



Dolphins, Turtles, Mad Cows and Butterflies – A Look at the Multilateral Trading System in the 21st Century

by

Sam Laird

The Centre for Research in Economic Development and International Trade is based in the School of Economics at the University of Nottingham. It aims to promote research in all aspects of economic development and international trade on both a long term and a short term basis. To this end, CREDIT organises seminar series on Development Economics, acts as a point for collaborative research with other UK and overseas institutions and publishes research papers on topics central to its interests. A list of CREDIT Research Papers is given on the final page of this publication.

Authors who wish to submit a paper for publication should send their manuscript to the Editor of the CREDIT Research Papers, Professor M F Bleaney, at:

Centre for Research in Economic Development and International Trade,
School of Economics,
University of Nottingham,
University Park,
Nottingham, NG7 2RD,
UNITED KINGDOM

Telephone (0115) 951 5620
Fax: (0115) 951 4159

CREDIT Research Papers are distributed free of charge to members of the Centre. Enquiries concerning copies of individual Research Papers or CREDIT membership should be addressed to the CREDIT Secretary at the above address.



Dolphins, Turtles, Mad Cows and Butterflies – A Look at the Multilateral Trading System in the 21st Century

by

Sam Laird

The Authors

Sam Laird is Counsellor, Development Division, WTO and Special Professor of International Economics, University of Nottingham.

Acknowledgements

The views expressed in this paper are those of the author and do not necessarily represent the views of the World Trade Organization or its Member States. The author is grateful to Dermot McAleese and André Sapir for comments on an earlier draft.

November 2000

Dolphins, Turtles, Mad Cows and Butterflies – A Look at the Multilateral Trading System in the 21st Century

by
Sam Laird

Abstract

As it approached the end of the 20th Century the multilateral trading system appeared to be on a high point. The WTO was in operation for five years, 50 years after the GATT had provided a stop-gap measure for the ill-fated ITO. With the failure of Seattle, the WTO begins the 21st Century with an uphill battle to preserve the multilateral system and to launch a new round of trade negotiations. What are the issues confronting the WTO? How can research help identify and overcome the problems facing the WTO in the next 100 years?

Outline

1. Introduction
2. Issues
3. A Research Agenda
4. Conclusions

I INTRODUCTION

The WTO began the 21st century in something of a state of shock. It took almost 50 years from the Havana Charter, intended to establish the ill-fated International Trade Organization, to establish the WTO in 1995. The new organization had an expanded mandate and membership was on the way to becoming nearly universal. However, proposals to launch the Millennium Round of Multilateral Trade Negotiations failed in Seattle in late 1999, and the WTO began the new century with a great deal of soul searching. How did this change take place? What is the prognosis? What should be the new trade agenda and how can it be put on track? How can economic research contribute to this process?

The GATT, the ITO's annex dealing with trade negotiations, had been a stop-gap solution, but it had a remarkable success in liberalizing world trade, dismantling barriers established in the recession of the 1930s. Its success owed much to the pragmatism of its "contracting parties" in negotiating the negotiable, favouring consultation over legal solutions, and - at times a strength and a weakness - allowing flexibility to contracting parties with particular problems, especially the developing countries. In its first 20 years, it advanced from essentially tariff-only negotiations towards progressive emphasis on tightening rules covering the use of non-tariff barriers in the Kennedy and Tokyo Rounds. Finally, in 1995, the WTO Agreement turned the GATT (the "Interim Commission for the International Trade Organization") into a fully fledged international organization, with a binding dispute settlement mechanism (DSM), and adding services and intellectual property to its existing mandate in goods. These new features as well as enhanced rules in many traditional areas applied to all WTO Members under the Single Undertaking of the Uruguay Round (excepting the Government Procurement and Civil Aircraft Agreements).

The soul-searching that took place after Seattle was reminiscent of one of the low periods of the GATT in the early 1980s when Lestor Thurow was to declare "GATT is dead!". Although the failure of Seattle was perceived by outsiders as a victory of the anti-globalization activists (often with conflicting basic goals), the main issues concern the changing nature of the organization, expectations of the new membership, different visions of the future of the organization, new issues with a sometimes tenuous linkage to trade policy, and an underlying replay of some old-fashioned issues such as protectionism

and the thrust of development policy. Curiously, the uncertainty within and without the organization took place against a backdrop of positive indicators in the world economy, such as sustained economic growth in the United States, accelerating growth in Europe and recovery in East Asia. However, clearly there was little confidence among the public at large in the management style of the invisible hand – the economist's joke about the market taking care of the replacement of light bulbs seems to have fallen flat among the structurally unemployed, or those who care about dolphins, turtles, mad cows and butterflies.

The paper tries to identify the main reasons for the failure of Seattle and other issues confronting the WTO at the start of the 21st Century. Section II tries to draw some lessons from Seattle which cover traditional negotiating issues as well as proposals to bring new areas within the coverage of the WTO. It also reviews confidence-building measures now being undertaken in the WTO. Finally, it asks whether there is cause to be concerned at trends in trade and trade policies – if trade policy has reached a satisfactory steady state, some kind of golden age, there would be little reason to worry about Seattle. On the basis of this information, Section III looks at how research can contribute to resolving some of the key policy issues facing the WTO and tries to determine some kind of priority for such work. Finally, Section IV provides some tentative conclusions.

II ISSUES

Lessons from Seattle

It is difficult if not impossible to be precise about the failure of the WTO Third Ministerial Meeting in Seattle in late 2000. The majority of insiders do not believe that organizational problems or the street protests had any significant effect on the negotiations. Certainly, some take the view that the initial delay in starting of the meeting, caused by the protests, was sufficient to take away the time needed to complete the drafting and reach agreement at the end of the meeting, which was not extended to make up for this lost time. Considerable progress had been made on the drafting, with relatively few square brackets (text not yet agreed). On the other hand, there is also a view that the remaining issues, for example in agriculture could not be resolved so quickly, and that in effect the text was only asymptotically reaching finalisation.

A more widely accepted view today is that the draft text attempted too much, trying in some areas to agree on an outcome rather than the launching of negotiations. Given the stated intentions that the proposed negotiations should only last three years (corresponding to the expiry of the peace clause in the Agriculture Agreement), it was felt that as much as possible should be agreed from the outset. Ministers arrived in Seattle to discuss and attempt to agree on a text of some 32 pages (16,430 words), including large sections of alternative texts that Geneva-based diplomats had been unable to reduce to manageable proportions. In the four full working days available to them, Ministers managed to eliminate various alternatives, reducing the draft to some 14 pages. However, this remained a massive task compared to that which they faced in 1986 with the text of six equivalent pages (2,851 words) that constituted the Punta del Este Ministerial Declaration to launch the Uruguay Round, which had far greater systemic implications than the proposed Millennium Round.

Apart from the size and complexity of the text, most areas were marked with disagreement, some on North-South lines, some between coalitions which cut across regions and levels of development. There were divergences about the organization and scope of the proposed negotiations in relation to negotiations mandated in the Marrakech Agreement, in relation to other topics proposed for negotiation, in relation to a range of additional elements of the WTO work programme, and in relation to areas for immediate decision in Seattle.

One of the most significant issues was the concern of many developing countries about implementation of the WTO Agreement, and which they feel must be addressed before a new round can be launched. (This is discussed further in Sub-section B of this Section of the paper). In the early stage of preparations for Seattle, one key question concerned the quantitative benefits that the developing countries had expected to obtain from the Uruguay Round. A number of these countries had been asking "Where is the cheque?" As noted in Laird (2000b), this refers to estimates at the end of the Uruguay Round that the implementation would yield global welfare gains variously estimated to range between \$212 billion and \$510 billion, while the estimated gains for developing countries range

between \$86 billion and \$122 billion.¹ However, these gains were largely proportional to each country's own liberalization efforts, and, although many developing countries had extended tariff bindings and lowered bound MFN tariffs, their applied rates were mostly lower than the new, bound levels, so that little tariff liberalization took place in practice. As this factor came to be appreciated, this question was dropped but a related issue that assumed great importance in the discussions on implementation was the backloading of liberalization in the textiles and clothing sector, where the main gains have yet to be realised. Again, there was a feeling that while the integration of textiles and clothing into the GATT 1994 was proceeding as scheduled and other commitments were being implemented in agriculture and manufactures, some of the expected gains were offset by the use of anti-dumping, special safeguards, the use of specific tariffs, tariff peaks, tariff escalation and tariffs quotas, and so on. Various clauses that required developed countries to give special attention to the situation of the developing countries were felt to be little more than "best endeavour" clauses that had no legal value and could not be enforced.

