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INDEXATION OF RAW MATERIALS PRICES: A CRITIQUE,(U)
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6 # INDEXATION OF RAW MATERIALS PRICES: A CRITIQUE 12 12

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I. THE GENERAL ISSUES

Introduction

The current interest on the part of many LDC raw materials exporters in the indexation of world commodity prices appears to be a response to their frustration at the failure of post war development efforts to narrow the income gap between themselves and the industrialized OECD nations. In this context, the ultimate LDC goals in implementing an indexing scheme are economic development and growth in income per capita. And maintaining their commodity terms of trade -- both reducing the short term fluctuations and maintaining the long run purchasing power -- is seen by the developing countries as a necessary and perhaps even sufficient condition for the achievement of these targets. According to a recent UNCTAD study on indexation:*

> Although there has been a substantial economic expansion in the developed countries in the post war period, this growth has not to any extent been matched in the developing countries. *A major reason* for this has been that the terms of trade of the developing countries have suffered an unfavorable trend, since exports from developing countries consist very largely of primary commodities, many of which are subject to substantial fluctuations and cycles in prices on world markets.

Although any decline in the price of raw materials relative to manufactured goods has certainly not helped to promote economic development in the LDCs, it is not clear that its negative influence has been as significant as the UNCTAD study implies. Of equal, if not greater, significance for

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*United Nations Conference on Trade and Development, *The Indexation of Prices*, (TD/B/503/Supp. 1), July 1974, p. 1.

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the macro-economic track record of developing countries during the decades since World War II have been the following:

- high rates of population growth
- misallocation of investment funds. For example, most development plans in the 1950s and 1960s emphasized the establishment of "heavy" industry to the neglect of the agricultural sector. The consequences of this sectoral orientation are now being felt in the form of increased imports of high priced food and fertilizer--imports which channel hard currency foreign exchange into current consumption rather than capital accumulation.
- misguided attempts to encourage industrialization (regardless of the merits of industrialization itself). These frequently involved policies which (i) kept the LDC's exchange rate undervalued, thus making imported inputs into the industrial sector cheap and discouraging production for export and (ii) protected the "infant" industrial sector from foreign competition by high tariff barriers. These barriers in turn inhibited the development of industrial exports capable of competing on the world market without government subsidy.

Changes in the Terms of Trade: Historical Evidence

The fundamental notion underlying the arguments for indexation is that the structural shifts which accompany economic development produce a secular (and inevitable) decline in the prices of raw materials relative to manufactures. Such trends would be evident both within and between countries as the locus of investment opportunity and therefore productive activity shifted in response to changes in relative demand and supply--changes which are assumed to favor the output of the manufacturing sector.

Existing evidence on international price trends must be interpreted with caution. Price indices for exports and imports are plagued by both the general, conceptual and empirical problems associated with constructing price indices and by those problems specific to the use of foreign trade data.* Especially significant is the difficulty of measuring technologically-induced changes in the quality of manufactured goods over time. Furthermore, the existence of secular price trends is not unambiguous for all commodities (or even all manufacturers), as shown by the recent prices of crude oil, copper, and internationally-traded foodstuffs such as rice and wheat. As a result, aggregate export and import price indices for a particular country or group of countries may mask disparate shifts among the prices of the component commodities.

Tables 1 and 2 illustrate the nature of this "aggregate index" problem using data for the United States. The tables decompose the unit value indices for total merchandise exports and imports into five categories: crude foods, manufactured foods, crude materials, semi-manufacturers, and finished manufacturers. The export data in Table 1 show that from 1950 until approximately 1967 the unit values of the two raw materials categories--crude foods and crude materials--exceeded the unit values for finished manufacturers and therefore total exports, given the preponderance of manufactures in the total amount of U.S. exports. A somewhat similar situation prevailed for merchandise imports, as shown in Table 2. During the 1950s, the unit values for imports of crude foods and materials exceeded those of finished manufactures; after 1963, the unit value indices for these categories were approximately equal.

Thus, for the United States during the postwar period, the secular decline in the prices of its raw material expoerts and imports relative to those for manufactures--a decline which is predicted by the model of economic change on which the arguments for indexing appear to be based--did not occur. The unit values of U.S. exports of raw materials relative to those of its manufactured imports remained roughly constant over this period, the two exceptions being the late 1950s and the years 1971-1972.

