Free Trade: Why, When and for Whom?

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The theme of free trade has aroused as much interest in the ivory tower as it has in the real world. It is among the few ideas in economics which have been the source of a lively interaction between economic theory and political reality over a period that spans almost two centuries. It is also a subject that is centre-stage in the contemporary world economy. This paper explores the evolution of economic thinking about free trade to analyse how it has been influenced by political compulsions and actual developments. In doing so, it poses, and endeavours to answer, some heterodox questions about free trade. The structure of the paper is as follows. First, it traces the origins of the free trade doctrine in classical political economy to set out the fundamental propositions of orthodox trade theory which provide the basis for the prescription that free trade would lead to both efficiency and equity: why? Second, it analyses the reasons for departures from free trade which seem to have been explored in economic theory as exceptions that prove the rule: why not? Third, it situates this economic theorising in the wider context of political realities which have shaped the sequence of developments in the international trading system, since the early nineteenth century, to illustrate the flexibility in the use of the free trade doctrine over time: when? Fourth, it considers the present conjuncture to suggest that, despite the rhetoric about the Uruguay Round agreement, the invocation of the free trade doctrine is uneven in space and asymmetrical across sectors as it is strongly influenced by national economic interests: for whom?

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1. Why free trade?

The analytical foundations of the orthodox theory of international trade, as it now exists, were laid in the era of classical political economy by Adam Smith, David Ricardo and John Stuart Mill. Smith (1776) enunciated the principle of absolute advantage to demonstrate that there were gains from trade, by extending his concept of the division of labour between men to a division of labour between countries. Ricardo (1812) formulated the theory of comparative advantage to develop an explicit argument against protection and an implicit argument for free trade. The concerns of Smith and Ricardo did not lie in abstract economic principles. Their economics was rooted in politics. Indeed, their intellectual pursuits were motivated by a strong desire to challenge the political dominance of mercantilist ideology. The doctrine of mercantilism was subjected to scathing criticism, which bordered on ridicule, for its pursuit of national economic power, at the cost of general economic welfare, to the neglect of plenty.1 In doing so, the advocates of free trade adopted a moral stance claiming that their concern was the welfare of human beings and not of nation states.

At the same time, the economic thinking of Smith and Ricardo endeavoured to provide a rationale, as also to analyse the conditions, for a transition from the prevalent feudalism to a prospective capitalism. Thus, for Adam Smith, free trade was simply one dimension of the case for laissez-faire which confirmed his belief in the magic of the invisible hand. Similarly, for David Ricardo, the formulation of comparative advantage was not simply about the pattern of trade or the gains from trade, as contemporary text books would have us believe. It was as much, if not more, about the impact of international trade on income distribution, capital accumulation and economic growth. The repeal of the Corn Laws and the adoption of free trade was advocated by Ricardo in the belief that it would redistribute incomes away from the reactionary landed gentry, who would at worst not save and at best invest in agriculture which promised diminishing returns, in favour of a progressive industrial capitalist class, who would earn more profits (given a lower corn wage) through cheap imports of wheat, and invest in manufacturing which promised increasing returns. The moral of the story was that, consequent upon the removal of restrictions on trade, an increase in profits would lead to an increase in the rate of accumulation which in turn would lead to a growth in employment, income and wealth. Economics and politics were closely intertwined in this world, for the redistribution of incomes from rents to profits was bound to be associated with a redistribution of political power from landlords to capitalists.

Subsequent economic theorizing about international trade began to separate the economics from the politics. This process started with Alfred Marshall and Francis Edgeworth in the late nineteenth century. It was taken to its logical conclusion by Eli Heckscher, Bertil Ohlin and Paul Samuelson during the first half of the twentieth century.2 In retrospect, it would seem that economics, so divorced from politics, slowly but surely acquired a life of its own. The selectivity in the choice of problems and the abstraction in the choice of assumptions made this difficult task much simpler. These choices shaped a corpus of thought where elegant models based on restrictive assumptions reached strong conclusions. Orthodox trade theory, which began life in this mode, soon came to den the mantle of mainstream economics. In this milieu, seeking a different set of answers, let alone asking a different set of questions, was perceived as unorthodox. The intersection of economics and politics in the sphere of trade was of course set aside, as a model-fetishism captured the imagination.