Another facet of implementation was the difficulties faced by the developing countries in meeting their new WTO obligations. Many developing countries recognized that signing on to the WTO Agreement would bring them benefits. These would occur through the greater predictability, credibility and transparency of their trade régimes ("governance"), so that they would be perceived as being more attractive hosts for foreign direct investment that would bring new technologies, increased productivity and enhance their international competitiveness. On the other hand, some governments knew that full implementation required co-operation with other economic forces within their own legislatures and they needed to be able to demonstrate that they were obtaining concrete benefits by way of improved market access, but, as discussed, some developing countries feel that much less was achieved than they had expected, for example, in agriculture.² Apart from this political economy factor, it was always known that full implementation of the WTO Agreement would take time and many developing countries would require technical assistance. Thus many specific agreements provide for longer transitional

¹ For a review of these estimates, see Safadi and Laird (1996).

periods for developing countries than for developed countries and acknowledge the need for technical assistance. However, in the course of the preparations for Seattle a number of developing countries made the point that the planned transition periods were insufficient and there was a need to provide extra time for full implementation.

The need for technical assistance was acute in some cases. For example, Finger and Schuler (2000) have computed that implementation of the WTO Agreement on Custom Valuation would cost as much as some countries' annual development budget. However, the technical assistance budget of the WTO is very limited, some SFr10 million, of which 90 per cent is made up of voluntary contributions from a limited number of developed countries (notably the Netherlands, Norway, Sweden, Switzerland and the UK, among others). Even the total is quite inadequate to meet the demands placed on the organization, and the uncertainty of voluntary contributions makes planning more difficult. Even if additional voluntary funds were available there would be a need for additional staffing to implement a more comprehensive technical assistance programme.

An issue that has arisen in relation to increasing the regular budget for technical assistance arises from the fact that all Members, including developing countries would be required to make a contribution, whereas the destination is almost uniquely developing countries and to a lesser extent transition economies. It has been argued that if technical assistance is a form of special and differential treatment then the developing countries should not have to contribute. There is also the notion that technical assistance is required to bring developing countries up to the same level of implementation of the WTO Agreement as developed countries, since most of the provisions for special and differential treatment relate to transition periods and technical assistance rather than lesser obligations, although lesser commitments were applied to developing countries in market access negotiations in goods and services. By this argument, technical assistance is intended largely to create a single tier system of rights and obligations, rather than a perpetuation of different levels of obligations as a permanent form of S&D.

2 This perception of negotiations as a co-operative game was put forward by Hector Torres of the Argentine

The question arises whether it was necessary to include the proposal to increase funds for technical assistance in the WTO budget and the package of measures to assist the least-developed countries in a single package. This could have been presented as a stand-alone decision, independent of any package for negotiations. On the other hand, it may well be that the inclusion of the proposal to increase the technical assistance allocation in the regular budget and the special proposal to help the least-developed countries was, at least in some eyes, a *quid pro quo* for acceptance by the developing countries of other parts of the draft Ministerial Declaration. On such a view, this would put pressure on the developing countries to drop or minimize their more stringent claims on implementation.

Given their concerns about implementation, a developing country position was that they were unwilling to contemplate new negotiations in various areas. This position extended to the inclusion of market access negotiations in manufactures which were not covered by the negotiations mandated in the Marrakech Agreement. Yet it has been estimated that a 40 per cent reduction in industrial tariffs would lead to a global welfare gain of some \$70 billion, almost identical to that from a similar reduction in agriculture (Hertel, Anderson, Francois, Hoekman and Martin, 1999). Of this, about half of the gains from liberalization of trade in manufactures would accrue to the developing countries from global liberalization in the sector, mostly from their own liberalization (Hertel and Martin, 2000). These countries are now also important markets for each other's exports, taking over 40 per cent of their imports from other developing countries in 1995.

Among the areas where the divergences were spread across regions and countries at different levels of development were the so-called "trade and..." issues. This refers notably to proposals for negotiations on trade and competition, trade and investment, trade and environment, and trade and labour standards. Were all these new issues ripe for negotiation? In the case of investment, this had been examined in some depth in the OECD's proposed Multilateral Agreement on Investment (MAI), and is also covered in certain WTO agreements (GATS, TRIMs and TRIPS). While some developing countries had a strong interest in such an agreement, a number of developed and developing WTO Members are clearly opposed to taking up OECD's failed initiative as a set of all-

encompassing rules on investment. Nevertheless, perhaps this could have been negotiated with adequate safeguards to be worked out in the negotiation. On the other hand, although considerable work had been undertaken in relation to trade and competition and trade and environment within the WTO, it is not obvious that these were ripe for negotiation. In relation to competition policy, it is still unclear whether Members would favour some kind of international code or whether a WTO agreement would merely promote the use of positive comity to take account of the concerns of other Members. Perhaps, it would have been more appropriate to propose further study with a view to bringing this issue into negotiations on a single package if study pointed to the possibility of agreement.

There was also an issue as to the appropriateness of bringing all environmental issues into the WTO. For example, some kind of inter-governmental agreement may be desirable, but should this be in the specialized Multilateral Environment Agreements or in the WTO? Some controls are already allowed for environmental reasons under GATT Article XX(b). A negotiation in the specialised agencies could develop such rules, including in relation to processes (protecting dolphins and sea turtles), while Members might agree to legitimize the use of trade measures to enforce such rules, while setting out the terms and conditions for their use (as in the case of standards).

Perhaps the most sensitive issue, and that which most clearly marked the failure of the Seattle meeting, was that of linking the possible use of trade sanctions to the non-application of ILO's core labour standards. As noted in Laird (2000b), the Singapore Ministerial Meeting of the WTO in December 1996 had recognized that the International Labour Organization (ILO) was the competent body to set and deal with internationally recognized core labour standards. Ministers explicitly rejected the use of labour standards for protectionist purposes, agreeing that "the comparative advantage of countries, particularly low-wage developing countries, must in no way be put into question". In addition, at the Singapore Meeting an agreed Interpretative Note stated that the issue of labour standards was not on the WTO's agenda, that no new work had been organized on the subject in the WTO and that the WTO had no competence in the matter. However, in Seattle President Clinton was emphatic in resurrecting the issue, envisaging the use of

sanctions to enforce core labour standards. This was certainly a "make or break" moment in Seattle, with many developing countries rejecting this position.

Similar concerns about the potential protectionist effect of measures under the existing WTO Agreements on Technical Barriers to Trade and on Sanitary and Phytosanitary Measures by comparison with the use of such measures for health and safety reasons lay behind disagreements on possible modification of the application of these agreements, for example, in relation to the use of the precautionary principle, whether to protect humans from hormone-treated beef or butterflies from GMOs. There is a concern among developing countries that Memoranda of Understanding between some developed countries on such issues, intended to facilitate mutual trade, are a form of discrimination against third countries. Developing countries are also concerned that the TRIPS Agreement appears to inhibit access to essential medicines, an issue that has assumed major proportions in relation to drugs to treat AIDS. In fact, the large majority of essential medicines are no longer covered by patents, and Article 31 of the TRIPS Agreement appears to open up the possibility of compulsory licensing to cover emergency situation,

There are two conflicts of vision underlying the debate on these issues both within the WTO and in civil society. On the one hand, there is a concept of the WTO as the arbiter of international disputes which have some or other trade linkage. From this perspective the WTO Agreement and all its components constitute the key legal, contractual framework for international economic relations, establishing the rule of law in place of power politics. The system attempts to create a level playing field on which the smaller nations can enforce their rights against the larger. An alternative vision is that of an Orwellian international institution, responsible to no one, secretive, undemocratic increasingly impinging on the sovereign rights of nations well beyond the trade boundaries (described in one newspaper as "the worlds most powerful and secretive organization").

The construct of WTO as a kind of social contract among nations corresponds largely to the reality of the situation. The WTO rules are negotiated among the Members, and

decisions are taken by consensus. While there are some provisions for voting in the WTO, the normal practice is to make decisions by consensus. In effect, each Member has a veto over any decision it does not like, and, it must be clear, a veto is more powerful than a vote. Thus, no Member can be obliged to accept a rule-change sought by any or all other Members. Moreover, the WTO is a Member-driven organization, whereby the agenda and the work of the Secretariat is overwhelmingly decided by the Members sitting in its council and committees. It is, therefore, distinct from organizations such as the World Bank, the IMF and UNCTAD where the staff have a more independent role and drive much of the agenda.

Perhaps the most important change from the GATT in terms of the debate about the role of the WTO comes from the change in the dispute settlement process. Following the failure to resolve issues bilaterally, such cases are referred by the Dispute Settlement Body (DSB, consisting of all Members) to be examined in the first instance by a panel of independent experts. The panel examines the facts and makes recommendation based on the rules as they exist (as would any national court). In another new feature, these decisions are now subject to review by an Appellate Body on matters of interpretation of the rules ("WTO law"). The recommendations of panels and the Appellate Body are accepted unless rejected by consensus (i.e., the winner of a case would have to participate in rejecting the findings in its favour). Under the GATT, there had to be a consensus to accept a report, which implied acceptance also by the party which lost the case. This change in procedure has strengthened the capacity of the WTO to rule against Members in breach of the rules. It obliges the loser to apply the rules, failing which the winner may apply sanctions, such as the withdrawal of previously negotiated concessions. The rule change, which has helped some small countries win cases against much larger trading partner, is also the source of much of the pressure to include new issues within the ambit of WTO rules. In this sense, the WTO is a victim of the success of the DSM.

