ECONOMIC GROWTH CENTER

YALE UNIVERSITY

Box 1987, Yale Station
New Haven, Connecticut

CENTER DISCUSSION PAPER NO. 393

TRADE, DEVELOPMENT AND FACTOR MOVEMENTS

T. N. Srinivasan

January 1982

Trade, Development and Factor Movements

T. N. Srinivasan

HARRY G. JOHNSON's contributions to economic thought on trade, growth and development were many, including an incisive and accessible analysis of two-sector neo-classical growth, effective protection and general equilibrium growth and, above all, the impact on development of tariffs and other barriers to trade.[1] It is no secret that he was not at all sympathetic to proposals for a 'new international economic order' (NIEO).[2] Nor was he persuaded that inward-looking policies promoted development in poor countries.

In remembering Harry, it would be appropriate to look at the changing NIEO proposals in the light of what has been learned from the experience of the developing countries over the last three and a half decades and, in particular, the post-1973 experience of those countries in adjusting to the 'oil shock'. A comparison of NIEO proposals with development experience seems to suggest certain directions for commercial diplomacy in the near future. I will also attempt to look at policy problems posed by international factor movements in terms of a simple theoretical model, in the spirit of Johnson, who was an excellent theorist and used simple models to illuminate policy issues. One of my motivations in doing so is the resurgence of migration of labour from some developing countries in the period since the sharp increase in oil prices in 1973-74.

Origins of the NIEO Demands

Kenneth J. Arrow, a Nobel-Laureate and a founder of post-war neo-classical general equilibrium theory, once pointed out that while "the now demonstrated fact that flexible exchange rates are a feasible way of conducting international finance is a triumph of theoretical insights over practical men's convictions", one of the two major failures of neo-classical economics as an explanatory mechanism has been 'the incompatibility of recurrent periods of unemployment in the history of capitalism with a neoclassical model of general market equilibrium'. The other failure identified by Professor Arrow is of greater interest for my present purposes. He argued that 'inequality in economic development among countries, and among groups and regions within a country, provides a second and somewhat complicated difficulty for neo-classical theory. A purely neo-classical answer would explain differences in per capita income by differences in physical and human assets per capita. This, of course, raises the further question, how this came to be, which would require a fully dynamic model to answer. But the more compelling problem is that the differences in income seem too vast to be explained by factor differences. Indeed, in the presence of international trade, and especially international capital movements, wage differences should be strongly reduced compared to what would occur in autarchic states..."[3]

Professor Arrow suggested that differences in the production-possibility sets of different countries could be a possible answer, only to dismiss it as a partial answer in that it raised further questions, for the differences in production-possibility sets among contemporaries

can only be due to constraints on the transmission of knowledge, in a broad sense, across national boundaries. This led him to put his finger on the failure of markets for future goods, in part because of large enforcement costs with respect to future contracts as compared with contemporaneous contracts and in part, also, because of the many uncertainties about the future. In particular, the market of credit and capital goods, he suggested, are most likely to be subject to imperfections or even non-existence. And non-existence or imperfection of even a single market has spill-over effects on other markets and can destroy the optimality of competitive equilibrium.

Once non-existence or imperfect functioning of markets is admitted, the normative characterization of a global competitive equilibrium as reflecting an efficient and Pareto optimal allocation of resources among countries and individuals no longer holds. And, if markets fail, Professor Arrow argued that it was very likely that other social devices would be invented, such as government intervention, codes of conduct for economic agents or economic organizations with some power between the neo-classical competitive firm and an all-encompassing government.

It should be emphasized that Professor Arrow's asgument for the possibility of market failures is based on uncertainties about the future as well as externalities about information rather than on the traditional arguments about monopoly or oligopoly and exploitation that NIEO proponents are fond of repeating ad nauseam.

I have quoted Professor Arrow's views at some length, not merely because of his authority as an exponent of neo-classical economics, but mainly because some of the original NIEO demands could derive some analytical support from them. Although I dare say many a NIEO proponent

would be horrified at the very thought of neo-classical economics being cited in their support! Indeed, the perception that the prevailing economic order of today, meaning thereby economic institutions such as international markets for goods, capital and technical knowledge, not to speak of government interventions in such markets through tariff and non-tariff measures, results not only in an inefficient allocation of world resources but also in an inequitable allocation detrimental to the welfare of the poor citizens of the developing world, seems almost to echo the failure attributed by Professor Arrow of the neo-classical paradigm to explain inequalities in economic development. It was thought that a "New International Economic Order", with its own set of government interventions, codes of conduct for multi-national enterprises, conditions for the transfer of technology et cetera, would move the global economic system towards greater efficiency and equity, much like Professor Arrow's other social devices in response to market failure.

This may be an overly rational interpretation of the NIEO proposals. But the reaction of the developed countries to the proposals for a "new international economic order" was to brand them as totally irrational. In fact, Johnson himself viewed them as "essentially a demand to replace the market system by a vast bureaucratic system" and, he said, it was a "facile assumption that the international transfers asked for will benefit the people rather than the governing elites of the poor countries".[4] Johnson had in mind the problem that an imperfectly functioning market system would be replaced not by a perfectly functioning system of government intervention, as Professor Arrow had in mind, but by a system worse than it replaced.

Sir Arthur Lewis, another Nobel Laureate, has traced the evolution of the existing economic order with his customary insight, brilliance and wit.[5] There is no need for me to tread the same path. Let me, instead, briefly recapitulate the broad contents of the NIEO proposals, as adumbrated in Resolutions 3201 (S-VI) and 3202 (S-VI) of the Sixth Special Session of the General Assembly of the United Nations. The NIEO proposals included:

(a) an 'integrated' programme of price supports at levels higher than historic trends for a group of commodities exported by developing countries;

(b) the indexation of prices of exports of developing countries to prices of their imports from developed countries;

(c) The attainment of the target of 0.7 percent of gross national product (GNP) of developed countries for official development assistance;

(d) the linkage, in some form, of development aid to the creation of international reserves in terms of Special Drawing Rights (SDRs) on the International Monetary Fund (IMF);

(e) the so-called Lima target for shifting manufacturing capacity from the developed to developing countries to the extent of 25 percent of world industrial output by the year 2000;

(f) mechanisms for the transfer of technology to developing countries and codes of conduct for multinational enterprises;

(g) preferential treatment in terms of tariff reductions for the exports of developing countries to the markets of developed countries without reciprocity;

(h) the establishment of an international food-grain reserve; and

(i) debt relief.

