Nicholas Kaldor's contribution to the analysis of international monetary reform

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1. Introduction
Nicholas Kaldor was both actively involved with practical problems of economic policy and reform, as well as contributing to the theoretical understanding of how economics function. In the field of international monetary reform, his work provides a clear example of a lucid application of theoretical insights on the malfunctioning of the international monetary and economic system to proposals on reform of the system, that could help overcome such problems.

Kaldor wrote on international monetary affairs very much in the tradition and the spirit of Keynes's thinking; this refers not only to the importance which he attached to the sustainment of world aggregate demand as a major objective of an efficient international monetary system, but also to the specific characteristics of Kaldor's proposal for international commodity control. But on international monetary reform, Kaldor was far more than a neo-Keynesian, as he also drew—and contributed to—the tradition of development economics, pioneered by Raul Prebisch, Hans Singer and Arthur Lewis. One of Kaldor's most valuable contributions to the field of international monetary reform is precisely that he is one of the first economists to approach this issue clearly from a development perspective. Indeed, as we shall see below, amongst the main objectives of Kaldor's proposals for international monetary reform were to 'permit a balanced distribution of economic progress in the world ... between developed and developing countries' and to 'provide an effective instrument for stabilising the terms of trade between primary products and manufactured goods, and for accelerating the rate of growth of world industrial production'.

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As Kaldor (1983) points out, Keynes's plan in this field has become known only in 1980, with the release of war-time British Government papers under the 30 years' rule, and their subsequent publication in Keynes' Collected Writings (Moggeridge, 1980).

1 This paper was submitted to the United Nations Conference on Trade and Development (UNCTAD) in 1964. As Kaldor writes in the introduction to the second volume of his Essays on Economic Policy, he had prepared a first draft by himself in April 1963, which found support from A.G. Hart and Jan Tinbergen. They then decided to prepare a joint submission to the forthcoming UNCTAD conference, on which Kaldor and Hart worked jointly at the end of 1963. Though Tinbergen was not able to participate in the actual drafting, he added his signature, subject to a few minor changes which were acceptable to Kaldor and Hart. Though Thirwall's (1987) interpretation that 'the plan was Kaldor's brainchild' seems an accurate summary of the authorship of the piece, though Hart's and particularly Tinbergen's backing clearly added prestige and weight to the piece.
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It could thus be argued that the significance of Kaldor's proposals for international monetary reform—first made in the early sixties—lie not so much in the detailed schemes themselves, but in the agenda of objectives which he puts forward, an agenda which seems particularly relevant in the eighties. In the next section (2), I shall elaborate further on the sources on which Kaldor based his analysis of the international monetary system. In Section 3, I shall describe and analyse Kaldor's proposal for an international commodity reserve currency, as well as mentioning his contribution to the setting up of compensatory financing schemes. Section 4 will evaluate Kaldor's contribution in the field.

2. The background to Kaldor's analysis

2.1 The concern with the fragility of the international monetary system

Kaldor shared with other economists, of which the most distinguished was Robert Triffin, a concern about the fragility of the Bretton Woods international monetary system, and its unsustainability. Triffin had pointed out the inherent financial contradiction of the system, that existed till 1971, based on the dollar being the 'key currency', and having a fixed price in terms of gold. In order for the key currency to be acceptable, it should not be too abundant, nor should the country issuing it be seen to have excessive balance of payments deficits. This contradiction, which has been called the 'Triffin dilemma' was a source of major concern to Kaldor. Throughout the 1950s and 1960s, mainly in correspondence, but also in some of his articles, Kaldor warned of the fragility of the system, and of the increase in dollar liabilities (see Thirwall, 1987). This concern with the fragility of the existing system was one of the two pillars on which Kaldor based his plans to replace the gold exchange standard with a commodity-backed international money, independent of any national currency.