Among a number of the WTO Members (and NGOs), the main concern is that the rules themselves are wrong, and they cite decisions in the Shrimp-turtle case, the Tuna-dolphin case, the Beef-hormones case in support of their argument. For many protestors, however, the WTO should not be intruding on national sovereignty on environment issues

or in the application of the precautionary principle on food safety. In the case of the "trade and..." proposals, some Members are trying to extend the rules to cover cases which they consider socially desirable (e.g. in relation to labour standards) or to eliminate loop-holes in existing rules which mitigate their expected gains in other areas (e.g., competition law to eliminate restrictive practices which limit market access, or investment rules which inhibit establishment to deliver their exports, protection of their investment against appropriation and the right to repatriate profits). Other Members oppose some of these changes fearing protectionist motives and the possible loss of sovereignty in certain areas (e.g., in relation to cultural exemptions). However, the concern about the loss of sovereignty has also to be seen against the consensus approach to rule making and, in the last resort, the capacity of Members to withdraw from the organization. The criticism that the WTO lacks of transparency has some legitimacy, despite the prompter and greater availability of documentation than in the past.

The question of transparency also surfaced at Seattle, although concerns had already been expressed about the processes in Geneva leading up to the Ministerial meeting. In managing the preparatory process and the Seattle meeting, it now seems clear that insufficient account had been taken of the major changes in the size and composition of the membership. When the Uruguay Round was launched in September 1986 at Punta del Este, the GATT had 80 contracting parties. At Seattle, the WTO had 135 Members. All of the 55 new Members were developing or transition economies. Many of these are very small and about 40 have no permanent representation in Geneva. Of those which have such representation, the delegations are also required to cover the meetings of UNCTAD, ILO, Human Rights, the High Commission for Refugees, WIPO, WHO, WMO, ITU and other Geneva-based international organizations.

These new Members came to Seattle with a purpose, intending to participate fully in the decision-making processes of the WTO. To their surprise and indignation, many of their Ministers found themselves precluded from participation in the small, informal meetings of selected delegations that were arranged to discuss the draft text for the adoption of the Ministers (the "green room" meetings). As much from the sense of frustration that this process engendered as from the fundamental disagreement about the contents of the draft

text, they voiced their anger and helped block the launching of a new round of trade negotiations. In a sense, the failure of Seattle was also a direct consequence of the application of the consensus principle and insufficient time or effort being made to bring these countries on board for the launch of the proposed new round of negotiations.

Finally, there a question as to whether participants at the Seattle meeting tried too hard or did not try hard enough. Given the potential gains to the developing countries through increased market access and through imported governance (signing on to enhanced rules), did negotiators play the mercantilist hand too much? Given the reforms that are taking place in many developing countries, including some of the most vociferous at Seattle, they had a strong interest in a wide agenda (Laird, 2000b), and this opportunity has now been foregone, at least for the time being. Was there adequate co-operation between ministries in formulating the positions to be taken in Seattle? Some Ministers seemed to show greater flexibility than had the Geneva-based diplomats, but perhaps this was to be expected. Or was it simply that there was not the political will to launch a new round. In this respect, as noted earlier, most WTO Members are now participants in a rapidly increasing number of regional trade agreements, and some at least took the view that the outcome of Seattle was not crucial since they already had trade agreements with their most important trading partners. There is even a view that so much had been achieved in the Uruguay Round (a "golden age"?), that there was no real need to rush into new negotiations. However, this does not fully take account of the need to achieve some kind of cross-sectoral and cross-issue balance which may not be fully attainable in the mandated negotiations.

Rebuilding confidence

Following an initial period of uncertainty after Seattle, the WTO began a series of measures to re-build confidence in the institution and to pave the way for an eventual agreement on launching a new round of trade negotiations. However, apart from these particular measures, it is important to recall that the ordinary business of the WTO is already a daunting task. This entails managing the rules-based trading system, the constant process of monitoring the operation and application of the full range of WTO agreements (including the progressive application of tariff cuts, domestic support and

export subsidies, negotiated in the Uruguay Round), dispute settlement, monitoring developments in individual countries (through the Trade Policies Review Mechanism) and more generally, processing the accession demands of some 30 countries, including China, Russia, Ukraine, Saudi Arabia, and so on. This work is supported by one of the smallest of the international secretariats, some 530 total staff, of whom there are just over 100 substantive professionals (excluding finance, personnel, interpretation, translation, security and other support staff). Certainly, in the post-Seattle period no one in the WTO was sitting on his thumbs.

Of the specific confidence-building measures, among the first steps were to initiate the negotiations in agriculture and services that had been mandated in the Marrakech Agreement 1994 establishing the WTO. These negotiations were formally begun in February 2000. These cover some two-thirds of world trade. In the case of agriculture, as mentioned earlier, the expected global welfare gains from a 40 per cent reduction in tariff and subsidies are estimated at some \$70 billion (Hertel, Anderson, Francois, Hoekman and Martin, 1999). Developing countries will be major beneficiaries, and within developing countries, some of the poorest segments of the population will benefit most. These negotiations therefore have important implications for poverty reduction. It is practically impossible to make accurate computations of the importance of protection in the services sector, but it is also estimated – somewhat more tentatively – that equivalent liberalization in the services sector would produce welfare gains of as much as \$332 billion in 2005 (*ibidem*). These gains are not uniquely within the services sector but are more widespread throughout the economy. This is because services are important inputs into the production, transport and marketing of traditional exports of manufactures and agricultural products. Export success in these areas for developed and developing countries is partly dependent on having access to efficient services at world prices.

Second, most WTO agreements contain provisions for reviews of their operation within five years, and these mandated reviews have also started without any fanfare in the range of WTO councils and committees. It is conceivable that such reviews will lead to changes in operational procedures or even for interpretations of the texts which, under Article IX of the Marrakech Agreement, could be approved by the General Council or Ministers outside of the framework of a formal negotiating round. However, the political reality is that such changes would need to be made within the overall balance of rights

and obligations across the whole range of agreements which can only be achieved within a round.

Third, a number of developed and developing country Members have picked up the elements of the Seattle draft text and announced a package of measures for the least-developed countries. These include "the tariff-free and quota-free treatment consistent with domestic requirements and international agreements, under their preferential schemes for essentially all imports products originating in least developed countries."³ In practice, LDCs already had relatively free access for many of their exports, and the new measures remain limited in areas such as agriculture and textiles and clothing, where the LDCs already have some capacity, but which are sensitive in the developed country market. However, it is hoped that the package can be extended both in terms of the products covered and the number of countries offering preferential treatment for the LDCs.

In addition, the WTO is cooperating with the World Bank, the IMF, UNDP, UNCTAD and the WTO/UNCTAD International Trade Centre in the context of the Integrated Framework of Trade-related Technical Assistance for the Least-developed Countries. This programme, intended to coordinate the use of existing funds, rather than provide new funds, has had a number of problems. However, following a review by heads of the six agencies in July 2000, there has been some restructuring of the operation to ensure greater transparency, more accountability and ownership. The World Bank will take the lead where trade-related programmes are being mainstreamed into a country-led process of defining national poverty reduction strategies, UNDP will manage a proposed trust fund to help LDCs develop the necessary analytical and policy framework for mainstreaming trade into national development strategies, while the WTO continues to chair meetings of the inter-agency group. ITC will focus on support for trade services, while UNCTAD will work on capacity-building and training, including for participation in trade negotiations.

Fourth, an effort is being made in the WTO to improve the planning and delivery of technical assistance. The main push at present is to attempt to increase the regular budget for technical cooperation to around the level that is being delivered largely with voluntary contributions. Whereas, there is wide sympathy for such a measure, there is as yet no agreement. In part, there is an objection from some developing countries who would also have to make such a contribution, while some major donors may prefer some flexibility through voluntary contributions that can be varied at will and do not necessarily want to be obliged to increase their contributions to the regular budget.

Fifth, within the WTO there has been a discussion on what is called "internal transparency" in reference to the process of small group or "green room" meetings. In essence, the WTO membership has decided to continue with current procedures, while making a greater effort to ensure that all are kept informed of meetings. Such small group meetings are to be announced internally and to be open to all Members who wish to attend. There are no plans for a small, representative executive body, like the World Bank and IMF Boards. Moreover, in the small group meetings, participants will not represent regions or other country groupings. Finally, decisions will continue to be taken by consensus among the wider membership, rather than voting.

