	0.78	35.35	2.00
Italy	0.0294	2.96	0.76	30.36	1.72
Japan	0.0350	2.78	0.79	37.77	1.64
UK	0.0145	0.99	0.61	15.79	1.64
USA	0.0064	0.19	0.63	17.50	1.28
<b>BRAZIL vs</b>					
France	-0.0063	- 0.43	0.41	7.56	2.06
Germany	-0.0033	- 0.36	0.30	5.05	1.94
Italy	-0.0053	- 0.37	0.39	7.16	2.28
Japan	-0.0064	- 0.29	0.59	14.66	1.92
UK	-0.0354	- 0.13	0.70	22.78	2.08
USA	-0.0956	- 0.66	0.82	44.78	1.71
<b>CARIBBEAN GROUP vs</b>					
France	0.0125	4.40	0.77	32.87	1.65
Germany	0.0125	2.52	0.66	19.80	1.60
Italy	0.0131	2.85	0.74	27.73	2.02
Japan	0.0184	2.32	0.72	25.37	1.80
UK	-0.0056	- 0.48	0.60	15.04	1.66
USA	-0.0388	- 0.43	0.71	24.73	1.51

(cont.)

Table 6 (continued)

	Estimates*				
	b	t-ratio	$\bar{R}^2$	F-ratio	D-W
CHILE vs					
France	-0.0470	- 5.03	0.72	25.71	1.92
Germany	-0.0493	- 4.56	0.76	31.44	1.77
Italy	-0.0453	- 5.76	0.73	26.47	1.98
Japan	-0.0404	- 4.81	0.69	21.89	1.84
UK	-0.0583	- 5.15	0.78	35.66	2.00
USA	-0.0591	- 5.44	0.79	36.89	1.84
CHINA vs					
France	-0.0127	- 0.89	0.39	6.95	2.27
Germany	-0.0101	- 1.02	0.33	5.63	2.13
Italy	-0.0119	- 0.75	0.37	6.63	2.24
Japan	-0.0121	- 0.59	0.51	10.90	2.07
UK	-0.0433	- 1.34	0.74	27.77	1.82
USA	-0.0671	- 1.00	0.76	30.90	1.53
ECUADOR vs					
France	-0.0071	- 0.89	0.26	4.37	1.84
Germany	-0.0067	- 0.57	0.38	6.88	1.71
Italy	-0.0064	- 1.24	0.07	1.71	1.89
Japan	-0.0009	- 0.19	-0.06	0.48	1.91
UK	-0.0967	- 2.00	0.58	13.87	1.84
USA	-0.0211	- 2.70	0.65	18.97	2.18
EGYPT vs					
France	0.0260	1.31	0.60	15.16	1.48
Germany	0.0266	1.46	0.59	14.85	1.36
Italy	0.0262	1.18	0.59	14.82	1.57
Japan	0.0300	1.18	0.69	21.72	1.25
UK	0.0085	0.29	0.56	12.89	1.36
USA	-0.0008	- 0.20	0.61	15.66	1.39

(cont.)

Table 6 (continued)

	Estimates*				
	b	t-ratio	$\bar{R}^2$	F-ratio	D-W
GHANA vs					
France	0.0077	0.78	0.43	8.20	1.70
Germany	0.0101	0.69	0.53	11.63	1.50
Italy	0.0083	0.80	0.50	10.50	1.64
Japan	0.0136	0.90	0.58	14.34	1.56
UK	-0.0045	- 0.72	0.23	3.82	1.36
USA	-0.0163	- 0.68	0.49	10.16	1.64
HONGKONG vs					
France	0.0072	0.61	0.39	7.16	1.95
Germany	0.0073	0.67	0.36	6.46	1.92
Italy	0.0087	0.86	0.32	5.53	2.07
Japan	0.0132	1.45	0.59	14.82	1.89
UK	-0.0123	- 0.53	0.56	12.94	1.86
USA	-0.0253	- 0.67	0.64	18.19	1.44
INDIA vs					
France	0.0209	2.85	0.56	12.96	1.85
Germany	0.0209	2.09	0.46	9.17	1.87
Italy	0.0204	4.44	0.58	13.89	1.95
Japan	0.0262	6.30	0.78	34.49	1.78
UK	0.0098	1.00	0.41	7.66	1.94
USA	0.0084	1.00	0.29	4.97	1.78
INDONESIA vs					
France	0.0119	1.87	0.31	5.31	1.73
Germany	0.0209	2.09	0.46	9.17	1.87
Italy	0.0103	1.06	0.40	7.37	1.78
Japan	0.0064	0.29	0.68	21.01	1.73
UK	-0.0090	- 0.52	0.38	6.81	2.02
USA	-0.0363	- 0.56	0.55	12.51	1.31