The neo-classical paradigm, as it emerged, emphasised the gains from trade. The economic logic underlying the proposition was indeed simple. In the most elementary sense, there are gains to be derived from trade if it is cheaper for an economy to import a good than to produce it at home, in terms of domestic resources used, and pay for it by exporting another. The gains are attributable in part to international exchange when costs or prices differ among countries before trade is introduced, and in part to international specialisation in production after trade commences. In a world where countries enter into international trade on a voluntary basis, each partner must derive some benefit to be in the game. The very existence of trade, then, becomes proof of its mutual benefit, irrespective of how the gains from trade are distributed between countries. It is clear, how-

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1 See, for example, Smith (1776) Book IV, Chapters I to VIII. This critique of mercantilism was developed further, in a longer term historical perspective, by Hahscher (1935).

2 The important contributions were Heckscher (1919), Ohlin (1933) and Samuelson (1939, 1948 and 1962).
ever, that the formal exposition of the gains from trade proposition was no more than an analytical contribution to economic theory. Its message was already widely accepted, as the mercantilist view about asymmetry in the gains from trade — exports were beneficial but imports were not — had been discredited much earlier in the mid-nineteenth century.

There were two other propositions which emerged from the theory of international trade in this phase and provided the basis for persuasive policy prescription: the free trade argument and the factor-price equalisation theorem. Orthodox theory combined the economic logic of the gains from trade proposition with the assumption of perfect competition to establish that free trade will enable an economy to operate with technical efficiency in production, in terms of resource allocation, and to optimise consumption through trade, in terms of utility maximisation. The neat conclusion derived from this theorising was that free trade ensures efficiency. The factor-price equalisation theorem emerged as a corollary of the Heckscher-Ohlin formulation of comparative advantage. Samuelson (1948 and 1949) considered a situation in which there is free trade but there is no factor mobility. The Heckscher-Ohlin assumptions about production conditions ensure a unique relationship between the factor-price ratio and the commodity-price ratio. In this world, free trade equalises commodity prices. If complete specialisation is ruled out, commodity-price equalisation necessarily leads to factor-price equalisation. The abstraction in the assumptions of the model does not conform to reality but yields a powerful conclusion to suggest that, even in a world where international factor movements are not possible, free trade in goods would ensure equity through an equalisation of factor prices across countries.

The free trade argument, formalised in the normative dimension of orthodox theory, served an explicit prescriptive purpose in stating that free trade is efficient. The factor-price equalisation theorem, set out in the positive dimension of orthodox theory, carried an implicit prescriptive purpose suggesting that free trade is also equitable. It is clear that the free trade argument and the factor-price equalisation theorem were not simply about abstract principles. Their prescriptive significance, whether explicit or implicit, is obvious. The economic theory may have been separated, but was not divorced from political reality.

2. Exceptions and the rule

The belief in free trade is almost a sacred tenet in the world of orthodox economics. Yet, from time to time, the profession of economics has recognised that there are reasons — orthodox and unorthodox — which may justify departures from free trade. Economic theory has analysed these exceptions to the rule, mostly in response to developments in the real world which have challenged or questioned the free trade doctrine. In retrospect, it is possible to discern four junctures in time when the wisdom of free trade has been a matter of doubt. The prompting circumstances and the underlying reasons were different on each of these occasions.

The first challenge to free trade came during the early nineteenth century, the era of classical political economy, even before the doctrine gained widespread acceptance. This thinking was prompted largely by the concerns of late industrialisers, such as the United States and Germany who wished to follow in the footsteps of England and France, and partly by the pursuit of economic interests rather than economic efficiency. It was recognised that there were two critical assumptions underlying the strong prescription of free trade: first, that market prices reflected social costs and, second, that a country's trade in a good was not large enough to influence world prices. If these assumptions did not hold, free trade could not ensure an efficient outcome. Market failure provided the basis of the infant industry argument, recognising that free trade may prevent an economy from realising its comparative advantage in manufacturing activities. Monopoly power provided the basis of the optimum tariff argument, recognising that restricting the volume of trade may enable an economy to increase its real income at the expense of the rest of the world. These arguments were accepted as valid exceptions to the rule by Mill (1848), thus providing the intellectual foundation for legitimate departures from free trade.