With regard to external transparency, there is as yet no agreement among Members, with some in favour of opening meetings and even dispute settlement to NGOs and the public at large. However, others emphasize the intergovernmental nature of the WTO and the need to preserve privacy to conduct sensitive negotiations. Nevertheless, the WTO now provides an enormous amount of material on its web-site (the subject of periodic cyber-attacks), and the work of the organization is now much more transparent than in the past. Much of the information is provided following decisions and, as such, does not satisfy NGOs which would like to influence the outcomes. Yet, in fact there are very few secrets in Geneva, and NGOs often seem to be highly informed of issues and are certainly making their views known ahead of important decisions.

Sixth, the programme of work on accession continues. Whatever the criticism of the WTO by NGOs and others, some thirty countries are in various stages of the accession process, as mentioned earlier. There are currently some 137 Members, and the inclusion of the countries currently in the accession process will raise the membership to close to universal. Concerns have been expressed about the burden of the accession process for small, developing countries and the unreasonable demands that are said to be being made of them, but there is essentially one track and each accession is a unique negotiation in which it is difficult to draw lessons from previous accessions. On the whole, the new Members are typically being required to take on greater obligations – binding of tariffs at low to moderate levels and other commitments – than those of some existing Members, especially developing countries who were long-term GATT contracting parties. On the other hand, it is argued that they have to pay for receiving the benefits of 50 years of negotiations among existing Members.

Seventh, one of the most important aspects of the confidence-building exercise, is the establishment of a special mechanism under the General Council to deal with implementation issues. Early in 2000, the General Council decided that Members would exercise due restraint in respect of the non-implementation by developing countries of WTO commitments. For a number of developing countries, a key issue was to obtain an extension of the transition period for the implementation of specific agreements. Developed countries favoured a case-by-case consideration of requests for extension of the transition periods, and such extensions have already been granted to a number of developing countries in various WTO committees, notably in relation to customs valuation. However, developing countries tended to favour a general waiver for developing countries, rather than the case-by-case approach. This concerns mainly the TRIMs Agreement, where several developing countries did not notify such measures in 1995 as required to benefit from the initial transition period. These measures occur almost exclusively in the automotive industry and involve private sector adjustment rather than time or costs for governments as in other areas of implementation. Obviously, the automotive industries, especially the auto parts industry which is the main beneficiary of local content plans, would prefer to continue the existing regimes *ad infinitum*, and it is logical for them to put pressure on their governments to seek extensions of transition periods in the WTO. Recently, the United States has begun dispute settlement cases

against such countries and the matter is to some extent *sub judice*. Some developing countries have been asking for studies of the issue, including a possible joint WTO/UNCTAD Secretariat study. This would clearly take some time and would need to look both at the economics of local content plans and export-balancing requirement as well as alternative WTO-consistent measures which might be used by developing countries which favour this kind of active industrial policy. How such work would fit into the possible time-frames for launching a new round is not yet clear, but the implication is that at least some developing countries would be willing to hold up the launching of a new round until they obtain satisfaction in this respect. This is taken up further in Section III, below

Other key areas in the implementation debate concern the effects on expected improvements in market access of the use or abuse of anti-dumping and problems in the integration of the textiles and clothing sector into GATT 1994. There have been one or two dispute settlement cases in relation to commitments in textiles and clothing but otherwise the developing country complaints seem to relate more to the spirit of the agreements rather than any breach of legal obligations.⁴ Both are difficult and sensitive areas and it is difficult to see any immediate solution to problems in either area.

One important aspect of the implementation debate, on which developing countries have somewhat different views, concerns the idea of linking progress on implementation to the launching of a new round. For some, implementation by the developed countries of measures in favour of the developing countries, including market access measures, special and differential treatment, and so on, are pre-conditions to the launching of a new round. These countries take the view that until the developed countries have met their obligations *vis-à-vis* the developing countries, they should not be asked to take on such new obligations as would be implied by a new round. On the other hand, a number of developing countries feel that a new round could well be in their interests, although the scope of this round has yet to be defined.

⁴ See Laird (2000) for a discussion of the substantive issues.

Of course, the question arises whether the present situation is a matter for serious concern. As discussed in this section, the existing agenda of the WTO includes the mandated reviews, mandated negotiations, monitoring of trade and trade policies, accession negotiations and dispute settlement. This is a busy programme. Often the case for new negotiations is based on the bicycle theory that is necessary to keep moving to stop from falling off. In this sense, there is a danger of irrelevance if the organization cannot respond to new concerns, and we have already seen the increasing resort to regional trade agreements as an alternative to the WTO. There is also the question as to whether trade patterns and trade policies represent a satisfactory steady state. This is picked up in the next section.

Trade and Trade Policy developments

A key question is how are developing countries faring in the multilateral system? Is the system stacked against them, as some allege, or are they able to use the system to achieve their objectives for trade, including through dispute settlement. These are complex multi-dimensional questions which are well beyond the scope of the present paper, but a limited evaluation of the overall trade performance of the developing countries in the last 25 years gives some cause for satisfaction, as they have increased their share of world merchandise trade from some 20 per cent in 1973 to 28 per cent in 1999. However, this compares poorly with the share of some 33 per cent in 1947. Moreover, there is considerable divergence in the performance of different groups of countries, with the main growth place in China and other East Asian countries which have succeeded in diversifying their economies towards manufactures (WTO, 2000). However, "economies which have remained tied to exports of raw materials, or to agricultural products (with a few notable exceptions such as Chile) have lagged behind both in overall trade development and in international integration" (*ibidem*). It is also noted that preferences by developed countries to developing countries may have assisted in the development of certain industries, "but may also have helped to perpetuate economic structures in developing countries which inhibit change and development".

While the trade of the least-developed countries has been increasing, they have not benefited to the same extent as other countries. Reflecting their reliance on primary

commodities, their share of world trade has been decreasing slightly. This is partly a consequence of low elasticities of demand for basic agricultural commodities and minerals, increased productivity in agriculture, and the substitution of manufactured products for basic minerals, plastics for steel, etc. WTO (2000) also notes that there are also significant differences in performance among the LDCs, noting the success that Bangladesh has had in diversifying its export structure and the successes of Laos and Cambodia emerging from war economies and integrating into the ASEAN region. However, concerns about the general trade performance of the least developed countries lay behind the initiative to try to improve conditions of market access for these countries in Seattle.

The economic crises originating in Asia in 1997, followed by the crisis in Russia and Brazil, was particularly harmful to the trade of the developing countries, demonstrating their continuing vulnerability to exogenous events. Overall, their share of world trade declined by two percentage points in 1998. However, this was recovered fully in 1999, with developing countries trade growing at twice the global average. It is important to note that, by and large, the developing countries did not resort to protectionist measures in response to the crisis, with some countries even strengthening their reforms, particularly in the financial sector. There seems little doubt that the reforms undertaken over the last 10-15 years facilitated their recovery.

As noted in WTO (2000), resource endowments, climate and population structure cannot alone explain the long-term changes in trade patterns. Other domestic factors which relate to governance issues (Stiglitz, 1998) are also relevant. Apart from the application of WTO rules, which should be seen as apart of governance, such factors also include investment policies, infrastructure and human resources development, and stable macro-economic policies.

The international policy environment has also played a role in explaining some of the trade developments. Some of the movements have been positive. The GATT and the WTO have presided over considerable multilateral trade liberalization, with industrial MFN tariffs declining from some 40 per cent in developed countries to some 4 per cent

today. There has also been considerable liberalization within regional trade agreements with almost all WTO Members participating in a number of agreements (Crawford and Laird, 2000). Moreover, in the last 10-15 years there has also been considerable unilateral liberalization by developing and transition economies, often under World Bank and IMF programmes (Drabek and Laird, 1998).

However, some important agricultural products and textiles and clothing were largely excluded from this liberalization until the Uruguay Round. Agriculture suffered from the inter-sectoral distortion caused by ISI policies within the developing countries, as well as import restrictions, domestic supports and export subsidies by the industrial countries. Textiles and clothing, has been covered for some 40 years by a series of restrictive agreements, starting with the Short-term Cotton Textiles Agreement and concluding with the WTO Agreement on Textiles and Clothing.

Within the Uruguay Round, a major achievement was the inclusion of these two sectors within the main rules. In agriculture, there were substantial tariff cuts for tropical products and a number of high value added products, such as fruits and vegetables, which are the fastest growing sub-sector of agricultural trade (Laird, 1999). There was also the elimination or tariffication of non-tariff measures, and programmed reductions of these tariffs, domestic supports and notified export subsidies. However, for some bulk commodities, this was largely the consolidation of existing support measures, with the expectation that meaningful liberalization would occur in future rounds, although there are indications that the cuts in export subsidies had some real value.

The integration of the textiles and clothing within normal WTO rules is being effected over a 10 year period under the supervision of a Textiles Monitoring Body (TMB). Under the Agreement on Textiles and Clothing, which is intended to include products from four different groups (tops and yarn, fabrics, made-up textiles, and clothing), fixed percentages of trade volumes, based on 1990 volumes, were to be integrated into the WTO in four distinct periods, starting in 1995 and concluding in 2005 (Laird, 2000a). Quota restrictions are being expanded by the amount of the prevailing quota growth rates plus 16 per cent annually for the first three years. However, as discussed in the debate on

implementation, concerns have been raised about the back-loading of the integration process, the large number of safeguard measures in use, more restrictive use of rules of origin by the United States, tariff increases, the introduction of specific rates, minimum import pricing regimes, labelling and certification requirements, the maintenance of balance of payments provisions affecting textiles and clothing, export visa requirements, as well as the double jeopardy arising from the application of anti-dumping measures to products covered by the agreement (*ibidem*).