It is worth noting here that Kaldor also added an important insight into the analysis of the final breakdown of the Bretton Woods system, with the suspension of the gold convertibility of the dollar on August 15, 1971. This explained the contradictions of the Bretton Woods system not merely in financial terms, but also in terms of the evolution of the world economy. Kaldor (1973) explained the progressive over-valuation of the dollar that had occurred in the fifties and sixties, mainly 'as a result of the cumulative trading advantages of countries which have been gaining an increasing share of world trade in manufactures, and the cumulative handicap of those whose market shares were curtailed in consequence'. Kaldor thus attributes the weakening of the dollar to the fact that the US pursued 'consumer led' economic growth, in which exports grow at a rate similar to that of industrial capacity and output; on the other hand, countries which like West Germany pursued an 'export-led' model, allowed their fast-growing industries to sustain far higher rates of growth than they could if they were mainly dependent on the growth of domestic demand. The faster rate of resulting productivity growth—caused by the more rapid growth of exports—led to a further improvement of their share of world trade. It was these mechanisms of self-reinforcing divergences in the trends of industrial productivity and competitiveness which in the last instance explained, according to Kaldor, the unsustainability of a world financial system based on firmly fixed exchange rates. Thus, Kaldor used his analysis of virtuous and vicious cumulative causation in long-term growth to explain what was initially seen by so many economists purely as a breakdown of a financial mechanism.
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2.2 The concern with world growth and development

The other pillar on which Kaldor based his proposals for international monetary reform was his concern with the deterioration of the terms of trade of developing countries and its negative effect on their (and the world’s) economic growth. As early as 1964, Kaldor in his joint piece with Hart and Tinbergen (Hart et al., 1964)—clearly stated that ‘The present world concern with monetary reform seems to us to present a rare opportunity to adapt the world monetary structure so as to foster the growth of world production and trade, and in particular, for us to contribute to the stabilisation and expansion of trade in primary products (Kaldor, Essays in Economic Policy II, pp. 131–2).’

Kaldor starts with the concern that increased availability of primary products in the world economy—due to technical progress and/or increased investment—will not necessarily lead to an expansion of manufacturing production, basically because of insufficient world demand, as the prices of primary commodities may decline. Such a decline in commodity prices, leads, firstly, to a fall in the purchasing power of the primary producing countries—reflected in their reduced demand for manufactured goods, produced in the industrial countries; secondly, it leads to a decline in world investment in the primary sector, mainly (in Kaldor’s model) within the developing countries; and, thirdly, it leads to a decline in the purchasing power of the primary producers in the developed countries. These three effects will probably, according to Kaldor, more than compensate the expansionary effect of aggregate demand in the industrial countries, owing to the increased purchasing power caused by cheaper primary products. Kaldor here takes Keynes’s concern with lack of world aggregate demand, but disaggregates it into primary and industrial sectors—and countries. This integration of macro-economic and broad sectoral concerns (particularly the relation between industrial and primary producing sectors and countries) is a major contribution by Kaldor to the field of development economics, which seems insufficiently recognised in the relevant literature.

Kaldor was fundamentally concerned with the wasted opportunity for growth and development which this situation presents since at a time when supplies of primary products are rising relatively fast, there is scope for acceleration in the rate of growth of world manufacturing production. According to Kaldor’s vision for the world as a whole (and for each under-developed country with prospects of industrialisation), the flow of the primary products represents the materials necessary to operate industry, and the food necessary to expand urban employment. Even if a given rate of expansion of primary production may be more than required to support the industrial expansion of already industrialised countries, it clearly cannot be viewed as excessive if accelerated industrialisation of relatively under-developed areas is considered. Hart et al. (1964) clearly summarise this point: ‘If an acceleration of agricultural production fails to induce an acceleration of industrial production, it is primarily because it fails to generate the increase

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1 See Moggridge (ed.), 1980; for a discussion, see, for example, Griffith-Jones and Sunkel, 1986, ch 2.
2 Kaldor believed that technical progress is more exogenous in the primary sector than in industry, thus representing a relatively inflexible upper limit on the long-term rate of growth of primary production. This technically determined upper limit was seen by Kaldor to be the main long-term constraint on industrial production growth, as well as an overall economic growth. For a clear and brief analysis of Kaldor’s thinking in this and other areas, see Wood (1987); see also, Kaldor, 1983, for his own statement and Thirlwall, 1987, for a formalisation of the analysis.
3 It should be stressed that the definition of primary commodities used in the GATT data is broad, and therefore that of manufactures narrow; thus, many processed primary products (e.g. canned gods, refined oil), which would be regarded as manufactures in domestic production statistics, are excluded from the manufactured category in the trade statistics given in Table 1. This further strengthens the point that raw primary product exports from developing countries are not as major an item in world trade as is generally perceived.
in effective (world) demand' (p. 164).