It is not entirely a coincidence that the NIEO demands came to be forcefully made soon after the success in 1973 of the Organization of Petroleum Exporting Countries (OPEC) in raising oil prices, although it is true that the demands for preferential access to the markets of developed countries without reciprocity, the commodities programme and targets for official development assistance as a ratio of GNP date back to the first and second sessions of the United Nations Conference on Trade and Development (UNCTAD), held in Geneva in 1964 and in New Delhi in 1968 respectively, as well as to resolutions of the United Nations on the "development decades". It is also true that disappointment that political independence did not transform economies rapidly and that external aid flows were tapering off were also proximate causes for the NIEO proposals. But as Jagdish N. Bhagwati,[6] now of Columbia University, New York, has pointed out, it was the dramatic success achieved by OPEC that made developing countries view commodity exports, the excessive concentration in which was until then considered as a sign of weakness, as powerful weapons for collective action to exact monopoly rents from developed countries. Even more importantly, it was believed that if enough such rents could be earned, developing

countries could become considerably less dependent on the industrialized countries for resource flows and acquire greater control over the allocation of resources. It was even believed by some that a shift in economic power, brought about by exercising 'commodity power', would gain for developing countries a greater 'voice' over the control of the two venerable Bretton Woods institutions, namely the World Bank and the IMF.

Response to the NIEO Proposals

The response of the developed countries to the NIEO demands at the political level has been the so-called North-South dialogue which has been proceeding in various fora and with varying sets of participants. The Cancun Summit, held in October 1981, was the latest such dialogue. The response of the overwhelming majority of economists in the West who have thought and written on the NIEO proposals was, as my Yale colleague Carlos Diaz-Alejandro has put it, 'to dismiss the demands as the babbling of economic illiterates seized by a fit of passion'.[7]

The commodities programme was either dismissed as unfeasible, by pointing to failures of such schemes in the past, or, if feasible, considered as more likely to benefit some of the industrialized countries, since they also supply a significant proportion of the world market for some of the 'core' commodities of the programme. Johnson put this view in his inimitable way: 'the faith in commodity agreements as a panacea survives, particularly (academically) at Oxford, the home of lost causes. And, as is usually the case, the faith rests either on ignorance of past history or the obstinate belief that what went wrong last time was attributable to lack of will or cleverness or to an unwillingness to commit

sufficient financial resources to the enterprise, but never to any difficulties that could be understood in terms of elementary economic analysis.[8] Unlike Johnson, few economists noted, though, that agreements such as the Multi-fibre Arrangement[9] and the International Sugar Agreement,[10] which are expressly designed to protect inefficient developed-country producers are all equally undesirable. Those economists who were sympathetic to the idea of stabilizing commodity prices argued that it was beneficial to producers and consumers, in part because it may help in a small way in the fight against inflation in the developed countries and, in part, because intervention in agricultural markets is a feature of developed economies as well.

The proposed link between SDRs and development assistance was dismissed on the grounds that the need for reserve creation and the need for development finance arise from entirely different sources and that linking the two would not necessarily serve either need adequately or efficiently. Besides, the pattern of distribution of SDRs to developing countries under the 'link' scheme would not necessarily correspond to a desirable pattern of development assistance, for the poorest countries would be least likely to benefit.

It was conceded that some transfer of industrial capacity from developed to developing countries, particularly capacity to process commodities, may be mutually beneficial. But this was to be brought about, it was argued, by 'deescalation of the tariff structures by stage of processing' in order to 'to improve <u>market</u> incentives to locate early-stage processing of primary products in the primary producing countries'.[11] The NIEO scheme for bureaucratically-planned transfers of industrial capacity, not necessarily consisting only of processing capacity, was rejected.

While a number of books have discussed the economics or the lack thereof in the NIEO proposals, in the political arena some sobering changes have taken place in the last five years, even apart from some concessions on the Common Fund for the commodities programme that were made at the fourth UNCTAD session, held in Nairobi in 1976. As of now, both sides seem much less hopeful of achieving a grand global compact in which the industrialized countries of the 'North' would be assured of access to energy supplies, the energy-exporting countries would be assured of the safety and adequacy of real returns on their financial investments and the energy-importing developing countries would be assured of generous development assistance. Within the 'South', there is perhaps a grudging, although increasing, realization that the hoped for solidarity is not there. The economic and political strengths as well as interests of the developing countries are too diverse. Even more importantly, their strategies for economic development, as well as their political-philosophical underpinnings, differ widely from almost total reliance on the market for the allocation of resources, as well as development finance, to varying degrees of planning through government intervention in markets and quantitative allocation mechanisms and reliance on bilateral and multilateral official capital flows for development finance. But this reality has not extended to NIEO rhetoric; the resolutions of the Group of 77 in United Nations fora still sound the same. But the degree of enthusiasm for these resolutions is no longer 'uniform' among the developing countries.

The diversity was nowhere more apparent than among the participants at the Cancun Summit itself. Tanzania's approach to development

is as different from, say, Brazil's as it is from that of India. By the same token, Tanzania's economic strength is minuscule compared with the other two. The Cancun Summit participants, although not yet the Group of 77 as a whole, apparently abandoned the NIEO proposals for a discussion of energy and food-security issues.[12] The apparent concession by the President of the United States to the principle of 'global negotiations'[13] in fora other than the United Nations would appear to have been motivated more by a desire to avoid open disagreement than by a real eagerness to participate in such negotiations.