(cont.)

Table 6 (continued)

	Estimates*				
	b	t-ratio	$\bar{R}^2$	F-ratio	D-W
KENYA vs					
France	-0.0255	- 0.68	0.49	9.99	2.16
Germany	-0.0095	- 1.26	0.37	6.54	2.04
Italy	0.0046	1.50	0.55	6.92	2.03
Japan	-0.0276	- 0.54	0.62	16.74	1.92
UK	-0.0547	- 1.40	0.84	52.40	1.75
USA	-0.1213	- 0.62	0.82	44.75	1.09
KOREA vs					
France	-0.0007	- 0.17	-0.02	0.82	2.04
Germany	-0.0024	- 0.34	0.19	3.28	1.84
Italy	0.0012	0.49	-0.08	0.32	2.13
Japan	0.0050	1.27	0.34	5.83	1.59
UK	-0.0123	- 2.01	0.41	7.70	2.44
USA	-0.0176	- 2.21	0.60	15.37	2.10
MALAYSIA vs					
France	0.0056	4.99	0.69	22.30	1.83
Germany	0.0271	4.79	0.73	27.10	1.94
Italy	0.0292	4.28	0.68	21.16	1.80
Japan	0.0356	4.06	0.78	35.45	1.74
UK	0.0182	2.96	0.52	9.19	1.64
USA	0.0160	1.06	0.47	9.27	1.38
MEXICO vs					
France	-2.99	- 0.0044	0.13	2.46	1.77
Germany	-0.0007	- 0.0994	0.11	2.14	1.57
Italy	0.0008	0.13	0.03	1.31	1.90
Japan					
UK	-0.0164	- 0.99	0.61	16.01	1.64
USA	-0.0227	- 1.04	0.66	19.50	1.58

(cont.)



Table 6 (continued)

	Estimates*				
	b	t-ratio	$\bar{R}^2$	F-ratio	D-W
MOROCCO vs					
France	-0.0487	- 9.14	0.97	271.69	1.74
Germany	-0.0470	- 4.25	0.95	167.38	1.42
Italy	-0.0479	-16.64	0.96	219.84	1.90
Japan	-0.0426	- 8.52	0.92	103.39	1.71
UK	-0.0641	- 6.34	0.96	235.71	1.44
USA	-0.0710	- 4.59	0.97	288.99	1.45
NIGERIA vs					
France	0.0059	1.11	0.02	1.20	1.88
Germany	0.0035	1.01	-0.05	0.55	1.82
Italy	0.0071	1.01	0.08	1.82	1.92
Japan	0.0133	1.41	0.36	6.33	1.72
UK	-0.0048	- 0.37	0.31	5.32	1.84
USA	-0.0087	- 0.39	0.47	9.41	1.47
PAKISTAN vs					
France	0.0337	3.04	0.53	11.59	1.67
Germany	0.0324	3.00	0.52	11.20	1.70
Italy	0.0348	3.50	0.54	12.00	1.75
Japan	0.0401	4.00	0.63	17.25	1.63
UK	0.0215	1.20	0.39	7.17	1.78
USA	0.0191	1.05	0.42	7.82	1.68
PARAGUAY vs					
France	0.0026	0.25	0.11	2.16	1.94
Germany	0.0025	0.21	0.13	2.47	2.01
Italy	0.0027	0.33	0.02	1.25	1.94
Japan	0.0074	1.29	0.05	1.55	1.89
UK	-0.0087	- 0.53	0.45	7.06	1.93
USA	-0.0104	- 0.83	0.32	5.42	2.03

(cont.)