In their view, here lies the central advantage of a scheme of commodity price stabilisation via an international commodity reserve currency. (For details of the scheme, see Section 3 below.) Under such an arrangement, an increase in primary production would (according to the authors) generate a proportionate increase in the effective demand for industrial products. Such an element of income generation would have a powerful multiplier effect, not only in increased consumption, but also on 'induced investment'; manufacturing producers, whose markets lie in the primary producing sector, would find a market that is not only larger, but more reliable, which will allow them to expand their own capacity with greater confidence. The commodity reserve system's virtue is thus to provide a mechanism through which the expansion of primary production induces a corresponding expansion in manufacturing production: 'the balance between the two sectors will be restored through an accelerated rate of industrialisation, rather than through cuts in investment and in the growth of output in the primary sectors—the latter being the adjustment mechanism that operates through prolonged periods of depressed prices' (p. 165). This type of analysis is of coarse particularly relevant in the late eighties, a decade which has been characterised precisely by the negative type of adjustment which Hart, Kaldor and Tinbergen wished to avoid.

Those authors went beyond the pure aim of sustaining short-term world aggregate demand, into perceiving the stability of primary product prices as an engine of industrialisation and development, particularly in the poorer countries. They thus argued that the process of expansion set off by the commodity reserve system would diffuse demand from the central to the outlying areas of industrialisation; if demand for additional industrial goods could not be met by increased supply from industrial countries (owing to full capacity utilisation) the expansive pressure would be diverted to the industrial sectors of less developed economies.

With this line of argument, Kaldor provided a clear rationale not just for the commodity reserve currency which he proposed with Hart and Tinbergen, but to other schemes where the main aim was to stabilise the prices of commodities; this is a subject to which Kaldor (1983) returned much later, when he argued in favour of schemes such as the Common Fund, proposed by developing countries, or the International Commodity Control, originally proposed by Keynes in 1938, to stabilise commodity prices. Kaldor points out that such schemes were coldly received by the 'establishment' in industrial countries, because they were seen mainly to benefit developing countries. Kaldor stressed however that stability of commodity prices was also in 'the vital interests' of the industrialised countries, as it is a pre-condition for securing long-term investment necessary for sustained growth.

Particularly in his later work, (1976, 1983), Kaldor was concerned not only with the negative effect of deteriorating terms of trade on the development of poorer countries and on the world economy, but also with the negative effect of any major instability of commodity prices (whether upwards or downwards). We have already described Kaldor's concern with the deflationary effect of falling commodity prices. However, as Kaldor pointed out, sharp increases in commodity prices can also have negative (stagflationary) effects on the world economy.

Kaldor's analysis of the latter (see Kaldor, 1976) is based on the perception that while commodity prices are demand-determined, industrial prices are cost-determined; as a result, rises in commodity prices have a very powerful inflationary effect operating on the cost side, which is multiplied by its passage through the various stages of production.
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Thus, according to Kaldor's analysis, the industrial sector—owing to its 'superior market power'—will resist any compression of real income by countering commodity price rises through a cost-induced inflation of industrial prices. The rise in the price of raw materials and fuels is, according to Kaldor's analysis, passed through the various stages of production into the final price with an exaggerated effect—'blown up' by a succession of percentage additions to prime costs. This initially causes a rise in the profit share (in the value added of manufacturing), which—in countries with strong trade unions—is a strong factor in causing pressure for wage increases. Added to this is the price-induced rise in wages caused by the reluctance of workers to accept a cut in standards of living. Through these different mechanisms, the industrial sector resists any compression of its real income by countering the rise in commodity prices through a cost-induced inflation of industrial prices. Furthermore, this inflation will have a deflationary effect on real demand for industrial goods, for two reasons. One of them is that the rise in producers' profits is not matched by a rise in their spending; the other is that the governments of industrial countries will tend to react to increased domestic inflation by deflationary fiscal and monetary measures, that reduce consumer and investment demand. In Kaldor's analysis, excess demand of primary products thus results in an acceleration in the world rate of inflation, but no relative price change between primary and manufactured products. Equilibrium is achieved by income changes, which reduce the demand for primary products, that may ultimately lead to a relative decline of commodity prices!

Kaldor thus initially stressed the negative effects—on growth, particularly, but not only, of developing countries—of deteriorating commodity prices; he became equally concerned with the negative effects of rapidly rising commodity prices, such as occurred with the major rise in the price of oil in the seventies. Thus, the key problem was instability of commodity prices, determined by the inappropriate operation of commodity markets, without government regulation.