Be that as it may, negotiations have to take place sooner or later, even if the NIEO proposals are given up and even if the latest proposal of the Group of 77 for agreement to be reached by 'consensus', rather than on majority basis, is not acceptable to the United States.[14] After all, a lot has happened since Bretton Woods which, at the very least, calls for a re-examination of the adequacy of the institutional framework established there.[15] As Miriam Camps, of the Council on Foreign Relations in New York, points out, a compromise will have to be found somewhere between the status quo and an extension of the principle of one-nation-one-vote to all international institutions. The world now consists of more than 160 nation states with significant diffusion of political, military and economic power. Even more importantly, 'there is, too, a lack of congruence between the economic dimensions of many problems and their political and social dimensions'. This lack of congraence reflects the fact that economic power is distributed differently from political and military power, with some states being important for certain economic questions, but not for others. One

cannot but agree with Mrs. Camps in pointing to the need for strengthening global institutions, 'however complicated may be the task of doing so, because of the diversity of states, the tension between the desire for more autonomy and that for the fruits of interdependence, the differences between the scale of economic problems and political and social structures'.[16] The complications of the task, after all, represent the heart of the NIEO proporsals. They are not merely a bunch of economic demands. They are in fact political demands for a greater voice in the control of international economic institutions.

Reverting to the Cancun Summit, one of its most interesting aspects was the fact that some countries were not invited to participate, while some (such as the Soviet Union) chose not to attend. I do not want to dwell on the debating points made by each superpower about the other in this matter.[17]But I do want to note that none of the Gang of Four: South Korea, Taiwan, Hong Kong and Singapore were at Cancun. This, more than anything else, accurately reflects the yawning gap between, on the one hand, the rhetoric of the NIEO proposals and, on the other, the reality of the successful development of a few as compared with the lack lustre development if not the outright failures to develop of the many. This contrast is of interest both in its own right and for the light it sheds on what ought to be, rather than what is likely to be, on the agenda of global negotiations. Let me now turn to the development experience in the period since World War II.

Three Decades of Development

It is by now well known that the three decades 1950-80 were a period of substantial growth for the developing countries as a group. This is shown by almost every indicator of development in Table 1. But the low-income countries did not do as well as the middle-income countries.

A number of studies of the development of individual countries (and a number of studies in a comparative framework) are available. Since my interest here is in foreign trade, I shall confine myself to two sets of studies sponsored by the National Bureau of Economic Research (NBER) in the United States.[18] The first, directed by Professors Jagdish Bhagwati and Anne O. Krueger, was completed before the 'oil shock' of 1973-74. It covered nine countries, namely Chile, Colombia, Egypt, Ghana, India, Israel, South Korea, the Philippines and Turkey, and analysed the impact of their foreign-trade regimes on their economic development. The second, directed by Professor Krueger, of the University of Minnesota, covered ten countries, namely Brazil, Chile, Colombia, Indonesia, the Ivory Coast, Pakistan, South Korea, Thailand, Tunisia, and Uruguay and its focus was on the impact of alternative trade strategies on employment. The first volume of the second study was published early in 1981[19] with two more volumes to follow. These two sets of studies followed earlier studies for the Organization for Economic Cooperation and Development (OECD), covering Brazil, India, Mexico, Pakistan, the Philippines and Taiwan,[20] and for the World Bank.[21]

The Bhagwati-Krueger project focussed on three sets of questions. (i) What is the 'anatomy' of exchange-control regimes and how do the complex quantitative and price interventions interact with each other and with domestic economic policies to affect relevant economic variables? (ii) How do the initial conditions associated with the anatomy of the exchange-control regime affect the economic impact of devaluation and how if at all does analysis of devaluation under exchange control differ from that under convertibility? (iii) How does the choice of alternative trade and payments policies affect the prospects for economic growth?[22]

Defining an import-substitution strategy or regime as one which provides a higher effective rate of exchange for importing than for exporting and defining an export-promotion strategy or regime as one of providing almost the same rate of exchange for both, the study found evidence that the former regimes were characterized by considerable dispersion in their structure of protection while the latter regimes showed much less dispersion. Import-substitution regimes are associated, it was found, with lower export performance; and changing the overall foreign-trade regime successfully in the direction of reduced reliance on exchange control and increased liberalization, it was further found, has paid handsome dividends in terms of higher exports. Sustained superior performance in exporting depends on successful liberalization that is maintained. Occasional jabs at liberalization appear to lead nowhere. Countries that succeeded in reducing the bias against exports, such as South Korea and Brazil, have managed to register acceleration in growth rates, whereas countries that have not done so have had poor rates of growth.

The contrast between the success of South Korea and the relative failure of India in this regard is striking. Manufactured exports of South Korea were $10 million in 1963 compared with India's $630 million. By 1977, South Korea was exporting manufactured goods worth $11.2 billion, while India managed to export only $4.0 billion worth of manufactured goods. Singapore and Hong Kong as well Taiwan show similar gains in the export of manufactures relative to India. Even in the volume of industrial production, as measured by total value-added, India lost ground to each of these countries. In 1970, value-added in all manufacturing in South Korea was 23 percent of India's figure and in 1977 this figure had risen to 60 percent. An even more striking contrast could have been made had similar data for 1960 and 1980 been available for use.[23] This is not to suggest that the foreign-trade regime is the only or necessarily the major cause of India's poor record. But that it contributed significantly to it cannot be doubted.

There is no support in theory or in empirical evidence that bias towards import substitution is necessarily worse than a bias towards export promotion, rather than neutrality between the two, in terms of the efficiency of allocation of resources. There is some evidence that socially-wasteful exporting did, indeed, take place at certain points of time in South Korea.[24] As I mentioned earlier, however, in the NBER studies export promotion was defined as the absence of bias, or only negligible bias, in either direction. It is nevertheless the case that even if there is a mild bias towards exports its harmful impact seems negligible. There are several reasons for this asymmetry.