Table 6 (continued)

	Estimates*				
	b	t-ratio	$\bar{R}^2$	F-ratio	D-W
PERU vs					
France	-0.0478	- 6.89	0.79	36.98	2.07
Germany	-0.0500	- 6.97	0.82	45.53	1.95
Italy	-0.0462	- 7.62	0.79	37.34	2.15
Japan	-0.0415	- 7.20	0.81	41.38	2.02
UK	-0.0611	- 5.41	0.82	43.07	2.11
USA	-0.0633	- 5.22	0.82	44.77	1.87
PHILIPPINES vs					
France	-0.0176	- 1.38	0.37	6.56	1.86
Germany	-0.0173	- 1.51	0.38	6.85	1.75
Italy	-0.0158	- 1.28	0.30	5.01	1.97
Japan	-0.0120	- 0.83	0.29	4.87	1.59
UK	-0.0361	- 1.61	0.57	13.48	1.86
USA	-0.0499	- 1.45	0.66	19.19	1.83
SINGAPORE vs					
France	0.0142	2.35	0.33	5.76	2.05
Germany	0.0176	1.40	0.37	6.51	2.12
Italy	0.0138	3.51	0.34	5.98	1.76
Japan	0.0198	4.81	0.61	16.02	1.85
UK	0.0045	0.40	0.31	5.18	1.99
USA	0.0028	0.33	0.21	3.49	1.97
TAIWAN vs					
France	-0.0060	- 1.30	0.03	1.30	1.99
Germany	-0.0079	- 1.53	0.14	2.55	2.01
Italy	-0.0043	- 1.22	-0.03	0.76	2.02
Japan	0.0000	0.01	-0.06	0.48	1.89
UK	-0.0232	- 1.89	0.56	13.03	2.23
USA	-0.0387	- 1.21	0.63	17.49	1.76

(cont.)

Table 6 (continued)

	Estimates*				
	b	t-ratio	$\bar{R}^2$	F-ratio	D-W
THAILAND vs					
France	0.0145	3.76	0.44	8.63	2.26
Germany	0.0141	2.96	0.44	8.72	2.25
Italy	0.0164	3.28	0.51	10.82	2.20
Japan	0.0235	3.01	0.67	20.09	1.81
UK	0.0057	1.09	0.11	2.14	1.75
USA	0.0037	0.27	0.38	6.83	1.46
TUNISIA vs					
France	-0.0429	- 5.55	0.95	176.07	1.76
Germany	-0.0414	- 5.10	0.93	122.73	1.28
Italy	-0.0396	- 6.69	0.92	109.51	2.24
Japan	-0.0348	- 4.63	0.86	61.47	1.75
UK	-0.0642	- 3.96	0.95	172.26	1.25
USA	-0.0826	- 2.59	0.96	240.96	1.15
URUGUAY vs					
France	0.0168	6.07	0.75	29.36	1.65
Germany	0.0156	4.09	0.62	16.62	1.81
Italy	0.0173	8.74	0.74	28.08	2.16
Japan	0.0230	7.75	0.79	36.91	1.77
UK	0.0050	0.56	0.42	7.80	1.89
USA	-0.0066	0.23	0.60	15.50	1.25
VENEZUELA vs					
France	-0.0161	- 2.96	0.35	6.19	1.98
Germany	-0.0180	- 2.80	0.36	6.36	1.97
Italy	-0.0143	- 3.78	0.38	6.82	1.99
Japan	-0.0092	- 2.28	0.17	2.93	1.93
UK	-0.0289	- 3.28	0.63	17.03	2.42
USA	-0.0322	- 2.68	0.60	15.02	2.06