At present, both developed and developing countries have tariff structures which are loaded against the exports of developing countries. Overall tariff averages are modest: MFN bound tariffs at the end of the implementation of the Uruguay Round results will be some 6.5 per cent across all countries and products (Table 1), while applied rates will be some 4.3 per cent (Laird, 2000a). In general, developing countries' bound rates are higher than those of the developed countries and, for some regions, there is a large gap between their applied and bound rates. However, protection is still quite high in sensitive product areas such as textiles and clothing and transport equipment (Table 2), where trade is large and imports are relatively responsive to price changes (*ibidem*). In addition, most countries have substantial tariff escalation, making it more difficult for the developing countries to develop downstream processing.

Concerning non-tariff measures, Laird (2000a), using evidence from OECD countries, shows that, as a result of the Uruguay Round, there was a substantial reduction in the use of NTMs in agriculture, principally through tariffication or elimination of prohibited measures, and the reduced application of export restraints in the area of textiles and clothing. Anti-dumping has become more important in developed and developing countries⁵, as a form of "legalized backsliding", although apparently more related to economic conditions and exchange rate differentials than to predatory dumping. Import licensing appears to be mainly used to allocate tariffs quotas in agriculture. Local content plans have disappeared in the developed countries, but remain important in some major developing countries. Although it is hard to obtain statistical evidence, technical barriers to trade and sanitary and phytosanitary measures seem to have become more important,

but it is difficult to say the extent to which these may be being used for protectionist purposes rather than to meet legitimate health and safety concerns.

Apart from these import-related measures, production measures and export subsidies are of importance in developed and developing countries in agriculture, and there is still some use of export subsidies to promote manufactured exports, mainly but not exclusively, in developing countries under the transition period (till end 2002) of the SCM Agreement.

Export taxes and restrictions are mainly used by developing countries. These are sometimes stated to be for reasons of food security, but most cases seem to be promote downstream processing of affected raw materials such as vegetable oil seeds, hides and skins and tropical timbers.

In general, the trend in the use of non-tariff measures means that negotiable measures – those subject to market access negotiations - are now used mainly in agriculture, while those on textiles and clothing should be phased out by 2005. Most other non-tariff measures are permitted under WTO rules, and, in such cases, negotiations in any round would be handled principally within the rules negotiations, now covered by the mandated reviews.

In relation to services, it is very difficult to say much about protection at this stage. It is widely accepted that in the Uruguay Round many countries made commitments that corresponded to existing measures, although it is hard to be unaware of the massive changes taking place in telecommunications in the industrial countries. Estimates of the potentially very large welfare gains to be made from liberalization in this sector, cited earlier, are still very rough estimates. There are a number of areas, such as subsidies, where the GATS lacks disciplines and these will no doubt be taken up in the negotiations which started in early 2000.

⁵ See also Mirand, Torres and Ruiz (1998).

The foregoing discussion of trends in trade and trade policies makes it clear that we have not entered a golden era. Although some economists have the notion that the main agenda in trade policy has been completed, it is clear that there is still much to be achieved in the traditional areas of negotiation, both from the perspective of improving the allocation of resources and from the perspective of improving access to foreign markets. By some calculations, traditional tariff negotiations have at least as much to offer as in the Uruguay Round. There are still substantive negotiations to be engaged in reducing or eliminating non-tariff measures, although the main thrust may now be in the area of rules to ensure that such measures are being used for legitimate objectives and not merely for protectionist purposes.

III A RESEARCH AGENDA

From the foregoing examination of the collapse of the Seattle Ministerial Meeting and of trends in international trade and trade policies, there are a number of issues that need to be addressed with varying degree of urgency. Among the areas that need attention, as discussed below, are the effects of globalization on economic development, including the linkages of investment, trade and growth. Advances in our knowledge in these areas may also lead to improvements in economic modelling. There are also related questions about the effects of trade on wages and employment, and related questions about social safety nets and structural adjustment programmes. Then, there are a series of questions about good practice in trade and related policies, including how to develop a rapid export response following liberalization. In addition, there are other questions with a development dimension, such as the effects of the TRIPS Agreement, the role of special and differential treatment for developing countries, reform of the dispute settlement mechanism and so on. Finally, there are question about the benefits of regional trade agreements and their relationship to the multilateral system.

Taking first the effects of trade liberalization and domestic deregulation on economic development, there is a view that such development is harmful to the environment. On the other hand, there are also studies that show that the quality of environment is appreciated more by the wealthier and that, at least above certain income levels, more is spent on environmental protection. Moreover, freer trade can lead to less use of

environmentally harmful farming and fishing practices. In relation to debt, it has also been shown that expanding trade opportunities for exports from developing countries can help them to pay off their foreign debt (Nogues and Laird, 1989). More recent evidence indicates that privatisation receipts can be used to reduce domestic and foreign debt, while lesser involvement in productive activities by the state improves the allocation of resources. It may be that further work is necessary to explore these issues in depth and to publicise the results.

Some have also been concerned about the possible immiserising effect of trade liberalization. It is not obvious from theory what the effects of trade liberalization might be on income distribution. Most economists take the view that trade liberalization is associated with higher income growth, although there are those who dispute that fact. Assuming that such a linkage is correct, intuitively one might suspect a possible trade-off between growth and income distribution because of the effects on resource allocation from related intervention, and it would require investigation to determine whether the poor better more from higher growth than say tax or spending policies to redistribute incomes. The experience of Chile in the 1990s, under President Aylwin's Government showed that it was possible to apply policies to improve health care and education for the poor (which would not show up in the Gini coefficient) while sustaining real growth rates of 9 per cent a year, similar to those of earlier government. Most recently, Dollar and Kray (2000) have shown that growth is neutral with respect to income distribution, but they stress that their work is based on statistical evidence with significant variations in experience. This is obviously an area that needs to be researched so that we can learn how to achieve the positive results and avoid the negative.

Related questions concern the linkage between investment policies, trade and growth. Again, open investment are said to bring technological advances to developing countries, which lead to productivity gains and international competitiveness. Although most economists accept that these kinds of such linkages exist, the mechanisms are not spelled out in theory or practice.

Another question that has received attention in recent years is the linkage between trade, jobs and wages in developed and developing countries. This is a multifaceted topic where empirical investigation can yet enlighten us beyond the basic theory incorporated in Heckscher-Ohlin and Stolper-Samuelson and suggest appropriate policy action, social safety nets, etc.. For example, consistent with the theory, it appears that there has been an increase in income inequality between skilled and unskilled labour in industrial countries (see Dawkins and Kenyon, 2000, for a review). However, there is also evidence that the change is explained by technology rather than globalization, and hence falling wages for the unskilled are not explained by trade, at least only minimally (Krugman, 1995; Slaughter and Swagel, 1997). On the other hand, Wood (1995) finds a much greater trade on effect. It may also be that there are some important inter-sectoral variations that could affect policy design. Of course, it is also possible that technological change may be driven by trade, so there need not be any inconsistency in these results. Whatever the reason, Dawkins and Kenyon (*op.cit.*) argue that wage setting systems, tax and social security systems, and education systems need to be reformed to address a bias against low-skilled labour. Moreover, it also seems possible that proposals to use trade sanctions to enforce core labour standards may be of greater benefit to skilled labour than to unskilled labour and rural workers.⁶

A related investigation for research is the application of adjustment policies. Moving from a situation of protectionist policies, state regulation and control to more liberal trade and domestic policy regimes may well involve costs to affected sectors of industry or the population. A considerable work was carried out in OECD on these things in the early 1980s, and some of this needs to be updated and brought to the attention of policy makers. This can be of value in helping to sell policy domestically. This aspect is often forgotten, although experience shows that making and maintaining policy changes are enhanced by public acceptance. Experience at the World Bank on policy adjustment is also the subject of recent work by Matusz and Tarr (2000).

⁶ Thus, ICFTU, which has union members in developing and developed countries, favours such a linkage, while developing country governments typically argue that such a linkage is for protectionist purposes.