(i) The pattern (across activities) of export incentives in

Table 1

Indicators of Economic Development, 1950-80

	1950-60	1960-70	1970-80
Rate of Growth of GNP per Person (in 1977 dollars)			
Industrialized Countries	3.1	3.9	2.4
Middle-Income Countries	2.5	3.4	3.1
Low-Income Countries	0.6	1.7	1.7

	1960-70		1970-80	
	Export	Import	Export	Import
Rate of Growth of Foreign Trade				
Industrialized Countries	8.7	9.4	5.7	5.1
Middle-Income Countries	5.5	6.8	5.2	5.8
Low-Income Countries	5.0	5.0	-0.8	3.2

	1950	1960	1979
Life Expectancy at Birth			
Industrialized Countries	66.0	70.0	74.0
Middle-Income Countries	48.6	53.0	61.0
Low-Income Countries	41.5	47.0	57.0

	1950	1960	1976
Adult Literacy (Percent)			
Industralized Countries	95	97	99
MIddle-Income Countries	48	53	72
Low-Income Countries	22	28	50

Source: World Development Report for 1980 and for 1981, World Bank, Washington. The story behind these averages and the substantial variation between countries is well documented in a number of studies, particularly those of the World Bank.

export-promotion regimes appear to be less skewed and chaotic than in import-substitution regimes. (ii) Import-substitution regimes are usually administered through quantitative controls with variable and uncertain incentive effects. They tend to create excess production capacities and inventories of imported goods, whereas in export-promotion regimes, which rely on price incentives, this tendency is less pronounced. (iii) an export-promotion regime is likely to attract foreign investment into activities in which the domestic economy has a comparative advantage. By contrast, import-substitution regimes attract 'tariff-jumping' types of investment, which is harmful in most situations. (iv) A successful export-promotion regime, by raising exports, will make the economy creditworthy for foreign lenders. (v) Finally, the positive effects of economies of scale, learning by doing, efficiency gains from international rather than domestic competition et cetera are more often realized with an export-promotion regime.

The second set of NBER studies, those directed by Professor Krueger, also appears to confirm the superiority of export-promotion strategies. "Given reasonably open markets abroad, export-oriented policies have been more favourable in some cases, or could have been in others, than import-substitution policies in expanding employment in developing countries."[25] For example, in South Korea, 'the effect of export promotion on employment was a rapid gorwth in total employment in the 1960s, a relatively full employment since about 1970, a change in sectoral distribution of employment and higher real wages than would otherwise have been possible.' Almost all the other 'country' studies also show that export industries conform to comparative advantage.

An even more striking feature of the advantages of outward-looking development is their superior ability to withstand external shocks. Bela Balassa, of Johns Hopkins University, has shown that 'the newly industrializing countries (NICs) responsed to adverse external shocks through domestic adjustment policies in the form of export promotion, import substitution and a (temporary) slow down in the rate of economic growth, whereas less developed countries (LDCs) place reliance largely on foreign borrowing. At the same time, within both the NIC and the LDC groups, outward-oriented economies made more successful domestic adjustment than inward-oriented economies [with the result that] after an initial slow down, economic growth accelerated in the first group, whereas the opposite result is observed in the second.'[26]

The success of the outward-looking strategies of the newly industrializing countries has been visible for quite some time. This raises two important questions. The first is whether such an option is viable for all developing countries, particularly the larger ones, and the second is whether the industrialized countries will continue to keep their markets open to the same extent for imports from developing countries as in the recent past.

It trivializes the issue to ask, as one is often asked in India, 'what would happen if India and China attempted to export the same per capita amount as Hong Kong', as if that were the relevant measure of export achievement. But it should be noted that imports from developing countries accounted for only 2.9 percent in the apparent consumption of manufactured goods in eleven industrialized countries in 1978, although obviously in particular commodities such as textiles, clothing

and footwear the shares were considerably higher.[27] Thus, in spite of the slowdown in the growth of the industrialized countries, the manufactured exports of developing countries could grow faster through increases in their market shares. This would mean a greater threat to domestic manufacturers of import substitutes in industrialized countries and leads naturally to the second question referred to above. Before I turn to that, let me briefly note that the so-called South-South trade among developing countries, while undoubtedly helpful if it creates more trade along lines of comparative advantage, is unlikely to increase in quantitative importance in the near future. The share of intra-Third World Trade has remained fairly stable in the range of 20-25 percent over the period 1963-77 and there is no reason to believe that a bias towards trade with developed countries was the reason for this stability.[28]

Turning now to the second question, there is no denying that even though the 1960s and the 1970s were a period of increasing openness in world trade, there is no assurance that this trend will continue in the 1980s. Adjustment in the industrialized countries to import competition was far easier in an environment of full employment and growing real incomes as in the earlier period than in the present period of slow growth interrupted by periodic recessions. With no early prospect of resumption of vigorous growth, the protectionist tide is rising in industrialized countries. And, strange as it may seem, there is even some intellectual support for protection in some countries. Just as Johnson castigated Oxford for being the defender of the faith in commodity agreements, one may castigate Cambridge, as he would have done, for championing the cause of senile-industry protection![29]

In the literature on international trade theory there is a minor boom consisting of theoretical analyses of the politics and economics of trade barriers.[30] This is not the place to delve deeply into this litarature. One important point that emerges is that, as long as the rules of the General Agreement on Tariffs and Trade (GATT) are followed, protection can be increased through exceptions to those rules under 'safeguard' clauses or whatever.[31] But bureaucratic or administrative protection is becoming an increasingly important way of exploiting these provisions for departures from the rules even going beyond them, as in the Multi-fibre Arrangement, to increase protection.