However, in the absence of better data, it may still be useful to study the behaviour of relative movements of unit values of manufactures of the two regions. The present study is concerned with this. We have calculated the ratio of unit values of manufactured exports of the two regions over the period 1975-1987 and have conducted a time series trend study. Furthermore, we obtained some unpublished data for total exports of manufactures by individual countries over the period 1965-1985<sup>9</sup>. These data enabled us to calculate the values of exports and imports of manufactures of some Third World countries. On the basis of these data, we have undertaken a time series study of the behaviour of manufacture-manufacture terms of trade (the ratio of the unit value index of manufactured exports to the unit value index of manufactured imports) of some Third World countries. Moreover, we have examined the movements in the unit values of manufacture exports of these Third World countries in relation to the unit values of manufactured exports of some major industrial countries. Our findings are presented in the next section. These cast some doubts on the 'unequal exchange' extension of the Prebisch-Singer thesis as far as the long term trends in barter terms of trade are concerned.

## IV

From the various issues of Monthly Bulletin of Statistics (United Nations), we get unit value indices of manufactured exports for both the regions of market economies (the First and Third Worlds), measured in both US dollars and SDRs, over the period 1975-87. Accordingly, we can construct two series on the unit values of manufactured exports of the Third World relative to those of the First World (one in terms of dollars and the other in terms of SDRs). Ignoring intra-regional trade, let us call these relative unit values the (net) barter terms of trade in manufactures between the Third World and the First World. Multiplying these relative unit value figures by the quantum indices of manufactured exports of the Third World, we obtain their income terms of trade (again ignoring intra-regional trade)<sup>10</sup>. Multiplying the reciprocal of barter terms of trade of the Third World by the quantum index of exports of manufactures of the First World, we obtain the income terms of trade of the First World (with the same qualification) for their manufactures trade.

To examine the nature of trends present in these series, we have fitted an exponential trend equation through Cochrane-Orcutt Iteration to remove autocorrelated errors from the estimates. Results are reported in Table 1. It is evident from Table 1 that in both US dollars and SDRs, unit values of manufactured exports of the Third World declined by 1-2% per annum in relation to those of the First World. The values of  $\bar{R}^2$  indicate that these trends are not smooth. Moreover, the trend coefficients estimated here have very high standard errors and do not survive the t-test (indicating a lack of statistical significance). But while the trend figures for individual years is uncertain, over the period of 20 years covered (1965-1985) an annual trend of -1½% per annum would result in a decline of over 35%. This can hardly be treated as "insignificant", even if the annual trend figure is so in the statistical sense.

However, due to the tremendous growth in manufactured exports of the Third World, their 'income terms of trade' rose unambiguously at an annual average rate of about 10 per cent. This rate of growth of income terms surpassed the rate of growth of income terms of trade of the First World which grew at an annual average rate of 5 to 6 per cent (not reported in Table 4). So if we take the ratio of income terms of trade of the two regions, the index exhibits an upward movement at an annual average rate of 3 to 4 per cent in favour of the Third World (see Table 7).

From this aggregative study, let us now turn to country cases. As indicated earlier, we obtained some unpublished trade data for some individual countries. For our case study, we have chosen a sample of 28 individual countries and one group of countries. Our sample covers all the countries considered as 'Major Exporters of Manufactures' in the 'developing' region of the market economy world (see UNCTAD Handbook of International Trade and Development Statistics, 1986 Supplement, p.v.). These constitute the 'Gang of Four' (South Korea, Singapore, Taiwan and Hong Kong) and three other countries; Argentina, Brazil and Yugoslavia. Besides these seven countries, we have considered another twenty individual Third World countries and a group (the Caribbean group of countries). We have also included China in our sample. Table 2 shows the importance of manufactured products<sup>11</sup> in the value and volume of total exports of each of the countries covered over the period of our study, 1965-85. It may be noted that the share of manufactures in total value and volume of exports rose rapidly for countries like Brazil, Korea, Morocco, Philippines, Singapore, Taiwan, Thailand and Yugoslavia, over the whole 1965-86 period. For countries like Argentina, India and Pakistan, the share of manufactures rose steadily up to a point near the end of the 1970s and then it showed a tendency to fall. On the contrary, for countries like Bolivia and Chile, the importance of manufactured products in total exports declined steadily.