The second challenge to free trade surfaced during the Great Depression in the 1930s. It was driven by the deep economic crisis in...
the advanced capitalist countries. In the sphere of macroeconomics, import restrictions came to be seen as a means of combating massive unemployment. The articulation of this view by Keynes (1930), which became stronger in his subsequent writings, provided an intellectual "imprimatur". It led to an erosion of the belief in free trade among economists, albeit for a short period of time. In this context, it was no surprise that political compulsions induced governments into a sapphine of "beggar-thy-neighbour" policies as countries attempted to increase employment at home even if it increased unemployment elsewhere. Around the same time, there were some important theoretical developments in the sphere of microeconomics which constituted another potential challenge to free trade. Edward Chamberlin (1929) and Joan Robinson (1931) explored the world of market structures other than perfect competition or pure monopoly. It became clear that, under conditions of imperfect competition, market prices did not reflect social costs. This undermined the basis of the free trade argument. But the question was not even posed, perhaps because the acceptance of the Keynesian worldview meant that free trade was already under a cloud.

The third challenge to free trade emerged during the 1950s at the beginning of the post-colonial era. This was shaped by the aspirations of underdeveloped countries who were latecomers to industrialisation and wanted to accelerate the catching-up process. In the realm of politics, of course, the strong sentiment against free trade stemmed from the perceived association between openness and underdevelopment during the colonial era. In the sphere of economics, however, the argument against free trade was based on market failure. It had two dimensions. First, it was argued that there were significant positive externalities in any process of industrialisation which were difficult to identify, let alone capture. Second, it was argued that imperfections in factor markets, both labour and capital, would pre-empt the realisation of potential comparative advantage in manufacturing. The infant industry argument was, thus, generalised into the infant manufacturing sector argument. The industrial sector was protected from foreign competition. And the pursuit of industrialisation in most developing countries was based on the strategy of import substitution.

The response of modern neo-classical economics was twofold. At one level, it accepted the infant industry argument, or the optimum tariff argument, as the basis of justifiable departures from free trade but reduced the validity of such arguments to a very demanding set of conditions. At another level, it argued that if market prices did not measure social costs, whether on account of a divergence arising out of market failure or on account of a distortion arising out of government intervention, the optimum policy intervention is one which is applied at the point at which the divergence or the distortion arises; the simple solution which followed from this complex discussion was that, as a rule, intervention in the form of trade policies would be sub-optimal. In sum, such theoretical analysis sought to strengthen the case for free trade by accepting that there is market failure and by arguing that protection is not the best corrective.

The fourth challenge to free trade was voiced in the 1980s. At first sight, it may seem that this originated from recent developments in the theory of international trade which have attempted to model scale economies and market structures. It is no coincidence, however, that such theorising, has coincided with the resurgence of protectionism in the industrialised world. The analytical foundations of the new trade theories can be traced to the work of Chamberlin and Robinson, but their ability to question the optimality of free trade should be attributed to the juncture in time. In terms of positive economics, the new theories suggest that trade flows are driven by increasing returns rather than comparative advantage in international markets which are characterised by imperfect competition. This has led to the formulation of two arguments against free trade in the

For a critical analysis of Keynes's views on free trade, see Hicks (1959) and Elchinger (1964). The macroeconomic implications of using import restrictions as a means of preserving employment are examined by Robinson (1937).

This generalisation is attributable, among others, to Myrdal (1956). It was also in keeping with List's conception of an infant economy argument.

See, for example, Corden (1974) who provides a meticulous analysis of the conditions under which the infant industry argument and the optimum tariff argument constitute valid arguments for protection.