If realized, the threat to the openness of the international trading system would do far greater harm to the interests of developing countries than any failure to achieve, in full measure, the NIEO proposals. It is disappointing that developing countries have not played a significant role to date in multilateral trade negotiations or in other GATT activities. It is also ironic in that in GATT negotiations, unlike the deliberations of the IMF or the World Bank, there is no weighted system of voting. It would be extremely myopic on the part of the developing countries to ignore that invocation of safeguard clauses, bilateral 'voluntary' export-restraint agreements, the common agricultural policy of the European Community and the 'trigger-price' mechanism on steel imports in the United States just because they bear chiefly on trade between developed countries.[32] By participating fully in GATT discussions and taking a stand against <u>any</u> and <u>all</u> protectionist measures and by moving towards reciprocity, rather than demanding special treatment as part of the NIEO proposals, developing countries stand to gain much more.

Returning, for a moment, to the adjustment policies pursued by developing in response to the oil shock, I have already mentioned their recourse to international borrowing. A second source that eased the adjustment problems of some, but not all, developing countries was the opportunities for employment that opened up in the oil-exporting and labour-scarce economies of Western Asia. The remittances from workers who migrated to these countries were substantial in the case of a number of countries--often even exceeding the value of their merchandise exports. Thus both flows of capital and labour across national boundaries have been of significance in the adjustment process. It is therefore of some interest to examine the theory of international factor movements.

Factor Movements and International Trade[33]

Neo-classical trade theory, based on the Heckscher-Ohlin-Samuelson model, predicts that factor prices will be equalized between countries by the equalization of commodity prices through international trade, provided that all countries share the same neo-classical technology in which commodity prices uniquely determine factor prices (a necessary condition for which being that the number of traded commodities equal the number of factors) and that in the trading equilibrium all countries produce some amount of each of the traded goods. In order to analyze the impact of factor movements one may try to document the reasons as to why the assumptions of the factor-price equalization theorem do not hold in the real world. One may also work with a model in which the presumption of factor price equalization is absent. One particularly simple and stark model, easy to manipulate but with enough structure to illuminate some interesting aspects of factor movements, is the so-called specific-factor model of Ronald W. Jones, of the University of Rochester.[34]

Like the standard model, it has two sectors, each of which produces a commodity using two factors, one of which is specific to that sector and not used in the other. We may, for ease of interpretation, call the two specific factors capital and land. The factor that is used in both sectors and is mobile between them can be identified with labour. Land obviously is immobile and labour and capital are potentially mobile. Let us number the capital-using sector as Sector 1 and the land-using sector as Sector 2.

The model can be interpreted in several ways. In one, Sector 1 produces an import substitute, while Sector 2 produces the exportable commodity. This corresponds to a developing economy exporting primary products and attempting industrialization by augmenting its industrial capital through borrowing from international capital markets or through inviting direct foreign investment. Where Sector 1 produces the exportable commodity the case corresponds to a developing country whose capital-using export sector is an extractive industry while its import-substituting sector 2 produces consumables including food. In yet another interpretation, one of the sectors produces a Hicksian composite tradeable good, the other producing a non-tradeable good. Depending on whether capital is used in the tradeable or the non-tradeable sector, we can model the inflow of foreign capital into tradeables or into non-tradeables, such as public utilities or transport.

The external environment faced by such an economy in respect of commodity as well as capital markets can be modelled in one of two polar versions. The economy is a price taker in one or both markets so that the volume of its transactions does not affect the unit price.

In the case of capital markets, such an assumption means that the economy can borrow any amount at a fixed rate of interest or, alternatively, that foreigners will invest any amount in the domestic economy at the going domestic rate of return. At the other pole is the assumption that the economy faces a rising supply curve in its foreign borrowing or a foreign-offer curve that implies decreasing marginal terms of trade for the home economy. With regard to out-migration of labour the two polar assumptions could be either the average (and hence marginal) inward remittance per worker is constant or marginal remittance per migrant worker declines as the number of out-migrants increases. Foreign investment, as contrasted with foreign borrowing, can be modelled by assuming an infinitely elastic supply of foreign capital at the going domestic rate of rental on capital.

The policy instruments include an import tariff, a tax on foreign borrowing, and a tax on inward remittances or repatriation of profits of foreign investment. The tariff and each of the taxes need not be optimal. In addition some imperfections in the labour market such as a minimum wage can also be introduced. The demand side of the economy is defined by a set of community indifference curves, the use of which implies that lump sum transfers between individuals are feasible. Each of the factors of production is assumed to be inelastically supplied to the extent of its availability. The competitive production equilibrium of such an economy when both sectors produce tradeable goods can be easily shown in terms of a simple diagram (Figure 1). Given the amount of foreign capital and the terms of trade, the marginal value product of labour (MVPL1) in Sector 1 is AA with O as origin for measurement of labour used in that Sector 1. Let OL be the total labour endow-

ment of the economy. With L as origin, we can measure the use of labour in Sector 2 with the marginal-value-product (MVPL2) curve BB. The two curves intersect uniquely at the point where OL_1 is the amount of labour used in Sector 1 and LL_1 is that used in Sector 2. And OM, the marginal value product of labour in either sector in equilibrium, is the wage rate. Given the equilibrium employment levels, the marginal value product of land and capital in the sector in which each is used determines their equilibrium rentals.