Table 7

Trends in Net Barter - and Income Terms of Trade in Manufactures of  
the Third World vis-a-vis the First World, 1975-1987

Index	Estimates <sup>*1</sup>		
	Annual Average Rate of Change (%)	-2 R	Durbin-Watson Statistic
I. Net Barter Terms of Trade (NBTT)			
- Relative Unit Values in US dollar	-1.88 <sup>x</sup>	0.34	1.80
- Relative Unit Values in SDR	-1.36 <sup>x</sup>	0.22	1.72
II. Absolute Income Terms of Trade (ITT)			
-Quantum Index of Exports x Relative Unit Values (NBTT) in dollar	9.34 <sup>*</sup>	0.97	1.86
-Quantum Index of Exports x Relative Unit Values (NBTT) in SDR	9.52 <sup>*</sup>	0.97	1.86
III. Relative Income Terms of Trade			
- Third World ITT (in dollar)/First World ITT (in dollar)	4.47 <sup>*</sup>	0.73	1.28
-Third World ITT (in SDR)/First World ITT (in SDR)	4.60 <sup>*</sup>	0.75	1.48

Note: x Not significant at 10% level.

\* Significant at less than 5% level.

\*<sub>1</sub> Estimates are obtained by fitting an exponential trend equation. First order autocorrelated errors are sought to be removed by Cochrane-Orcutt Iterative Procedure.

Source: Calculated on the basis of data available in Monthly Bulletin of Statistics (United Nations), Various Issues.

For some countries we find abrupt rises or falls in the share of manufactures (e.g. Ghana, Ecuador and Egypt). Countries like Ecuador, Nigeria and Venezuela had very low share of manufactures (they are basically oil exporters). Thus we have a sample covering different groups of countries having different experiences regarding the relative growth of value and volume of manufactured exports over the 1965-85 period.

For each country or region we show the ratio of unit value of manufactured exports to that of manufactured imports. This gives the manufacture-manufacture (net Barter) terms of trade of a country vis-a-vis the rest of the world. Multiplying the unit value ratio by the quantum index of manufactured exports we arrive at figure of income terms of trade in manufactures. To examine the nature of trends present in the series, an exponential trend equation has been fitted in each case. Through the Cochrane-Orcutt iteration technique, autocorrelated errors are removed from the estimates as done in the case of our aggregative study. The estimates are reported in Table 8.

The results for the 29 cases (28 countries and 1 region) may be summarised as follows: 14 negative trends, of which 6 significant and 8 not clearly significant; 15 positive trends, of which 8 significant and 7 not clearly significant. Thus the results are evenly divided - about half not clearly significant and the others divided between positive and negative trends in terms of trade. Thus changes in terms of trade in manufactures seem to have been natural, neither compensating for nor exacerbating adverse change in overall terms of trade or exchange of primary products for manufactures.