This cursory survey of price trends in U.S. foreign trade since 1950 points up the need for detailed investigations of the available, empirical evidence on the terms of trade for less developed countries. The purpose

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*An excellent discussion of these problems appears in Robert E. Lipsey *Price and Quantity Trends in the Foreign Trade of the United States*, Princeton University Press, Princeton, 1963, Chapters 3-5.

TABLE 1

U.S. Merchandise Exports, Unit Values
1967 = 100

	Crude Foods	Manufactured Foods	Crude Materials	Semi-Manufactures	Finished Manufactures	All Exports
1950	96	84	90	84	67	74
1951	107	105	107	104	74	84
1952	116	99	101	92	74	84
1953	109	102	95	100	75	84
1954	97	102	97	99	74	83
1955	94	93	97	105	75	84
1956	95	91	96	117	78	87
1957	94	95	97	114	83	90
1958	93	96	95	102	84	90
1959	95	89	92	104	86	90
1960	92	87	91	105	87	90
1961	94	89	95	103	89	92
1962	97	87	96	98	89	92
1963	99	88	95	96	89	91
1964	100	90	95	96	90	92
1965	96	94	99	102	93	96
1966	99	101	103	103	96	95
1967	100	100	100	100	100	100
1968	96	101	98	96	104	101
1969	97	102	100	96	109	105
1970	99	105	107	101	116	111
1971	105	110	116	101	119	114
1972	106	119	128	100	123	118

Source: Department of Commerce, *Statistical Abstract of the United States*, various years.

TABLE 2

U.S. Merchandise Imports, Unit Values
1967 = 100

	Crude Foods	Manufactured Foods	Crude Materials	Semi-Manufactures	Finished Manufactures	All Imports
1950	97	80	93	79	89	87
1951	110	87	135	100	105	109
1952	110	87	112	101	104	104
1953	111	87	101	96	102	99
1954	133	85	98	94	102	101
1955	114	84	103	101	100	101
1956	110	85	106	107	102	103
1957	108	89	109	106	104	104
1958	102	88	101	96	94	96
1959	90	87	102	96	93	92
1960	89	86	105	98	95	96
1961	85	86	101	97	96	92
1962	83	86	99	92	94	92
1963	83	93	99	91	94	93
1964	101	91	100	94	94	95
1965	100	90	103	97	94	96
1966	103	97	103	99	97	99
1967	100	100	100	100	100	100
1968	101	101	100	103	100	101
1969	105	107	105	104	104	104
1970	122	112	105	110	112	112
1971	117	117	107	114	121	118
1972	125	125	111	121	131	126

Source: Same as Table 1

of this analysis would be to identify precisely the nature of the fluctuations and trends in prices experienced by those individual commodities or commodity groups, including manufactures, which figure significantly in the exports or imports of these countries. It is only on the basis of such an analysis that the economic and political validity of the arguments put forth in support of indexation can be assessed.

Changes in the Terms of Trade: Economic Implications

In a market whose characteristics fulfilled the economist's competitive paradigm, the decline in the relative prices of raw materials exports would signal and eventually lead to, depending on the time lag involved, a reallocation of resources from the production of raw materials in favor of the production of manufactured exports. The changed terms of trade confronting raw materials exporters would thus be a "valid" market signal according to efficiency criteria, although not necessarily on equity grounds. The length of the transition period needed to make the switch in production and the magnitude of the associated adjustment costs might involve substantial dislocations, with the burden of the costs falling disproportionately on those groups within these economies least able to adjust to the changed economic conditions.

There are really two separate issues here. *First,* to what extent do the competitive assumptions mentioned above obtain? That is, to what extent does a decline in the terms of trade faced by raw materials exporters actually indicate the changed, global profitability of raw material production due to its increased productivity, the development of synthetic substitutes, etc.--a changed profitability whose effects *should* be allowed to percolate through the LDCs involved in order to encourage investment in those sectors whose domestic and trade-related growth prospects are more promising.