More fundamentally, it is still necessary to continue work on the gains from trade and the importance of sectorally neutral policies (or the development of information on externalities, if any, from intervention). As discussed earlier, traditional trade barriers in agriculture and manufactures remain important and need to be addressed, while the gains from services liberalization are tentatively estimated to be very large. In recent years, some of the most important advances have been made in the construction of large scale data bases modelling, particularly through GTAP, based at Purdue University. This has helped to drive home the importance of inter-sectoral linkages – indeed, forcing policy makers to think in a general equilibrium framework may be of more value than quantitative results. The models have also been used to emphasize the gains from trade, as discussed earlier in relation to estimated gains from a new round, even if there are some doubts about the actual numbers. However, more work may be needed on the basic data on trade barriers, especially in the services sector, on the elasticities, and on making such applied models more realistic, for example, by modelling imperfect competition and intra-industry on making trade. In the longer term, there is a need to explore the dynamic linkages, perhaps incorporating ideas from macroeconomic modelling. At present, there is still a tendency for such models to show very minor gains from trade, and some believe that this means there is something wrong with the models, e.g. X-factors, intra-industry trade, economies of scale, etc. Nevertheless, some developing countries have evidently been reading these studies, such as they are, and are taking a cautiously positive view of a new round of trade negotiations beyond the limits of the mandated negotiations. The message needs to be spread!

This modelling work could also be usefully applied to the development of strategies for liberalization. Laird (2000a) shows that top down policies, cutting the highest barriers first, tends to be welfare-enhancing, but cutting the lower barriers first can increase distortions in an economy. This suggests the use of formulae approaches to liberalization, but the absence of information on services barriers means that, unilaterally, regionally and multilaterally, policy is often being implemented in the dark.

Another key issue for developing countries, little voiced in the WTO, is how to develop an export response to trade liberalization. Some work has been done on this in the past,

mainly at the World Bank and to some extent in UNCTAD. While some have stressed the need to use positive measures such as export zones, export subsidies, export promotion programmes, others have stressed the importance of reducing the anti-export bias of ISI policies (the Lerner Equivalence theorem) and getting the real effective exchange rate right. Often, nominal anchors, still popular among some influential policy advisors, to achieve macroeconomic stability have led to exchange rates being seriously misaligned, with negative effects on export performance. WTO rules limit the use of export subsidies who are then vulnerable to anti-dumping or other safeguard actions, and it is important to explore the policy options more fully (Laird, 1999).

In general, there is still work to be done on identifying on good practice in a number of areas of trade and related policies, which often reach well beyond frontiers deep into macroeconomic management. The World Bank and to a lesser extent the IMF have been supporting structural adjustment programmes in developing countries, pushing in the direction of good policy (see Thomas and Nash, 1991). However, the main function of the WTO is to set a perimeter beyond which Members may not go in the application policies which are harmful to each other (and usually to the Member itself). Perhaps there is scope within the coherence mandate of the three institutions to collaborate on identifying and applying good policy, although WTO Members are very chary of any idea of cross-conditionality. As noted earlier, there sometimes seems to be a contradiction between the policy approach being applied by the main economics, finance and planning ministries, and that espoused in Geneva by representatives of the some governments, mostly from foreign or trade ministries, who are subject to different pressure groups at home. Of course, each government may justifiably take a hard-line negotiating position to obtain improved market access, but this should not be at the expense of foregoing needed reforms in national policy. In this respect, it may well also be useful to resuscitate and extend to developing countries work done at the World Bank in the early 1980s on the political economy of protection in OECD countries (linked to work on adjustment policies), and this could also be linked to institutional reform in a public choice framework. Work also needs to be done by the international institutions and by the economics profession more generally on extending the net of received knowledge to a wider the range of agencies and individuals in the developed and developing countries.

Within the academic community, some of this can be done by encouraging research networking, such as that supported by the World Bank Institute in recent years.

Development issues were at the core of some of the most intractable problems in the preparatory process for Seattle and in the discussions that have since taken place. As discussed earlier, these cover the difficulties that some developing countries have in meeting their WTO obligations, and which are, in most cases being handled by extensions of transition periods. (There seems to be no requests for extension of the time for implementation of tariff-cutting commitments, which were less than those of the developed countries, but often do not cut into applied rates). At least some developing countries appreciate that full implementation can bring them benefits, as a positive sign of good governance, but face certain legislative and capacity constraints. Apart from extensions of transition periods, technical assistance is being extended by the WTO within its limited budget, stretched with voluntary contributions, and bilaterally by some Members. Since a case-by-case approach presents problems for those countries which did not notify their TRIMs in 1995 (as mentioned earlier), some of these are asking for a general exemption and are also asking for studies of the implications of application of the TRIMs commitments. An option might be to negotiate a peace clause for a limited period (although it is by no means certain that the situation would not reproduce itself however, long a moratorium might be). An alternative approach, given that the problem mainly relates to private sector adjustments, would be seek support from the World Bank or the IMF by means structural adjustment loans. Work to identify implementation problems and their solutions is perhaps the most pressing issue in the WTO today.

Another area of importance for developing countries is TRIPS, as mentioned earlier. Focussing only on the controversial question of patents, there is a difficult trade-off between rewarding researchers to develop new products which benefit society and the desire to provide those benefits as quickly and cheaply as possible to those in need. Are existing compromises reasonable? Are there other issues related to the provision of medical services, e.g., for preventive medicine? This is also a rich field for research.

On the market access side, while the strict rules seem to be being applied, considerable good will could be generated if the developed countries made a greater effort to apply the best endeavours that are scattered throughout the WTO agreements. It may well be that no change in policy would result, but at least such efforts would be a sign of good faith. A problem on textiles and clothing is that the US schedule is written into law, and while Congress may be in no mood to accept changes, the Administration could win a lot of brownie points by putting a proposal to advance part of the process of integrating the sector into the main rules. Again, various WTO importers could make a greater effort to take account of the interests of the developing countries while applying anti-dumping laws or special safeguards. Some research on adjustment problems, designed to identify constructive solutions would be welcome.

Another issue of implementation relates to the dispute settlement mechanism. While this has generally been judged to be a success – a developing countries have won some important cases – there are some elements of dissatisfaction. One such element, the costs of fighting such a case is being addressed through the establishment of a legal Advisory Centre. However, there are also concerns that the system is being abused to delay implementation of decisions, for example, in the beef hormones and bananas cases. More recently, concerns have arisen in relation to the powers of the panels and the Appellate Body, which, some say, are establishing WTO law where the negotiated rules are somewhat vague. Thus, panels have ruled on aspects of GATT Article XXIV on regional trade agreements, where only one such agreement has been approved in 50 years, and another panel has also seen fit to consult the IMF in relation India's BOP measures. Some would also like to see greater access to outside bodies, for example, allowing NGOs to file *amicus curiae* briefs and for panels to conduct their business with transparency (as do national courts). While the general issue of WTO legal procedures lies beyond the scope of most economic research, there are linkages with institutional matters and public choice theory, as well as the substantive economic issues that give rise to disputes.

In the run-up to Seattle, there was also considerable controversy about the introduction of the so-called new issues, in particular, investment, competition policy, environment,

and, as discussed, labour standards. Other issues which were less controversial include e-commerce and trade facilitation, and are most likely not blocking issues. In some sense the proposals to include these issues with the scope of the WTO relate to the perceived success of the WTO dispute settlement mechanism. As discussed earlier, these issues do not all cut across North-South lines, with some developing and developing countries favouring some kind of agreement on investment and competition policies, although it was far from clear that these were yet ripe for a negotiation to bring them within the scope of some kind of WTO rules. For example, in competition policy would there be a new WTO code or simply an agreement to apply positive comity? A considerable amount of valuable work has already been done within the WTO working group on these issues, and perhaps the time is approaching where decisions might be taken, although it may be preferable to continue this work to avoid unexpected hurdles at a later stage. Some economists take the view that with sufficient contestability of markets, any kind of code is unnecessary, but this would seem to be some way off. In the case of investment, WTO rules already apply in services, TRIMs and TRIPS, but some Members are not yet ready to see an over-arching, broad-based code in goods. The broad thrust of economic research suggests that greater openness to foreign direct investment brings important benefits to an economy, e.g. India since 1991, but perhaps more detailed case studies are needed to make the point. Of course, there are concerns about openness to short-term capital movements, such as portfolio investment, and there have been suggestions that controls or a Tobin tax may be needed to avoid rapid and disruptive large-scale capital movements. The counter argument is that getting the economic fundamentals right is more important (as in the case of nominal anchors), but some case studies would help clarify the situation. The whole area of sustainable development (environmental issues) could benefit from scientific and economic research to suggest how rules might usefully be extended and enforced, whether in the WTO or through specific multilateral conventions.

The issue of e-commerce is related to questions about the so-called new economy. This is an area which needs to be further examined. Is there a real issue or are we merely talking about new means of delivering information and services? If there is a real issue, how can developing countries participate effectively and not be left behind in a new technological revolution. On the basis of limited information, it seems that some

developing countries are already winners in that through electronic media they are able to perform accounting, airline ticketing and software development services from their home countries, taking business away from professionals in developed countries. However, the whole area needs further work.