Table 8

Trends in manufacture-manufacture terms of trade<sup>1</sup> of a selected  
number of Third World countries  
1965-1985

	Estimates <sup>2</sup>		
	Annual Average Rate of Change (%)	$\bar{R}^2$	Durbin-Watson Stat.
<u>I Negative trends</u>			
Brazil	-2.65*	0.67	2.06
Chile	-5.18*	0.79	1.91
China	-0.32*	0.33	1.23
Ecuador	-1.14*	0.38	1.91
Kenya	-4.85	0.86	1.30
Mexico	-1.15*	0.59	1.58
Morocco	-5.04*	0.97	1.23
Paraguay	-0.24*	0.08	1.98
Peru	-5.19*	0.84	2.02
Philippines	-2.41	0.48	1.70
Taiwan	-0.60*	0.04	1.98
Tunisia	-4.38*	0.95	1.35
Venezuela	-1.90*	0.55	1.98
Yugoslavia	-0.31	-0.10	2.00
<u>II Positive Trends</u>			
Argentina	1.56*	0.56	1.66
Bolivia	2.76*	0.75	1.40
Caribbean Group	1.02*	0.72	1.84
Egypt	3.37*	0.51	1.47
Ghana	0.37	0.46	1.28
Hong Kong	0.78*	0.56	1.69
India	1.78*	0.58	1.89
Indonesia	0.06	0.41	1.47
Korea	0.07	0.04	1.89
Malaysia	0.94	0.56	1.62
Nigeria	0.31*	0.06	1.76
Pakistan	3.61*	0.49	1.81
Singapore	0.78*	0.13	1.88
Thailand	1.54*	0.53	1.90
Uruguay	1.13*	0.67	2.05

There is however a clear tendency for the negative trends for the 14 'negative' countries to be stronger (-2.8% pa), than the positive trends for the 15 'positive' countries (+1.3% pa). Thus the overall unweighted average for the 29 countries is -0.65% pa, broadly confirming the results of the aggregate analysis. All these figures are unweighted (simple) averages, treating each country case as a separate, equally important, test of the hypothesis. If we concentrate on countries with marked trends (over 2% pa) we find 7 countries with negative trends and only 3 with positive trends. Of the Latin American countries, seven had negative trends and only three positive (average -1.2%); by contrast among the Asian countries only 2 were negative but 8 positive (average +0.9%). Here we clearly have a contributory factor to the differential balance of payments and debt pressure experience of the two continents.

Of the 14 highly indebted countries in Table 5, no less than 9 are in the negative group and only 5 in the positive group. This would support the view that debt pressures and associated export pressures have a negative influence on terms of trade. The average trend (simple average) for the 14 highly indebted countries is -1.3% pa.

It is interesting to compare the behaviour of unit values of manufactured exports of Third World countries with those of some major industrial countries. Accordingly we have derived the ratios of unit value of manufactured exports of each of the 29 countries and region covered in our sample to those of six industrial countries, France, Germany, Italy, Japan, UK, and USA. As before we have fitted an exponential trend equation to each series on relative unit values of manufactured exports. The results are reported in Table 6.

It can be observed that five (out of six) countries that faced a significant deterioration in their manufacture-manufacture terms of trade during 1965 (Chile, Morocco, Peru, Tunisia and Venezuela) experienced declines in their

unit values of manufactured exports relative to those of all the six industrial countries considered here. The other country, Ecuador, faced a statistically significant declining trend in its unit value of manufactured exports only vis-a-vis USA. In fact all the six countries faced the highest rates of declines in their manufactured export unit values vis-a-vis those of the USA. Not only that, no country experienced an improvement in its unit value of manufactured exports vis-a-vis the USA.

If these unit value ratios can be taken as rough proxies of the manufacture-manufacture terms of trade between the two countries, one belonging to the Third World and the other belonging to the First World, we must conclude that there is no clear evidence in support of the 'unequal exchange' extension of the Prebisch-Singer 'deterioration hypothesis', although there is some evidence for this (a) for Latin America and (b) for trade with the US. This finding in a way supports the prophecy of Prebisch as the first Secretary General of UNCTAD, 'with an effort of imagination', he visualized a situation in the distant future when adverse terms of trade would disappear 'as a result of the worldwide process of industrialization' (Prebisch, 1964, p. 15).