3 Kaldor's proposals for international monetary reform

A solution which attempted to tackle simultaneously the fragility of the international monetary system and the instability of commodity prices, with its negative implications for the world economy, was presented jointly by Kaldor, Hart and Tinbergen, in their 1963 article quoted above.

Though proposals for an international commodity reserve currency had been developed since the nineteenth Century, the Kaldor, Hart, Tinbergen proposal (Hart et al., in short) is clearly one of the most elaborate and influential schemes in this tradition, as reflected in the fact that it tends always to be quoted in any discussion on the issue. Perhaps one of the reasons for this is that they provided a very detailed justification and a blueprint for the operation of such a scheme, even though accepting that there would have to be subsequent modifications to the blueprint.

The scheme had the following characteristics:

(a) The IMF would have its own currency, convertible into both gold and a bundle of commodities, consisting of thirty or so principal commodities in world trade, which combine a high degree of standardisation with reasonable durability in storage. In the tradition, and presumably in honour of Keynes, this currency would be called 'bancor'.

(b) Bancor should be fully covered by gold and commodities, except for a fixed fiduciary issue.
Only central banks of member countries should be entitled to hold bancor balances with the IMF, and countries should accept bancor in settlement of claims.

A suggestion was made for an initial issue of bancor equivalent to $30 billion (at the time), made up of $5 billion in exchange for gold, $20 billion in exchange for commodities, and $5 billion as the fiduciary issue.

Once the scheme could enter into full operation (when the IMF would have built up its reserve of commodities), the convertibility of bancor into both gold and commodities could ensure that the price of primary commodities in the bundle would be stable in terms of gold, irrespective of variations in the exchange rate of individual currencies. Tendencies to price declines would be met by an absorption of stocks by the IMF, an increase in the basic income of primary producers and an increase in world liquidity; if prices fell, the reverse mechanism would operate.

The plan presented by Kaldor, Hart and Tinbergen to the UNCTAD Conference was not seriously discussed there, being referred instead to a study group. Kaldor himself wrote already in 1964: 'In submitting this scheme, none of us were under any illusion that the central bankers of the main industrial countries would be prepared to give serious consideration to a plan of this kind', however, they were anxious—at a time of widespread discussion on international monetary reform—to present 'the case for alternative schemes which would produce a more powerful and more widely diffused benefit to the world economy' (Introduction to Hart, Kaldor, and Tinbergen, 1964).

The IMF did agree to issue a new international monetary unit, the Special Drawing Right (SDR), in 1960. The SDR is valued in terms of a basket of currencies and not, as Kaldor et al. had proposed, by commodities; there are no automatic rules for its issue, a decision which depends on a majority in the Executive Board of the IMF. The SDR is a fairly insignificant part of international monetary reserves; between 1981 and 1988, as a result of the opposition of certain industrial governments—and particularly the US—there has been no new issue of SDRs. Though the world economy since 1981 had many of the characteristics outlined by Kaldor—low and falling commodity prices, slow growth or declining GDP in many developing countries, with negative effects on industrial economies' exports and production—counter-cyclical mechanisms have not been used internationally to reverse these trends. A commodity reserve currency would have operated automatically in such a direction; however, the existing SDR currency could have also been used in a counter-cyclical manner, as many economists and governments have argued. This logic was not accepted by the US and other governments, which blocked new issues of SDRs between 1981 and 1988.

Thus, not only has Kaldor's scheme been rejected, but in the eighties even the spirit of counter-cyclical international financial measures to combat recession in developing countries, so eloquently defended by Kaldor, was also rejected, even though such measures could have been implemented with existing mechanisms. The cost of such a rejection has been dramatic, particularly in the developing world (see, for example, Cornia, Jolly and Stewart, 1987).

Just as there has been no new issue for SDRs in the eighties, and any attempt to link SDR issues to the needs of developing countries was even less 'feasible' politically, so commodity price stabilisation schemes have received very little and even decreasing support internationally, and particularly from industrial governments. As the ideological preferences of the governments of leading industrial countries have shifted towards
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'free' markets and towards tight control of government issued currency (nationally and internationally), the climate for accepting Kaldor's scheme has, if anything, deteriorated since the mid sixties. However, if and when these trends are reversed, the climate may again improve.