An issue which has been extensively explored but where further work may be merited is that of regional trade agreements (RTAs). Many economists believe that these are trade-diverting and that WTO rules should be tightened to reduce the negative effects on third countries. There are also concerns about the relationship of RTAs to the multilateral system (building blocks or stumbling-blocks). A considerable amount of research has been done on RTAs at the World Bank, and in the WTO Committee on Regional Trade Agreements there has also been extensive consideration of systemic issues as well as examinations of individual agreements. However, the WTO work is bogged down on systemic issues (what is "substantially all the trade", etc), and in the whole history of the GATT and the WTO only one agreement has ever been found to be consistent with the rules (the Czech-Slovak Customs Union). It is not easy to see a way out: making new rules would only affect new agreements, while clarification of existing rules could require changes in existing agreement. Perhaps it would be better to shift the emphasis towards increasing transparency in line with public choice theory (Crawford and Laird, 2000).

Although somewhat beyond the economics profession, science needs to address health and safety issues arising from discoveries in the fields of genetics and other performance-enhancing products. Recent disputes seem to show that scientists are also prone to disagreement, as much as the economics profession. There is also an interplay between science and economics that is more frequently encountered in relation to health care and defence. Questions include: How much are human life or national security worth? How much should be spent on health care or defence systems? In relation to traded goods, the questions that are being put include whether zero-risk exists (the precautionary principle) and what extent is an acceptable level of risk? There is no simple answer to these questions but there are analytical tools available to investigate these questions.

IV CONCLUSION

A number of the issues raised in the previous section, above all the implementation issues, require urgent attention if there is any hope of launching a new round, whatever shape and size that might be, and this might fairly be described as the top priority for the WTO at present. These issues encompass traditional trade policy issues where the importance of further liberalization for developed and developing countries needs to be stressed, and the likelihood is that the economics profession will be called on to repeat the lesson over and over again.

There are also divided views about the extent to which the WTO should get involved on some issues, and research may help take the heat out of the situation. Such issues include debt, poverty, environment, health risks from GMOs, and so on. Some of those concerned about such issues were among those who protested in Seattle about the intrusion or indifference of the WTO. On the other hand, many also believe precisely that the WTO needs to get involved in such issues, by improving on existing WTO rules or establishing new rules.

With respect to new issues, there is a danger of overloading the system, especially given the limited resources of the WTO. However, the system also has to be responsive to genuine concerns about the effects of trade and trade policies. The WTO may also need to find new ways of doing business to allow the concerns of civil society to be expressed and taken into account. As noted recently by the EC Trade Commissioner, Pascal Lamy, "Only when the WTO is clearly transparent, clearly legitimate and clearly responsive to the environment agenda, the social agenda and the consumer agenda can we expect political and public support to start to increase again" (speech to the Foreign Correspondents' Club, Tokyo, reported by Reuters, 8 July 2000). If new issues are not tackled, the WTO will fail to find support among civil society, and it will certainly occur to some Members to pursue a WTO-plus concept, like the Tokyo Round codes whereby a number of GATT contracting parties took on a higher level of rights and obligations through adherence and third (mainly developing) countries allowed themselves to become

marginalized. Alternatively, there is a danger of irrelevance as Members turn increasingly towards regional trade agreements.

Although the greater burden belongs to its Members, the organization also needs to reach out to society to explain its objectives, and this can be aided by research. For example, some NGOs have set up the straw man that the WTO stands for unbridled free trade. Apart from the fact that there are still major trade barriers, often loaded against the developing countries, such trade liberalization as can be negotiated is only one part of the WTO mandate. Increasingly, the mandate is that of setting and enforcing rules for the conduct of trade, as well as the monitoring and ruling of the consistency of the behaviour of the Members with the negotiated rules. Rules to govern trade for reasons of food safety, environmental protection and so on are also part of the system, although they may need to be improved, and it is not always obvious that the WTO is the right place for such work. There are also older rules on anti-dumping, balance of payments, infant industry protection, some of which economists regard with suspicion, that legitimise trade intervention and which may need overhauling. Application of the rules as they exist is the function of the DSM, as is the case of national courts in relation to domestic law. However, these laws are rarely perfect and need to be evolved at the WTO as in individual Members.

This paper essentially argues for the need to launch new trade negotiations, both to liberalize trade and improve the security of the rule of international trade law. This may mean taking on new areas of work at the right time, and also finding new, more transparent ways of working. The overwhelming evidence points to the need to move the system on, to seize the moment and evolve supplementary policies to mitigate any negative effects of liberalization. It is not an option, as was voiced on the streets of Seattle, to abolish the WTO, returning to autarchy or anarchy in trade. As noted by Hobbes (1651), in referring to the natural condition of society lacking authority ("common power"), "in such condition there is no place for industry... no culture of the earth; no navigation, nor use of the commodities that may be imported by sea; no commodious building; no instruments of moving and removing such things as require much force... and the life of man, solitary, poor, nasty, brutish, and short".

REFERENCES

- Crawford, J-A. and S. Laird (2000), "Regional Trade Agreements and the WTO", CREDIT Research Paper No. 00/3, University of Nottingham, U.K. (with J.A. Crawford). (Revised version of paper presented at North American Economics and Finance Association meeting, Boston 6-9 January 2000 (AEA-ASSA Annual Meetings)).
- Dawkins, P. and P. Kenyon (2000), "Globalisation and Labour Markets: Implications for Australian Public Policy", Research Paper 2000/7, Centre for Research on Globalisation and Labour Markets, School of Economics, University of Nottingham, UK.
- Dollar, D. and A. Kray (2000), "Growth *is* Good for the Poor", Development Research Group, The World Bank, Washington D.C. (preliminary).
- Drabek, Z. and Laird, S. (1998), "The New Liberalism – Trade Policy Developments in Emerging Markets", *Journal of World Trade*, 32, 5, 241-269 (October).
- Finger, J.M. and P. Schuler (2000), "Implementation of Uruguay Round Commitments", *The World Economy*, 23, 4, 511-525.
- Hertel, T., K. Anderson, J.F. Francois, B. Hoekman and W. Martin (1999), "Agriculture and Non-agricultural Liberalization in the Millennium Round", paper presented at The Conference on Agriculture and the New Trade Agenda in the WTO 2000 Negotiations, held in Geneva on 1-2 October 1999.
- Hertel, T. and W. Martin (2000), "Developing Countries' Interests in Liberalizing Manufactures Trade", *The World Economy*, 23, 4, 455-469.
- Hobbes, T. (1651), *Leviathan*, <http://coombs.anu.edu.au/Depts/RSSS/Philosophy/Texts/Leviathan2.html>.
- Krugman, P. (1995), "Growing World Trade: Causes and Consequences" *Brookings Papers on Economic Activity*, 1, 327-377.
- Laird, S. (1999), "Export Policy and the WTO", *Journal of International Trade and Economic Development*, 8, 1, 73-88 (March).
- Laird, S. (2000a), "Millennium Round Market Access Negotiations in Goods and Services", CREDIT Research Paper No. 00/4, University of Nottingham, U.K.

- (Revised version of Keynote paper at International Economics Study Group, Birmingham, 14-16 September 1999).
- Laird, S. (2000b), "The WTO Agenda and the Developing Countries", CREDIT Research Paper No. 00/5, University of Nottingham, U.K. (Revised version of paper prepared for Second International Meeting of Economists on Globalization and Development Problems, Havana 24-29 January 2000).
- Laird, S. (1999), "Issues for the Forthcoming Multilateral Negotiations in Agriculture", Seminar on Agricultural Marketing in Developed Countries, Instituto Agronómico Mediterráneo de Zaragoza, 4 October 1999.
- Matusz, S.J. and D. Tarr (2000), "Adjusting to Trade Policy Reforms" in A.O. Krueger (ed.), *Economic Policy Reform: The Second Stage*, University of Chicago Press, Chicago (forthcoming).
- Miranda, J., R. A. Torres and M. Ruiz (1998) "The International Use of Anti-dumping: *Journal of World Trade*, 32, 5, 5-71 (October).
- Nogues, J. and S. Laird (1989), "Trade policies and the debt crisis", *The World Bank Economic Review*, 3, 2, 241-261 (May).
- Safadi, R. and S. Laird (1996), "The Uruguay Round Agreements: Impact on Developing Countries", *World Development*, 24, 7, 1223-1242.
- Slaughter, M.J. and Swagel, P. (1997), "The Effects of Globalisation on Wages in the Advanced Economies", IMF Working Paper 9743, Washington D.C. (April).
- Stiglitz, J. (1998), "Towards a New Paradigm for Development: Strategies, Policies and Processes", Raúl Prebisch Lecture, UNCTAD, Geneva (19 October).
- Thomas, V., Nash, J. and associates (1991), *Best Practices in Trade Policy Reform*, Oxford University Press for the World Bank.
- Wood, A. (1995), "How Trade Hurt Unskilled Workers?", *Journal of Economic Perspectives*, 9, 57-80.
- WTO (2000), "Participation of developing countries in world trade: recent developments, and trade of the least-developed countries", Note by the Secretariat (WTO document WT/COMTD/W/65 of 15 February 2000).