S. Bhagwati and Ramaswami (1963) and Corden (1974). In this context, there are two points which are worth noting. First, appropriately chosen trade policy intervention, even if it is second-best or third-best, may result in a level of welfare higher than would be sustainable under free trade. Second, the tax-cum-subsidy alternative may not be first-best if the taxes levied involve large collection costs or impose tolerable distortions elsewhere and if the disbursement costs of subsidies are significant.

For an overview of the new theories of international trade, see Dixit and Norman (1980), Helpman and Krugman (1985) and Krugman (1986); see also Helpman and Krugman (1985).
sphere of normative economics. The first is the strategic trade policy argument which states that appropriate forms of government intervention can deter entry by foreign firms into lucrative markets and thus manipulate the terms of oligopolistic competition to ensure that excess returns are captured by domestic firms. The idea is that, in a market which has a small number of competitors, strategic support for domestic firms in international competition can raise national welfare at the expense of other countries. The second is an old argument in a new incarnation which states that governments should encourage activities that yield positive externalities. In a world of increasing returns and imperfect competition such externalities are easier to identify in industries where R&D expenditures are large and firms cannot entirely appropriate the benefits from investment in technology and learning.

It should come as no surprise that the new trade theories received an asymmetrical response in the profession: ready acceptance of the positive aspects and strong criticism of the normative aspects. Orthodox economics set out three criticisms: a) it is difficult to model imperfect markets and thus impossible to formulate appropriate policies for intervention; b) potential gains from intervention would be dissipated by the entry of rent-seeking firms; and c) in a general equilibrium world, the benefits of explicit promotion of one sector may be less than the cost of implicit discrimination against other sectors. These criticisms may weaken the arguments against free trade but cannot eliminate them. Yet, the new theorising has withdrawn in the face of criticism on the basis of what is described as wider considerations of political economy. The explanation runs as follows. For one, it is possible that successful intervention would have a beggar-thy-neighbour impact, which could lead to retaliation by trading partners making everybody worse off. For another, governments are not Plato's guardians who act in the national interest, and intervention may simply be manipulated by vested interests who can influence the State to appropriate economic gains. This strategic withdrawal leads Paul Krugman (1987, p. 143) to a revealing conclusion:

3. The flexible doctrine

Economic theory is to political reality what the ivory tower is to the real world. The experience of the past two centuries provides ample confirmation. Economic ideas about free trade have not shaped political reality but political compulsions have shaped the contours of economic theory. However, economic interests, whether perceived or real, have exercised an important influence on the political objectives of nation states in the world economy. In this pursuit of national economic interests, the use of the free trade doctrine, with its emphasis on efficiency and equity, has been flexible over time and across space.
Economic theorising about trade has always considered a world in which countries at similar levels of development are equal partners, thus ruling out the use of political power to foster economic interests. This abstraction simply does not conform to reality. It never did, as Joan Robinson (1974) wrote, even in Ricardo’s world. In the now famous example, Portugal was to gain as much from exporting wine as England from exporting cloth. This was not quite true even in terms of economics. Once we introduce capital accumulation into the picture, it is clear that free trade promised growth for England and stagnation for Portugal, for investment in cloth would be associated with increasing returns whereas investment in wine would be associated with diminishing returns. But that is not all. In the realm of politics, as Joan Robinson (1974, p. 1) put it,

“Portugal was dependent on British naval support, and it was for this reason that she was obliged to accept conditions of trade which wiped out her production of textiles and inhibited industrial development, so as to make her more dependent than ever”.

It is patently clear that, despite the abuse of mercantilism, free trade was also about the pursuit of national economic power. Indeed, the moral stance adopted by the advocates of free trade was false insofar as the desire for affluence or plenty was motivated by a quest for economic power no less than by a concern for human welfare.

The consequences of imperialism in trade are brought home by another historical example which also illustrates the flexibility in the use of the free trade doctrine over time. To begin with, the British cotton textile industry in Lancashire grew up under protection from superior Indian imports. When it became competitive, free trade was imposed on India. A century later, Indian textiles were once more able to undersell Lancashire. In response, the British turned to protection again, this time through an international agreement to regulate trade in textiles. This multi-fibre agreement has been with us for more than three decades, and will continue for at least another into the twenty-first century.