As described above, there has been strong ideological rejection, particularly in the eighties, not only of Kaldor's scheme, but also of the use of other counter-cyclical international financial mechanisms which Kaldor advocated and to whose creation he had contributed (see below). This opposition has come with particular strength from those who are ideologically committed to the pure operation of market forces, both nationally and internationally. As these latter views became more dominant in major industrial countries (particularly during the Reagan years of the US administration), opposition both to the letter and the spirit of Kaldor's proposal was strengthened.

A more long-term reason for resistance to Kaldor's scheme by industrial governments may arise from the view that industrial and developing countries have conflicting interests in the matter of commodity prices; if it is perceived that industrial economies actually benefit from lower commodity prices (e.g. by lower costs of imports, lower inflation), then there is no reason for industrial governments to support and even less to fund commodity prices stabilisation mechanisms or a commodity backed currency, with a similar effect. Again the ideological perspective is important here. It emphasis is placed on controlling inflation as a key (and possibly major) objective for industrial governments, as the monetarist school does, then lower commodity prices provide a welcome contribution to the fight against inflation. Clearly, lower commodity prices in the eighties have contributed to a reduction in inflation in the industrial world. However, if a Kaldorian or a Keynesian view is adopted, both as regards the operation of the world economy and the objectives of economic policy, then there is a 'positive sum' gain to be obtained from higher and—above all—more stable commodity prices; these would be a pre-condition for long-term and sustained investment in the primary sector as well as providing an additional source of aggregate world demand (see Section 2 above). Furthermore, a Kaldorian perspective would give far higher priority to sustaining economic growth, particularly but not only in the developing world, than a monetarist one.

The extent to which higher commodity prices should be viewed in a zero-sum perspective (as harmful to industrial economies) or in a positive-sum perspective (as beneficial to both industrial and particularly developing economies) may be largely related to the perception of supply elasticities (and idle resources) in the industrial economies. To the extent that there is idle capacity in industrial economies, and no structural bottlenecks, then the increased demand from the developing world, generated by higher commodity prices, could be accommodated by higher production in the industrial world. Negative effects on inflation via increased costs of imported commodities would be reduced or eliminated by the reduction in unit fixed costs caused by an expansion of production volumes. Should there be no (or scarce) space capacity in industrial countries, or if there are structural bottlenecks, then the effect both of the rise in commodity prices (via higher costs) and of increased aggregate demand would be basically an inflationary one, and therefore an undesirable one, from the perspective of industrial countries' consumers. However, the positive long-term effect—pointed out by Kaldor—of higher investment in the primary producing sector, particularly in developing countries, would still occur even in this case; indeed, such investment could tend to reduce future inflationary pressures.
Table 1. Selected data for world merchandise trade, 1985 (billions of dollars)

<table>
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<th>Origin/Destination</th>
<th>Developed</th>
<th>Developing</th>
<th>World</th>
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<td><strong>Developed countries</strong></td>
<td></td>
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<tr>
<td>Total primary products</td>
<td>51</td>
<td>310</td>
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<tr>
<td>Primary products excluding fuel</td>
<td>43</td>
<td>210</td>
<td></td>
</tr>
<tr>
<td>Total manufacture</td>
<td>195</td>
<td>940</td>
<td></td>
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<tr>
<td>Total exports</td>
<td>253</td>
<td>1275</td>
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</tr>
<tr>
<td><strong>Developing countries</strong></td>
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</tr>
<tr>
<td>Total primary products</td>
<td>196</td>
<td>294</td>
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</tr>
<tr>
<td>Primary products excluding fuel</td>
<td>58</td>
<td>96</td>
<td></td>
</tr>
<tr>
<td>Total manufacture</td>
<td>96</td>
<td>145</td>
<td></td>
</tr>
<tr>
<td>Total exports</td>
<td>295</td>
<td>440</td>
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It should also be stressed in this context that it is increasingly incorrect to view the developing countries only as primary commodities exporters and the richer countries only as industrial goods exporters. Increasingly, the ‘North’ has become a major commodity producer and exporter, while several ‘Southern’ countries have become major exporters of manufactures. As a result, schemes like Kaldor’s which would favour sustained and stable commodity prices would not merely favour in the first instance developing economies, but primary producers anywhere in the world. Indeed, as can be seen in Table 1, total exports (in US $) of primary products by developed countries (at $310 bn) was higher than total exports by developing countries (at $294 bn). If fuels are excluded (given that its prices have had a far more favourable evolution since the seventies than those of other commodities), total non-fuel primary exports from developed countries (at $210 bn) are far higher than from developing countries (at $96 bn). Furthermore, if trade between the ‘North’ and ‘South’ is examined, non-fuel primary exports from South to North (at $58 bn) are of a not very different order of magnitude to non-fuel primary exports from North to South (at $43 bn). Thus, a scheme that would stabilise commodity prices—and possibly maintain them at a slightly higher level than the average in the eighties—would not only be of great benefit to developing economies (given the high share of primary exports in their total exports), but would also benefit producers and exporters of those commodities in the industrial world.