In this model equilibrium factor returns depend on factor endowments, as well as commodity prices. Even though the economy is incompletely specialized in equilibrium, equalization of commodity prices through trade does not equalize factor prices. Given the same commodity price, an economy better endowed in land (capital) ceteris paribus, enjoys a higher equilibrium wage because the marginal value product of labour in the sector using land (capital) shifts up (as shown by the dotted curve CC in Figure 1), leaving the marginal value product of labour in the other sector unaltered. A higher equilibrium wage (OM' in Figure 1) in turn means lower rental for both capital and land. An increase in labour endowment lowers the equilibrium wage and raises the equilibrium rentals for capital and land. This result is in sharp contrast to the Heckscher-Ohlin model in which in an incompletely specialized equilibrium factor prices depend only on commodity prices and not on factor endowments. But if, for instance, capital movement between countries results in equilization rental rates of capital, then clearly all factor prices become equalized, given that technology satisfies the constant returns-to-scale assumption. The reason is that equal rental rates for capital implies identical

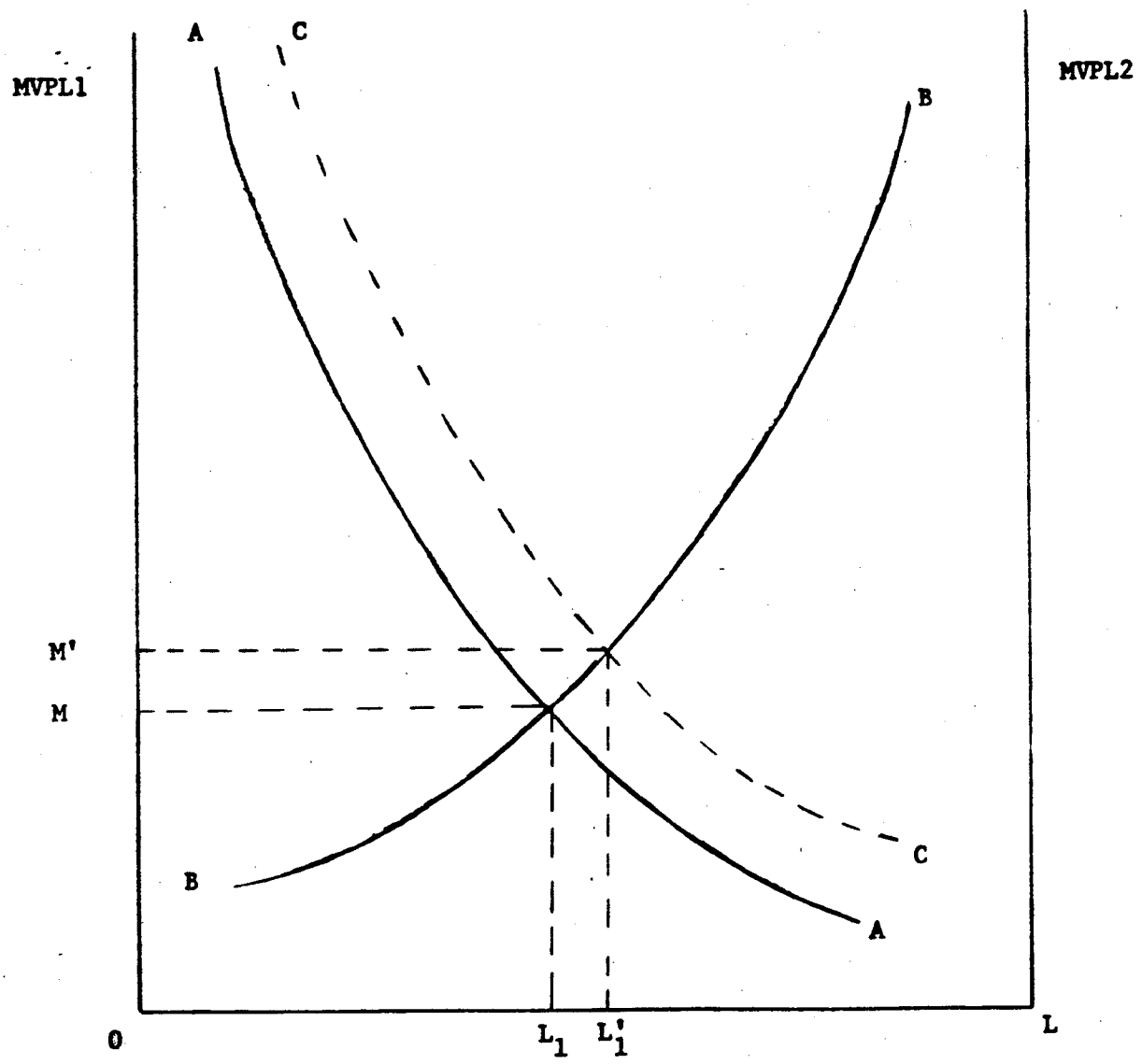

FIGURE 1

capital/labour ratios in the capital-using sector in each country. This in turn equalizes wage rates between countries. With wage rates and commodity prices equalized, the land/labour ratio in the land-using sector is equalized, which in turn equalizes the land rental rates. Thus free capital movement in addition to free trade is necessary for factor price equalization in this model.

It is clear from the diagram that, at fixed terms of trade, increasing use of foreign capital raises the marginal-value-product curve for labour in the capital-using sector, leaving the marginal-value-product curve in the other sector unaltered. This raises the equilibrium wage rate and hence lowers the rental for capital as well as land. Similarly, improvement in the terms of trade (that is, reduction in the price of the importable in terms of the exportable), at a constant level of use of foreign capital, raises employment in the exportable sector and lowers the wage in terms of the exportable. The wage rate in terms of the importable goes up. The rental rate for both capital and land goes up in terms of the exportable and goes down in terms of the importable.

Consider now the determination of terms of trade and the amount of foreign capital. If the country is a price taker in commodity as well as capital markets, it is easy to see that the optimal policy is free trade in goods and unrestricted capital inflow . Optimal foreign borrowing (or investment) will equate the marginal value product of capital to its fixed foreign cost. The gain to the economy is the rent accruing to the intra-marginal units of capital because marginal product of capital is diminishing. Clearly, even if foreign capital inflow is not pushed to its

optimal level, any inflow up to that level is welfare improving. If the economy is a price taker in capital markets but faces diminishing terms of trade curve in its commodity markets, the optimal policy is to have an optimum import tariff for traditional reasons and leave capital inflow unrestricted. If the economy faces a rising marginal-cost curve in capital markets, for reasons which are not hard to imagine, but is a price taker in commodity markets, there should be an optimum tax on capital inflow while commodity trade is free. If it is not a price taker in either market, there should be an optimum tariff, as well as an optimum tax on capital inflow.