It is clear why free trade was in the interest of countries which were the pioneers in industrialisation. Their economic strength was perhaps a source of their political, even military, power which enabled them to impose free trade on the rest of the world. For this reason, the ideology of free trade went well with British imperialist expansion until the early twentieth century and with American political hegemony thereafter. The imposition of free trade on the underdeveloped world was simple enough because much of Asia, Africa and Latin America was colonised either de jure or de facto. It was, however, difficult to impose on countries at similar levels of development, such as Germany and Japan, which were latecomers not only to industrialisation but also to colonial empires. The exclusion of such rivals from sources of raw materials and from promising markets contributed to the tensions that led to the two world wars.33

The 1930s witnessed a different form of economic conflict between the advanced capitalist nations, attributable to similar reasons, as countries resorted to import controls, tariff wars, competitive devaluations and so on, to protect their own levels of income and employment at the expense of the outside world. The ideology of free trade ran into acute difficulties during the period from the Great Depression to the Second World War. So much so that the retreat from free trade was almost complete, even on the part of countries which were, until then, its most ardent advocates. The reason was simple enough. National economic interests were at stake. And the free trade doctrine was readily shelved for a while.

The lessons that emerged from this experience of economic chaos and political conflict were not lost on the architects of the international trading system that was created, with the General Agreement on Tariffs and Trade (GATT) as its centre-piece, in the late 1940s. Its basic foundation was the principle of non-discrimination embodied in the most-favoured-nation clause. The virtues of unilateral free trade were recognised in theory but not accepted in practice. It was agreed that trade barriers would be made transparent by a conversion into tariffs which, in turn, would be progressively reduced through negotiations. Thus, universal free trade was perceived as the ultimate objective, but the conceived transition path was characterised by an implicit reciprocity principle that was almost mercantilist. The contractual framework of the GATT meant that countries would negotiate market access and tariff reductions on

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32 For an interesting analysis of the interplay between ideology, interests and institutions in the context of the political debate about free trade, both in Britain and in the United States, see Bhagwati (1980).

33 For a lucid discussion of economic conflicts during this period, see Drezner, Alejandro and Heidenheimer (1982).
a reciprocal basis, through bargaining among major trading partners, and this was to be multilateralised through the GATT system. Clearly, the countries of Western Europe seeking to reconstruct after the war, and conscious of American dominance, were not willing to accept free trade at that juncture.

The acceptance came soon. The next twenty-five years witnessed trade liberalisation among the major industrialised countries at a rapid pace. The *modus operandi* was successive rounds of multilateral trade negotiations, under the GATT umbrella, which brought tariffs in the industrialised countries to levels that were almost negligible. This process was facilitated in politics by American hegemony and in economics by rapid growth associated with full employment. The influence of those factors began to wane in the early 1970s, and there was a turn of the tide as the industrialised world resorted to increasing protectionism over the two decades that followed. Large segments of world trade such as agriculture and textiles were excluded from GATT discipline. Non-tariff barriers proliferated and multiplied; some misused GATT rules (anti-dumping or countervailing duties), others circumvented GATT rules (grey-area measures like voluntary-export-restraints and orderly-marketing-arrangements), while a few were not even in the realm of trade (laws about standards or health regulations). The outcome was a steady erosion in the principle of non-discrimination. The flexibility of the free trade doctrine, obviously, continued.

The surge of trade liberalisation and the rise of protectionism in the second half of the twentieth century were both attributable to the pursuit of national economic interests by countries which had the requisite political power. In the first phase, the industrialised world led by the United States wanted free trade and had the political hegemony to achieve it. During this period, from the late 1940s to the early 1970s, the industrialised countries progressively dismantled barriers to trade among themselves. This was carried out, through negotiations, at a pace that was mutually acceptable. In the second phase, as growth slowed down, recession persisted and unemployment mounted in the industrialised economies, the United States and the European Community both turned to protectionism as a means of preserving their economic interests. The East Asian countries, led by Japan, wanted free trade but did not have the political strength to impose it on others. During this period, from the early 1970s until now, the industrialised countries essentially erected barriers to trade to restrain exports from the developing countries. This was done in a unilateral manner which did not conform to the rules of the game. It is striking that the principle of free trade was preserved for trade within the industrialised world but diluted for trade between the industrialised countries and the developing world.