On the other hand, it is possible that a fall in the relative prices of raw materials may represent the interplay of certain noncompetitive forces. These would include the monopoly or monopsony positions of the market participants which are frequently vertically-integrated, multinational corporations which either produce or purchase the raw material in question and whose activities may preclude the clear definition of an equilibrium price for the commodity at any given stage in its processing.

In this situation, it follows that the implementation of policies which would move the international and associated domestic markets closer to the competitive paradigm would lead to a reversal of the fall in the relative prices of raw materials.

. The *second* issue,which may come closer to the heart of the arguments in favor of indexation, is the ability of many of the countries in the Third World to affect a timely adjustment to changes in external economic conditions. The relative prices of many primary products have been declining gradually, if somewhat erratically, since the early 1950s, and many LDCs initiated development efforts during this period aimed at a reorientation of the locus of their domestic economies away from the traditional sectors (frequently colonial) producing mineral and other raw materials for export toward manufactures both for domestic consumption and trade. This activity did not, however, eliminate their dependence on the industrialized West for imports per se; although the composition of imports did shift from final, consumer goods to intermediate inputs, capital equipment; and fossil fuels. These imported components of LDC industrial development plans were paid for by continued exports of raw materials and inflows of foreign private and government (aid) capital. Some countries such as Brazil, Korea, and Taiwan have made the structural transformation of their economies which is implicit in the shift in the composition of their exports from raw materials to manufactured goods. Other countries, such as India, also possess an industrial base. But this industrial sector is directed inward and supplies only domestic needs. Its inefficiencies are perpetuated by tariff protection and government subsidy; and it cannot, therefore, compete on world markets.

The shortrun growth prospects for all LDCs have suffered as a result of events of the recent years transmitted throughout the world economy: (1) the changes in the international monetary situation, specifically the end of the "dollar standard" and the increasing fluctuations among and between exchange rates; (2) the occurrence of food and fertilizer shortages and concomitant high prices for these commodities; (3) the increase in oil costs; and (4) the slowdown in the growth rates in OECD nations with the associated slower growth in demand for LDC exports (both raw materials and manufacturers) and the resultant, increasingly protectionist attitude on the part of OECD governments as they attempt to cope simultaneously with high rates of domestic unemployment and inflation and balance-of-payments deficits.

The first group of non oil exporting LDCs -- those whose economies are already diversified into manufactured exports -- probably possess the flexibility to achieve the internal adjustments necessary for increased exports and energy conservation in order to correct their balance of payments deficits.* For these countries, the slowdown in growth may be a temporary phenomenon *provided* they continue to have access to capital markets and other recycling facilities, such as the IMF oil "window", in amounts sufficiently large and at interest rates sufficiently low to permit them to make the transition from an era of cheap energy to one in which real fuel costs are substantially higher with a minimum of internal economic disruption. However, it is precisely this access to the export and capital markets of the OECD countries which appears doubtful for both the immediate future and longer term horizon.

For the remainder of the non oil exporters in South and East Asia, the prospects for renewed growth are considerably less sanguine. The economies of these countries lack both the industrial base and resource mobility to shift their domestic capabilities to accord with changed realities of the international economy without severe and prolonged dislocations (in the form of substantial increases in urban unemployment, for example). They possess little leeway for affecting export expansion and, partially in response to this, are not financially able to undertake substantial increases in their foreign indebtedness. Increases in foreign exchange earnings engendered by the investment of such loans in non-traditional, export-promoting activities would have to be earmarked for paying the interest on the debt and amortizing the principle, with little left over for increasing *domestic* income and spurring *domestic* savings and investment.

Thus, the future economic prospects for both groups of LDCs, particularly the latter, appear to depend importantly on their access to

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*See the discussion in H. B. Chenery "Restructuring the World Economy", *Foreign Affairs*, January 1975.

"untied" aid from the industrialized OECD nations and the OPEC countries, either in the form of concessional loans or outright grants. As Helmut Schmidt has argued:*

> The rate at which most countries of the Third World are accumulating capital resources of their own is so low that it is hardly possible to set in motion an accelerated process of self-development merely by offering them assistance in the form of credit . . . in the long run, there will have to be more genuine transfers of real resources in order to provide the less developed nations with a genuine basis for continued self-development and thus also to decrease social and political tension.