What if the economy is not following optimal policies? It can be shown, that in the case of rising marginal cost of foreign capital but fixed terms of trade, if the economy follows a non-optimal unrestricted capital inflow policy, there will be too much foreign capital inflow and too little commodity imports relative to the welfare optimum. In the case in which it faces a diminishing terms of trade while being a price taker in capital markets, free trade in goods will lead to too much commodity imports relative to the welfare optimum. But one cannot say in general whether or not there will be too little capital inflow relative to the welfare optimum because the terms-of-trade effect of a non-optimal level of imports affects the welfare cost of debt service or profit repatriation (in terms of the exportable) associated with any given level of borrowing or investment. Thus, in either case, non-optimal policy in respect to one market has a spill-over effect in the other.

In the same vein, if an economy is a price taker in commodity markets, but has an import tariff in place (instead of the optimal policy of free trade), allowing foreign capital inflow into the import-substituting sector from an initial position of no inflow has ambiguous effects if the capital-using sector produces the import substitute. The reason is that the gain from capital inflow due to an increase in output net of payments of capital has to be set off against the welfare loss due to its increasing the output of the import substitute. This result is by contrast to the case of capital inflow in a Heckscher-Ohlin model as discussed in an article by Professors Richard Brecher and Carols Diaz-Alejandro.[35] In their case, given an equilibrium of incomplete specialization before and after capital inflow, the gain in output due to extra capital is exactly offset by the payments to foreign capital, while there is a welfare loss if the output of the import substitute increases as a result of it being relatively capital intensive.

Out-migration of labour raises the home wage rate and reduces rental rates on capital and land as long as the commodity terms of trade are unchanged. If the marginal inward remittance per emigrant is a decreasing function of a number of migrants, an optimal tax on remittances will be needed to achieve a welfare-optimizing level of migration.

An interesting analytical issue in this context is the following: for an economy that is a price taker in commodity markets, between the two alternatives of inviting an optimal amount of foreign investment and permitting an optimum amount of out-migration of labour, which of them leads to higher welfare?[36] Since both policies raise

domestic wages and lower rentals, and since landowners and capital-owners are assumed to be compensated to the required extent through lump-sum transfers from wage earners, that policy which raises home wages more is the welfare-superior policy. The presumption is that for an economy which is relatively poorly endowed in respect of capital in a relevant sense, foreign investment rather than out-migration is welfare superior. Analogously, for an economy better endowed with capital than labour, permitting optimal immigration is welfare superior to investing abroad.

If domestic labour-market distortions, however, create different factor-cost conditions in the two sectors, then capital inflow could be welfare worsening rather than welfare improving. In sum, this simple model leads to the conclusion that as long as the home economy follows optimal domestic policies, which in particular implies that there are no domestic distortions, free trade and free capital movements are optimal for an economy which is a price taker in all markets. While the welfare consequence of foreign investment, for instance, could be ambiguous, given a domestic distortion in the labour market, one has to probe deeper into the reason for the distortion in the first place. Unless the domestic distortion itself is an optimal policy response for achieving objectives not summarized by the social-utility function, the appropriate policy is not to restrict foreign investment because of its ambiguous welfare effect, given the domestic distortion, but to remove the distortion and allow foregin investment.

Conclusion

To conclude, the developing countries have a strong interest in an open international trading system and, too, in capital markets that are free of inhibiting restrictions. Their commercial diplomacy will be far more rewarding if it is directed towards ensuring such a system than towards special pleading or preferences, while negotiations should go on in other fora towards increasing their voice, and hence their responsibility, in international organizations.

FOOTNOTES

[1]This is a slightly revised text of the Harry G. Johnson Memorial Lecture, the third in the series, that I had the honour to deliver in Geneva, at the Graduate Institute of International Studies there, on 15 December 1981. It is being published with the title "Developing Countries and the GATT System" in The World Economy, March 1982.

I want to thank Carlos Diaz-Alejandro, Jonathan Eaton and Louka Katseli-Papaefstratiou for their comments on the analytics of factor movements in the penultimate section. Comments of Jagdish Bhagwati, William Parker, Gustav Ranis and Paul Streeten have been valuable.

The section on development experience is based on my joint paper with Jagdish Bhagwati, "Trade and Development", in Rudiger Dornbush and Jacob Frenkel (eds), International Economic Policy: Theory and Evidence (Baltimore: Johns Hopkins Press, 1979).

My contact with Harry Johnson began with my first, somewhat tentative, entry into the field of international economics with a paper on a dynamic model of trade. As a neophyte, hardly out of graduate school, I claimed too much for the originality of my results and for their importance. Harry, to whom I had sent a draft, responded with extensive and constructive comments, while at the same time pulling me up for being too much of an upstart. The last time I saw him was in New Delhi a few months before his death. He was there to deliver the annual lecture in memory of V.K. Ramaswami, a valued colleague and international economist who, also, was influenced by Harry and his work.

[2]The demands for a "new international economic order" (NIEO) are set out in the Charter of Economic Rights and Duties of States adopted by the General Assembly of the United Nations, New York, on 12 December 1974. Also see the Declaration on the Establishment of a New International Economic Order, and the programme of action, drawn up at the Sixth Special Session of the General Assembly of the United Nations, April-May 1974.

[3]Kenneth J. Arrow, "Limited Knowledge and Economic Analysis", American Economic Review, March 1974, pp. #1-10.

[4]Harry G. Johnson's contribution to the panel discussion at the conference at the Massachusetts Institute of Technology on the NIEO proposal recorded in Jagdish N. Bhagwati (ed.), The New International Economic Order: the North-South Debate (Cambridge, Massachusetts: MIT Press, 1977),pp. #359-61.