Looked at from this perspective, Kaldor’s scheme has today far fewer potential negative distributional implications for industrial countries than it could have had in the mid sixties, as the structure of trade has quite significantly been modified.

Even though a commodity backed currency faces strong—and perhaps insuperable—opposition from industrial governments either owing to their ideology or to their perception of their economies’ self-interest, such a proposal still either receives support or at least serious consideration from those concerned with the prospect of international monetary reform, from the point of view of the interests of the developing countries. Thus, the Arusha South North Conference in 1980 had, as its central recommendation, ‘the establishment of an international currency unit as the international means of
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exchange and primary reserve asset' (see Development Dialogue, 1980). Authors, like Stewart and Sengupta (1984), Williamson (1987) and Bird (1987) who analyse international monetary issues, either partly or mainly from a developing country perspective, tend to give consideration to a commodity-backed currency, though they are not necessarily convinced of its technical advantages.

This leads us to an examination of the more technical criticisms of Kaldor's scheme of a commodity-backed currency, mainly voiced by critics sympathetic to his scheme. Even if the ideological and political climate changed very significantly (which seems at present fairly unlikely, thought not impossible) and there was greater support for the governments' deliberately regulating the world economy as well as for a greater acceptance of developing countries' interests in the structuring of the international monetary system, it is unclear whether a commodity-backed currency would be technically an optimal solution. It is to these more technical objections to Kaldor's scheme to which we now briefly turn.

The clearest disadvantage of a commodity-backed international currency is the high cost of commodity storage; this problem was in fact recognised by Hart et al. themselves, who estimated the gross cost to amount to as much as 3–3½% a year of the value of the stock; an opponent of the scheme, Grubel (1965) estimated a higher cost, of around 6%. Stewart and Sengupta (1984), estimated that at 1980 prices, this would imply an amount in the range of US $20 billion to US $80 billion, clearly a very significant figure! The above estimates reflect the gross private running costs of such a scheme. However, it could be argued, as Bird (1987), does, that firstly, the net private cost could be lowered, if the buffer stock made a profit in its commodity transactions. More importantly, the net social cost would differ from the net private cost for several reasons. The existence of the 'Kaldorian' buffer stocks could reduce the need for other stocks; also, confidence in the long-term viability of the stock could encourage private speculators to operate in a price stabilising way; most importantly, the world economy would benefit from the scheme owing to more stable growth, higher levels of employment and a lower rate of inflation. However, in any attempt to implement the Kaldor scheme, it would be the gross private running costs which would initially have to be financed, and for which financial support, mainly from the industrial governments, would have to be found. This seems a major barrier, not only in present circumstances but also in future ones.

More specific technical objections have also been raised. For example, Bird (1987), has argued that stabilising prices may in some cases not stabilise export earnings, but in fact de-stabilise them. Stewart and Sengupta (1984), have also argued that a commodity reserve currency provides stability of commodity prices in terms of the bancor units, but not in terms of manufactured goods prices. Such technical problems could probably be overcome, but at the cost of introducing further complexity in an already much complicated scheme.

The advantages of a commodity reserve currency are basically those so lucidly outlined in the writings of Kaldor, as well as in Hart et al. (1964) (see Section 2.2 above). These relate to more rapid and stable world economic growth, to more stable commodity prices, and—particularly—to more sustained growth amongst primary commodity exporting economies. Some of the functions of such a commodity reserve currency could however be achieved by unbacked international currency, if it were properly developed.