This is the context in which the policy debate concerning the indexation of commodity (including oil) prices should be viewed. Quoting again from the Schmidt article,

> Admittedly specialization, division of labor and free trade across national boundaries have increased the wealth of nations and caused an immense supply of goods in the same way as the division of labor increased production within a single nation. But the main problem is then to define the laws which determine the distribution of this enormous output; it might be added: which determine the "fair distribution, the "equitable" price, the "proper" value.

During the 1960s and early 1970s, this distributional question took the form of a protracted series of negotiations between and among the nations of the industrialized West and the LDCs concerning monetary and commercial rules--for example, the reform of the Bretton Woods system in favor of more flexible exchange rates and the Kennedy round of GATT negotiations. The "easy" reforms and changes have been made, however. And those issues which remain, such as the removal of nontariff barriers to trade or the dismantling of the agricultural protectionism which appears in both industrialized and developing economies, are politically quite sensitive even in the "best" of economic booms, let alone in the midst of a protracted and pervasive slowdown in economic growth. In

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*"The Struggle for the World Product," *Foreign Affairs*, April 1974.

addition, OECD member-nation support for development aid unrelated to narrow political objectives is at a post-war low. And, given the current rate of inflation in the prices of manufactures, food, and fuels, substantial increases in the nominal amount of aid must be forthcoming just to maintain its real level. The U.S. Congress and Administration are particularly unresponsive to LDC needs in this area.*

The areas of possible convergence between the international economic interests of developed and developing countries thus appear to have decreased substantially over the past few years. And it will be difficult to identify and implement those policy options which can produce a mutually beneficial accommodation of the conflicting means used by the two groups to achieve what are, in fact, similar ends.

The Role of Indexation

In the current, international economic environment, the indexation of commodity prices may thus appear to be the only viable lever available to developing countries to achieve the dynamic income growth and redistribution they desire. It is the concrete expression of the demands by these countries for an increased share of the world's economic goods and services which their low-cost, raw material resources have historically helped to provide.

Although the explicit goal of indexation is the transfer of income from developed to developing countries, its operational significance has yet to be defined. Precisely what--whose income and how much--is being redistributed to whom--which countries and which groups within countries? Without careful analysis of these questions, the effects of indexing raw materials prices on commodity purchasers (donors) and producers (recipients) are problematic and thus subject to the polemics of political debate.

The answers to these questions will depend on two sets of factors. First, what is the *immediate* goal of indexation--i.e., by what means is the income redistribution to be achieved? Will it attempt to stabilize fluctuations in commodity prices while letting the market, as currently, organized, determine their long run trend? Or will its goals be the more

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*See the discussion in C. Fred Bergsten "The Threat from the Third World," *Foreign Policy*, Summer 1973.

ambitious ones of establishing both the trend values for commodity prices as well as the degree of tolerable deviation around this trend. Although the means and ends of the two types of indexing are conceptually distinct; in practice, they may overlap to a considerable extent. In order to implement a stabilization scheme, one must define a mean value for the price in question. Depending on how this value is selected--for example, basing it on the price prevailing in a single, preceding year or on some average of past prices, the process and product of short run price stabilization will approximate those of long run price determination.

The second set of factors which will affect the extent and nature of the income transfer are the actual parameters of the particular scheme chosen: (i) the specific items, weights, and base periods to be used in the index; (ii) the reference price for the commodity against which to apply an index; and (iii) the operational means by which the target price is attained--namely, production cutbacks and/or stockpiles.

The permutations and combinations within and between these two sets of factors are enormous. Both the absolute number of possible alternatives and the complex interactions and feedbacks by which their effects will be worked out through the international economic system and the domestic economies of producers and consumers makes the calculation of the "who-wins-who-loses" question extremely difficult. In fact, it may be impossible to determine a priori what the impact of a given indexation scheme will be. Furthermore, there is no a priori reason to believe that any indexation scheme, once implemented, will be sustainable. The scheme itself is likely to set up implicit incentives for its own subversion and eventual destruction. Finally, the commodity price indexation may legitimize, not a redistribution of world income per se, but the series of misguided development plans and policies pursued by less developed countries in the past. And, as a result, it may encourage their continuation into the future and thus decrease the probability that the LDCs will ever attain their goal of self-sustained growth in income per capita.