[5]Arthur Lewis, The Evolution of the International Economic Order (Princeton: Princeton University Press, 1977).

[6]Bhagwati, "Introduction", in Bhagwati (ed.), op. cit., pp.#1-24.

[7]Carlos Diaz-Alejandro, "International Markets of LDCs: the Old and the New", in John Adams (ed.), The Contemporary International Economy: a Reader (New York: St. Martin's Press, 1979).

[8]Johnson, "Commodities: Less Developed Countries' Demands and Developed Countries' Responses", in Bhagwati (ed.), op. cit., pp. #237-51.

[9]The Multi-fibre Arrangement (MFA) is formally called the Arrangement Regarding International Trade in Textiles. For an authoritative analysis of the MFA, see Donald B. Keesing and Martin Wolf, Textile Quotes against Developing Countries, Thames Essay No. #23 (London: Trade Policy Research Centre, 1980).

[10]The International Sugar Agreement was originally designed to accommodate producers of beet sugar in the United Kingdom and other developed countries and, more recently, to accommodate the European Commodity and the United States, but the Community has not joined the agreement. Not all developed-country signatories of the Agreement, however, are inefficient producers of sugar, Australia being the most notable exception.

[11]Richard N. Cooper's contribution to the panel discussion on the NIEO proposals recorded in Bhagwati (ed.), op cit., pp. #354-58.

[12] For a post-Cancun review of NIEO, see Third World Quarterly, April 1982.

[13]The concept of "global negotiations" in the United Nations has been vague from the outset with inter-governmental discussions, talks about talks, being about what they might cover.

[14]New York Times, 6 December 1981, p. #12.

[15]Besides the IMF and the World Bank, the institutional framework of the international economic order that was established after World War II also embraced the General Agreement on Tariffs and Trade (GATT), which took the place of the International Trade Organization that was envisaged in the Havana Charter, but never came into being because the United States Congress, among other legislatures, did not ratify it.

[16] Miriam Camps, "The New Bretton Woods", International Journal, Spring 1980, pp. #240-62.

[17] On Soviet Union's non participation in the Cancun Summit, see Padma Desai "The Soviet Union and Cancun", Third World Quarterly, April 1982.

[18] In the period 1974-78 the National Bureau of Economic Research had published for it a special series on Foreign Trade and Economic Development in eleven volumes.

[19] Anne O. Krueger et al. (eds), Trade and Employment in Developing Countries: Individual Studies (Chicago: University of Chicago Press, for the National Bureau of Economic Research, 1981).

[20] I.M.D. Little, Tibor Scitovsky and M. FG. Scott, Industry and Trade in Some Developing Countries: a Comparative Study (London: Oxford University Press, for the OECD, 1971).

[21] Bela Belassa et al., The Structure of Protection in Developing Countries (Baltimore: Johns Hopkins Press, for the World Bank, 1971).

[22] Krueger, Foreign Trade Regimes and Economic Development: Liberalization Attempts and Consequences (Cambridge, Massachusetts: Ballinger, for the National Bureau of Economic Research, 1978) p. #3.

[23] World Development Report 1981 (Washington: World Bank, 1981) Annex Tables 6 and 12.

[24] Wontack Hong, "Distortions and Static Negative Marginal Gains from Trade", Journal of International Economics, May 1976.

[25] Krueger et al. (eds), op. cit., p. #25.

[26] Balassa, Adjustment to External Shock in Developing Countries, World Bank Staff Working Paper No. #472 (Washington: World Bank, 1981).

[27]World Development Report 1981, op. cit.

[28]Oli Havrylyshyn et al., Trade among Developing Countries: Theory, Policy Issues and Principal Trends, World Bank Staff Working Paper No. #479 (Washington: World Bank, 1981).

[29]In its Cambridge Economic Policy Review, the Cambridge Economic Policy Group (CEPG), a group of economists in the Department of Applied Economics at the University of Cambridge, in the United Kingdom, has been advocating general import restrictions for any country which has a persistent balance-of-payments deficit when experiencing unemployment and "excess capacity".

For a critique of the CEPG argument, see M. FG. Scott, W.M. Corden and I.M.D. Little, The Case against General Import Restrictions, Thames Essay No. #24 (London: Trade Policy Research Centre, 1980).

[30]Douglas Nelson, The Political Structure of the New Protectionism, World Bank Staff Working Paper No. #471 (Washington: World Bank, 1981). For analytical models of protectionist lobbying, see the papers by Robert Baldwin, Jagdish Bhagwati, Jagdish Bhagwati and Robert Feenstra and Ronald Findlay Stanislaw Welisz in Jagdish Bhagwati (ed.): Import Competition and Response, University of Chicago Press, 1982.

[31]For a brief review of the GATT's safeguard clauses, and an analysis of the main one, Article XIX which provides for emergency action against a sudden surge of imports of a particular product, see David Robertson, Fail Safe System for Trade Liberalization, Thames Essay No. #12 (London: Trade Policy Research Centre, 1977).

[32]Very Often, of course, the GATT's safeguard clauses are invoked against developing countries, while bilateral "voluntary" export-restraint agreements are usually with developing countries.

[33]Formal analysis of the model presented in this section will be made available by the author early in 1982.

[34]Ronald W. Jones, International Trade: Essays in Theory (Amsterdam: North-Holland, 1979) ch. 6, "A Three Factor Model in Theory, Trade and History".

[35]Richard Brecher and Carlos Diaz-Alejandro, "Tariffs, Foreign Capital and Immiserizing Growth", Journal of International Economics, 1977.

[36]This question was originally posed by V.K. Ramswami in "International Factor Movements and the National Advantage", Economica, August 1968 was resurrected and discussed in a policy context by Jagdish Bhagwati: "International Factor Movements and National Advantage", the 9th V.K. Ramaswami Memorial lecture, Indian Economic Review, 1979.