4. The present conjuncture

The Uruguay Round of multilateral trade negotiations was launched in an attempt to resolve the crisis in the international trading system, but was different from its predecessor rounds in a fundamental sense. It was not concerned with conventional tariff reductions for trade liberalisation. At one level, in the realm of traditional GATT issues, it was about the implementation of existing rules in the multilateral trading system, which have been eroded, circumvented or flouted in the recent past. At another level, *a proposito* new issues, it was about the formulation of new rules in vital spheres of international economic transactions, many of which have thus far been a matter for bilateral negotiations. It is necessary but not sufficient to recognize why and how the Uruguay Round was different from the earlier rounds of multilateral trade negotiations. The differences are much wider and deeper than its enlarged scope. GATT-type rules and principles, with provision for dispute settlement, compensation and retaliation are sought to be extended beyond trade in goods to international flows of capital, technology, information, services and personnel. The quest for international regimes of discipline on trade-related investment measures, trade-related intellectual property rights and trade in services, is closely intertwined with the interests of transnational corporations who are capital-exporters, technology-leaders and service-providers in the world economy. For them, these new issues represent the final frontier in their global reach to organise production and trade on a world scale without any fetters. The interests of transnational corporations were perhaps an important factor underlying the political impetus to conclude the negotiations, with compromises wherever necessary to resolve the issues of conflict among the major industrialised countries.
It should be recognised that the Uruguay Round agreement represents a return of free trade more in rhetoric than in reality. The axiom of unilateral free trade has obviously not been accepted for the reciprocity principle remains overwhelmingly important. The object of universal free trade is no more than a faint hope on a distant horizon. But that is not all. The invocation of and the adherence to, the free trade doctrine is uneven across space and asymmetrical across sectors. This provides an answer to my third question about free trade: for whom?

In spite of the professed belief in the free trade doctrine, the industrialised world is reluctant to accept free trade with the developing world. This reluctance stems from concerns about real wages and employment levels at home. The economic foundation of such views is weak but the political appeal is strong.

First, there is a fear that free trade with developing countries would have an adverse impact on real wages of unskilled or semi-skilled workers in the industrialised economies, which would not rise and may even fall as a consequence. In politics, the stagnation or decline in real wages in the industrialised world, particularly the United States, combined with the steady increase in real wages in some parts of the developing world, particularly East Asia, is cited as supporting evidence. In economics, the factor-price equalisation theorem is invoked as supportive argument. Orthodox economics, seeking to rehabilitate the free trade doctrine, is beginning to question the Samuelson result that it acclaimed not so long ago. Jagdish Bhagwati (1994, p. 242), for example, now says:

"It is time to remind ourselves that the original view of the factor-price equalisation theorem was correct. Its assumptions are indeed extraordinarily demanding. It is not therefore a compelling, or adequate, guide to real world phenomena".

Indeed, he goes further to cite scale economies, diversification and competition as reasons why real wages in the North and the South will not converge as a result of free trade. It is ironical that the same factor-price equalisation theorem, which was placed on a pedestal because it implied that free trade is equitable, is now pulled down to demonstrate that free trade cannot do anything as wicked as equalise wages across countries. What is more, this economic theorising has not led to political persuasion.

Second, there is a concern that free trade with developing countries would mean unfair competition because environmental regulations are sparse and labour standards are poor. The demand, then, is for a level-playing-field. This, in turn, means that domestic economic policies on environment and labour must be harmonised across countries. In its political dimension, the argument is that developing countries have an unfair advantage in competition and that there must be fair trade before there can be free trade. In its economic dimension, the argument is that the high levels of unemployment in industrialised countries are attributable to imports of manufactured goods from developing countries. Such arguments are obviously exaggerated, if not false, and have been treated with some scepticism by most economists. For one, differences between economies, particularly in wages, are a source of gains from trade. For another, imports from developing countries constitute a minuscule fraction of consumption or income in the industrialised countries. Yet, political considerations over-rule economic reasons. The appeal extends beyond conservative politics because environment and labour are both good liberal causes. In fact, the 'social clause' is already on the agenda for the world trading system. It is only a matter of time before an 'environment clause' arrives on the scene.