However more relevant concepts in the context of the Theory of Unequal Exchange are the double factorial terms of trade. Although our study is not directly concerned with this concept of terms of trade in the field of manufactured exports and imports, available data presented in Table 5 indicate that there exists a wide gap in the growth of labour productivity between the First World and the Third World.

During 1960-70 the annual average rate of growth of labour productivity in manufacturing production of the First World was 4.1 per cent while for the Third World, it was 2.3 per cent. This gap widened further in the next decade, 1970-80: while labour productivity grew at an annual average rate of 2.8 per cent in the field of manufacturing production of the First World, it rose at a meagre rate of 0.4 per cent in the Third World. Hence given the

absence of major overall trends in the manufacture-manufacture terms of trade of the Third World vis-a-vis the First World, the double factoral terms of trade turned against the Third World. Thus while our study casts some doubts on the 'unequal exchange' extension of the Prebisch-Singer thesis so far as it is concerned with the behaviour of manufacture-manufacture (net) barter terms of trade, the barter terms of trade by their very absence of a clear improvement failed to reflect the respective productivity trends, and in that sense trade in manufactures contributed to increased inequality in the distribution of gains from trade. But the major factor remains the long-term deterioration in the (net barter) terms of trade of primary products vis-a-vis manufactures (see also Sarkar, 1986 etc.). It is only when we move to factoral terms of trade that trade in manufactures emerges as important overall although in Latin America it also contributes to a deterioration of barter terms of trade.

It also suggests that the real core of the Prebisch (or Prebisch-Singer) thesis is the loss of productivity gains which applies both to primary products/manufactures and manufactures/manufactures trade, rather than the movement of barter terms of trade which has led to a spate of statistical debate. This final conclusion fits in well with those reached by Spraos "Inequalizing Trade" (1983).

Notes

1. This is based on data in H D Gibson and A P Thirlwall: 'An International Comparison of the Causes of Changes in the Debt Service Ratio 1980-1985' (Mimeo).
2. Gibson and Thirlwall loc. cit., p 11.
3. Gibson and Thirlwall loc. cit., p 11.
4. This, in fact, is part of the "double taxation" or "multiple taxation" of export earnings mentioned in an earlier part of this paper.
5. See Peter G Warr: "Predictive Performance of the World Bank's Commodity Price Projections". The Australian National University Research School of Pacific Studies, Department of Economics and National Centre for Development Studies, Working Papers in Trade and Development No. 88/2, February 1988.
6. These figures are based on Table 20 (Summary of economic performance indicators) of the World Bank UNDP Report on "Africa's Adjustment and Growth in the 1980s" (page 30) and represent the simple averages (not the weighted averages also given in the same Table in parenthesis).
7. 'The World Development Report 1987 on the Blessings of "Outward Orientation": A Necessary Correction', The Journal of Development Studies, Vol 24, 2 January 1988 and 'Trade Policy and Growth of Developing Countries: Some New Data' with Patricia Gray, World Development, Vol 16, No 3, 1988.
8. See UNCTAD Handbook of International Trade and Development Statistics, 1983 (pp 94-9) and 1986 (pp 72-79).
9. These data were compiled for use in the World Trade Matrix which is at the centre of the Link modelling system at the University of Pennsylvania. All trade data (exports and imports) are on an f.o.b. basis.
10. As argued before, intra-regional trade is dominant for the First World and not insignificant for the Third World. But, due to lack of better data, we are using the terms, income terms of trade and net barter terms of trade although the indices calculated and studied here will be good proxies only if unit values do not differ much between intra-regional and inter-regional flows of products due to identical market conditions.
11. Generally, in UN presentation of data, the broad category 'Manufactures' includes only those products which are classified in the SITC (Standard International Trade Classification) sections 5 to 8

(chemicals, machinery and other manufactures). But for our country case study, 'unclassified items' (SITC section 9) are also included in the broad category 'Manufactures'. This definition is used for all the data presented and analysed in Tables 5, 6 and 7.

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