Given that, unlike in 1964, there already exists an unbacked international currency, the SDR, the discussion today needs to relate to the extent to which replacement by a
commodity reserve currency would be superior to an improvement of the SDR itself. For governments concerned with improving the international monetary system in ways which make it both more stable and more functional to stable and widespread economic growth, a strong pitch for a commodity reserve currency would be justified only if the technical advantages were very obvious and a sufficient number of influential governments could easily be persuaded of this. So long as this is not the case, pressure for commodity backed currency would be a waste of both technical expertise and bargaining time.

A commodity currency could potentially have important advantages over the existing SDR system, some of them clearly demonstrated by recent experience. In particular, the counter-cyclical element of issue would operate far more automatically under a commodity currency than under the existing SDR system, which has no trigger criterion for issuing SDRs automatically or semi-automatically, when the world economy—or sections of it—have a scarcity of international liquidity. This problem could be overcome by providing an element of automaticity into SDR issue, but such automaticity would emerge more naturally from a commodity-backed currency. A commodity-backed currency would also have other advantages, if viewed from the point of view of the developing countries, in that it would be particularly counter-cyclical in the first instance, as regards their own economies, as the variable to be stabilised would be commodity prices. For those who view world economic growth as a positive-sum game, this could be an advantage. However, for those who (incorrectly according to Kaldor) view world economic growth as more of a zero-sum game, the fact that in the first round the counter-cyclical benefits go to developing countries could be viewed as a disadvantage for industrial economies, and could be therefore opposed.

On tactical terms, Stewart and Sengupta's (1984) conclusion seems correct, that it is better to focus bargaining energy in the short-term on improving the SDR, and attempting to incorporate some of the advantages of a commodity currency in those improvements, than to attempt the replacement of the SDR by a commodity-backed currency. This relates to the fact that commodity price stabilisation has even far less support amongst industrial governments than improving the SDR. Kaldor's scheme tries to address simultaneously two major problems in the world economy: instability of commodity prices, as well as the possible relative deterioration of commodity prices and the resulting deflationary tendencies in the world economy, particularly in developing nations. Tactically, the problem is that opposition to any scheme which would try to stabilise commodity prices is stronger in industrial government circles than opposition to measures which could lead to increases in world demand (e.g. new issues of SDRs, or even expansion of compensatory financing for cases of commodity price decline). Thus, if developing country governments were to push all out for a Kaldor type scheme, they would risk destroying potential progress on more expansionary world demand, owing to opposition to a scheme that would also help stabilise commodity prices.

However, it should be stressed that progress in expanding world economic demand (e.g. via SDR issues or other measures) may not be enough to deal with commodity price problems. Indeed, during several years in the mid eighties, even when industrial countries' aggregate demand grew at a fairly rapid pace, commodity prices—in nominal terms and, even more, relative to manufacturing prices—either continued at their very low levels or—even worse—declined further. Although, since 1987, this negative trend in commodity prices has been somewhat reversed, the de-linking of growth in industrial countries and improved commodity prices, that occurred in the mid eighties, is a source
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of concern. It is possible that this combination in the mid eighties can be explained by factors specific to that period such as widespread debt crises; as many developing countries simultaneously faced the need to expand export volumes so as to increase export earnings, to fund their higher net financial transfers abroad, the aggregate sum of their actions implied an expansion of total commodity supply that had a deflationary effect on commodity prices. Thus, declining commodity prices were both an initial important cause of widespread debt crises, as well as an important consequence; this link occurred not only in the eighties, but also in previous periods, e.g. the thirties. A scheme such as Kaldor's would have broken such 'perverse' inter-linkages. If it is politically infeasible, ideologically unacceptable, or technically problematic (see above) to adopt price stabilisation schemes, alternative measures need to be designed internationally to face the problem of fluctuating—and, in certain periods—declining commodity prices. Amongst such measures are the improvement and broadening of international compensatory financing facilities as well as the financing of, and international support for, export diversification and import substitution for the countries whose exports are too heavily concentrated on one or a few commodities. These measures, differently from Kaldor's scheme, accept as inevitable market fluctuations of commodity prices, and seek to protect countries from these fluctuations, in the short term, by compensatory financing; and/or in the long term, by supporting and funding economic restructuring and diversification, in sectors which generate or save foreign exchange. Particularly to break the 'perverse' interaction between widespread debt crises and declining commodity prices described above, it would be useful to design lending instruments which link repayment of debt to commodity price evolution of countries' main exports, for example via commodity bonds; for handling the current debt crises of the eighties, measures of debt or interest relief could be related (amongst other factors) to the evolution of the commodity prices of countries' main exports.