In refuting such arguments, it is important to stress that the stagnation in real wages and the high level of unemployment in the industrialised countries are attributable to the nature of technical progress, which is replacing several unskilled workers with a few skilled workers, and the impact of macroeconomic policies, which have sought to maintain price stability at the expense of full employment. The source of these problems lies within the industrialised countries and not in their trade with developing countries. The red herring cannot be revealed by trade theoretic analysis.

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14 It is difficult to find conclusive evidence that would validate or refute such a hypothesis. In his recent work, however, Wood (1994) provides evidence to show that competition from the developing world in the form of trade, has led to dislocation in the industrialised countries in low skill manufacturing activities. He also makes an attempt to assess how much of the labour-saving technical progress in the industrialised world was a response to competition from developing country trade. But this sort of analysis invariably ignores the possibility that unemployment is attributable to a lack of effective demand. What is more, such an approach does not sufficiently recognise the impact of macroeconomic policies and the nature of technical progress on employment levels in the industrialised economies.
The asymmetrical treatment of free trade is not confined to geographical space. It also extends across economic activities. The conclusion of the Uruguay Round is going to change the rules of the game for international trade as the twentieth century draws to a close. The new international regime of discipline would provide for a progressive dismantling of barriers to international trade in goods and international capital movements. This would be associated with a strict regime for the protection of intellectual property rights but there is nothing to facilitate international labour movements. The proposed multilateral framework for trade in services also caters to the interests of rich countries which have a revealed comparative advantage in capital-intensive or technology-intensive services, but makes little allowance for labour-intensive services in which poor countries have a potential comparative advantage. The movement of labour from developing countries to deliver services in the markets of industrialised countries is a matter for bilateral, sector by sector, negotiations, where immigration laws and consular practices would remain the dominant constraint.\footnote{For a discussion on international trade in services, and on labour mobility in that context, see Nayar (1988).}

It would seem that the institutional framework for globalisation, which has been shaped by political reality, characterised by a striking asymmetry. National boundaries should not matter for trade flows and capital flows but should be clearly demarcated for technology flows and labour flows. This asymmetry implies that developing countries would provide access to their markets without a corresponding provision for labour mobility. Without a corresponding provision for labour mobility. It should come as no surprise that orthodox economic theory would rationalise this reality by suggesting that free trade combined with capital mobility is both efficient and equitable, insofar as the import of goods that embody cheap labour together with the export of capital that employs cheap labour is a substitute for labour mobility. Let me end with a simple question: is it not possible to attain the same objectives of efficiency and equity through international labour mobility?

REFERENCES

Methods to Determine Capital Requirements for Options

P.J.G. Vlaar

1. Introduction

Measuring the risks associated with options is a complex business, not only because option prices depend in a non-linear fashion on a number of variables, but also because these risks need to be seen in connection with other positions. Uncertainty is a major factor that complicates matters here. In order to monitor these risks, it should preferably be possible to calculate the risks in a relatively simple manner, while the principles must also be compatible with the regulations emanating from Brussels (European Commission 1993) and Basle (BIS 1994).

The purpose of the present paper is to clarify the nature of the risks involved in options so as to be able to assess whether the various capital requirements being proposed are reasonable. For this purpose we shall, in Section 2, approximate the risks involved in options by means of a second order Taylor expansion after the manner of the proposed capital requirements. In Section 3 we shall consider four different methods, namely the BIS's simple method for purchased options, the delta method proposed by the European Commission, the delta-plus method proposed by the BIS and the scenario analysis preferred by the BIS, as well as a few possible alternatives. We shall end with a summary of the main conclusions.

i De Nederlandsche Bank, Econometric Research and Special Studies Department, Amsterdam (The Netherlands).
ii For a comparison of the Brussels and Basle capital requirements for other instruments, see Hall (1995).