Finally, in this context it should be stressed that, particularly in the 1981-88 period, there has been no significant movement either towards improving the SDR, enhancing its role or indeed issuing it, in a context when an important part of the world was starved of foreign exchange reserves. Political realism, at least in the Reagan years, did not take us far on any road of international monetary reform, or even of use of existing, potentially counter-cyclical, instruments for international monetary management!

Returning to Kaldor's own work, it should be perhaps mentioned again that in one of his final works (1983), Kaldor recognised that his 1964 scheme was very complex and had some inherent problems. He therefore not only simplified his scheme, but also related it to the existing SDR. As mentioned above, drawing far more directly on Keynes's recently disclosed work, Kaldor (1983) proposed a simpler scheme, in which separate buffer stocks operated for various commodities. Kaldor proposed that the net expenditure on these buffer stocks—run by an international agency for stabilising commodity prices—would be funded by SDRs. Though simpler and less detailed his later scheme ends up with a fairly similar product to that of his 1964 scheme, 'a basic money unit which can be guaranteed to be stable in terms of basic commodities'.

Finally, reviews of Kaldor's work in this field tend to focus exclusively on his brilliant schemes which are not—and perhaps never will be—implemented. However, it seems appropriate to stress a far more neglected aspect: that Kaldor made an important contribution to providing the theoretical background for the establishment of the compensatory financing facility (CFF) of the IMF. This is particularly important because the CFF was for a long time the only significant modification of the international monetary
system, achieved mainly as a result of the pressure of developing country governments; it is also one of the few counter-cyclical mechanisms existing in the international monetary system (see, e.g., Griffith-Jones, 1986).

As early as 1952, Kaldor had prepared a paper that analysed the problem of how to offset, or minimise, the international propagation of cyclical fluctuations, a paper which contributed to the theoretical analysis beginning then within the United Nations and elsewhere on this subject. This debate contributed clearly to the establishment in 1962, by the IMF, of the above mentioned Compensatory Financing Facility. Hart et al. (1964) correctly welcomed this innovation, 'as the most encouraging development in the international monetary system since 1953'. The same principle behind the CFF was later applied to the EEC's compensatory facility, STABEX.

It is unfortunate, however, that in the mid 1980s, compensatory (and counter-cyclical) mechanisms were weakened by a reduction in the size of the CFF, and of its semi-automatic nature (DelI, 1985), precisely at a time of low and falling commodity prices as well as widespread debt crises, they were particularly essential.

4. Kaldor's contribution

Nicholas Kaldor was perhaps the first major economist, after Keynes, to address the issues of international monetary reform from the perspective of growth in the world economy. In one sense, Kaldor went beyond Keynes in that he related the structure of an ideal international monetary system not just to the sustainment of aggregate demand and short-term growth but also to sustained investment and long-term development, particularly in the poorer parts of the world. It is especially in this context—of linking long-term development concerns with the operation of the international monetary system—that Kaldor's contribution to the latter field is the greatest. Though his work in this case is fairly widely quoted, it perhaps has not got the full attention it deserves, particularly as a basis for providing a powerful rationale for international monetary reform.

Thus, Kaldor's work on the commodity reserve currency is lasting not so much in the actual details of the scheme he proposed, as in the broad agenda of policy objectives and methodology of analysis which it sets.

Kaldor contributed in an important way to the creation of a school of economists, who analyse the operations of the international financial system in depth, but who do so from a perspective which gives priority to the achievement of goals in the real economy, with particular, though not exclusive, concern for the development needs of poorer countries. This tradition of analysis, embedded in Keynes's thinking, is represented by economists such as John Williamson, Sidney Dell and Gerald Helleiner; it seems appropriate to note that one of the distinguished followers of that tradition is Frances Stewart, Kaldor's daughter.

Like Kaldor—and Keynes before him—this school of economists have perceptively analysed the working and limitations of the international monetary system, and made innovative proposals for its improvement and reform. The proposals of this school of analysis have to an important extent—though not entirely—been unheeded, with rather serious costs to world economic growth and indeed with growing risk to the stability of important parts of the international monetary system. It is to be hoped that their influence will increase as time passes, and as the cost of ignoring their policy advice is more clearly perceived.
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