TABLE 1. POST-URUGUAY ROUND IMPORT WEIGHTED APPLIED AND BOUND TARIFF RATES
(Percentages)

Country group or region	Applied	Bound
World	4.3	6.5
High income economies	2.5	3.5
Latin America	11.7	32.7
East Asia & Pacific	11.9	21.0
South Asia	30.4	50.8
Eastern Europe	6.7	13.3
Rest of Europe	24.2	16.3
North Africa	24.8	48.7
Sub-Saharan Africa	9.0	19.4

Source: Finger, Ingco and Reincke (1996)

Note: Weighted averages, excluding trade within FTAs. The applied rates are those for the base period, while the bound rates are those applying after the implementation. The data on developing countries was based on 26 out of 93 developing country participants in the Round, representing 80 per cent of merchandise trade and 30 per cent of tariff lines.

TABLE 2: POST-URUGUAY ROUND APPLIED AND BOUND RATES OF DEVELOPED AND DEVELOPING COUNTRIES BY MAJOR PRODUCT GROUP
(Per cent)

Product Group	Developed		Developing	
	Applied	Bound	Applied	Bound
Agriculture exc. Fish	5.2	7.2	18.6	19.9
Fish & fish products	4.2	4.9	8.6	25.9
Petroleum	0.7	0.9	7.9	8.4
Wood, pulp, paper & furniture	0.5	0.9	8.9	10.3
Textiles & clothing	8.4	11.0	21.2	25.5
Leather, rubber, footwear	5.5	6.5	14.9	15.4
Metals	0.9	1.6	10.8	10.4
Chemical & photo. Supplies	2.2	3.6	12.4	16.8
Transport equipment	4.2	5.6	19.9	13.2
Non-electric machinery	1.1	1.9	13.5	14.5
Electric machinery	2.3	3.7	14.6	17.2
Mineral prods., precious stones & metals	0.7	1.0	7.8	8.1
Manufactures, n.e.s.	1.4	2.0	12.1	9.2
Industrial Goods (Rows 4-13)	2.5	3.5	13.3	13.3
All merchandise trade	2.6	3.7	13.3	13.0

Source: Finger, Ingco and Reincke (1996)

Notes: Weighted averages, excluding trade within FTAs. The applied rates are those for the base period, while the bound rates are those applying after the implementation; in some instances this means that the applied rates are higher than the bound rates.

CREDIT PAPERS

- 98/1 **Norman Gemmell and Mark McGillivray**, “Aid and Tax Instability and the Government Budget Constraint in Developing Countries”
- 98/2 **Susana Franco-Rodriguez, Mark McGillivray and Oliver Morrissey**, “Aid and the Public Sector in Pakistan: Evidence with Endogenous Aid”
- 98/3 **Norman Gemmell, Tim Lloyd and Marina Mathew**, “Dynamic Sectoral Linkages and Structural Change in a Developing Economy”
- 98/4 **Andrew McKay, Oliver Morrissey and Charlotte Vaillant**, “Aggregate Export and Food Crop Supply Response in Tanzania”
- 98/5 **Louise Grenier, Andrew McKay and Oliver Morrissey**, “Determinants of Exports and Investment of Manufacturing Firms in Tanzania”
- 98/6 **P.J. Lloyd**, “A Generalisation of the Stolper-Samuelson Theorem with Diversified Households: A Tale of Two Matrices”
- 98/7 **P.J. Lloyd**, “Globalisation, International Factor Movements and Market
- 98/8 **Ramesh Durbarry, Norman Gemmell and David Greenaway**, “New Evidence on the Impact of Foreign Aid on Economic Growth”
- 98/9 **Michael Bleaney and David Greenaway**, “External Disturbances and Macroeconomic Performance in Sub-Saharan Africa”
- 98/10 **Tim Lloyd, Mark McGillivray, Oliver Morrissey and Robert Osei**, “Investigating the Relationship Between Aid and Trade Flows”
- 98/11 **A.K.M. Azhar, R.J.R. Elliott and C.R. Milner**, “Analysing Changes in Trade Patterns: A New Geometric Approach”
- 98/12 **Oliver Morrissey and Nicodemus Rudaheranwa**, “Ugandan Trade Policy and Export Performance in the 1990s”
- 98/13 **Chris Milner, Oliver Morrissey and Nicodemus Rudaheranwa**, “Protection, Trade Policy and Transport Costs: Effective Taxation of Ugandan Exporters”
- 99/1 **Ewen Cummins**, “Hey and Orme go to Gara Godo: Household Risk Preferences”
- 99/2 **Louise Grenier, Andrew McKay and Oliver Morrissey**, “Competition and Business Confidence in Manufacturing Enterprises in Tanzania”
- 99/3 **Robert Lensink and Oliver Morrissey**, “Uncertainty of Aid Inflows and the Aid-Growth Relationship”
- 99/4 **Michael Bleaney and David Fielding**, “Exchange Rate Regimes, Inflation and Output Volatility in Developing Countries”
- 99/5 **Indraneel Dasgupta**, “Women’s Employment, Intra-Household Bargaining and Distribution: A Two-Sector Analysis”
- 99/6 **Robert Lensink and Howard White**, “Is there an Aid Laffer Curve?”
- 99/7 **David Fielding**, “Income Inequality and Economic Development: A Structural
- 99/8 **Christophe Muller**, “The Spatial Association of Price Indices and Living
- 99/9 **Christophe Muller**, “The Measurement of Poverty with Geographical and Intertemporal Price Dispersion”

- 99/10 **Henrik Hansen and Finn Tarp**, “Aid Effectiveness Disputed”
- 99/11 **Christophe Muller**, “Censored Quantile Regressions of Poverty in Rwanda”
- 99/12 **Michael Bleaney, Paul Mizen and Lesedi Senatla**, “Portfolio Capital Flows to Emerging Markets”
- 99/13 **Christophe Muller**, “The Relative Prevalence of Diseases in a Population of
- 00/1 **Robert Lensink**, “Does Financial Development Mitigate Negative Effects of Policy Uncertainty on Economic Growth?”
- 00/2 **Oliver Morrissey**, “Investment and Competition Policy in Developing Countries: Implications of and for the WTO”
- 00/3 **Jo-Ann Crawford and Sam Laird**, “Regional Trade Agreements and the
- 00/4 **Sam Laird**, “Multilateral Market Access Negotiations in Goods and Services”
- 00/5 **Sam Laird**, “The WTO Agenda and the Developing Countries”
- 00/6 **Josaphat P. Kweka and Oliver Morrissey**, “Government Spending and Economic Growth in Tanzania, 1965-1996”
- 00/7 **Henrik Hansen and Finn Tarp**, “Aid and Growth Regressions”
- 00/8 **Andrew McKay, Chris Milner and Oliver Morrissey**, “The Trade and Welfare Effects of a Regional Economic Partnership Agreement”
- 00/9 **Mark McGillivray and Oliver Morrissey**, “Aid Illusion and Public Sector Fiscal Behaviour”
- 00/10 **C.W. Morgan**, “Commodity Futures Markets in LDCs: A Review and Prospects”
- 00/11 **Michael Bleaney and Akira Nishiyama**, “Explaining Growth: A Contest between Models”
- 00/12 **Christophe Muller**, “Do Agricultural Outputs of Autarkic Peasants Affect Their Health and Nutrition? Evidence from Rwanda”
- 00/13 **Paula K. Lorgelly**, “Are There Gender-Separate Human Capital Effects on Growth? A Review of the Recent Empirical Literature”
- 00/14 **Stephen Knowles and Arlene Garces**, “Measuring Government Intervention and Estimating its Effect on Output: With Reference to the High Performing Asian Economies”
- 00/15 **I. Dasgupta, R. Palmer-Jones and A. Parikh**, “Between Cultures and Markets: An Eclectic Analysis of Juvenile Gender Ratios in India”
- 00/16 **Sam Laird**, “Dolphins, Turtles, Mad Cows and Butterflies – A Look at the Multilateral Trading System in the 21st Century”

DEPARTMENT OF ECONOMICS DISCUSSION PAPERS

In addition to the CREDIT series of research papers the Department of Economics produces a discussion paper series dealing with more general aspects of economics. Below is a list of recent titles published in this series.

- 98/1 **David Fielding**, “Social and Economic Determinants of English Voter Choice in the 1997 General Election”
- 98/2 **Darrin L. Baines, Nicola Cooper and David K. Whynes**, “General Practitioners’ Views on Current Changes in the UK Health Service”
- 98/3 **Prasanta K. Pattanaik and Yongsheng Xu**, “On Ranking Opportunity Sets in Economic Environments”
- 98/4 **David Fielding and Paul Mizen**, “Panel Data Evidence on the Relationship Between Relative Price Variability and Inflation in Europe”
- 98/5 **John Creedy and Norman Gemmell**, “The Built-In Flexibility of Taxation: Some Basic Analytics”
- 98/6 **Walter Bossert**, “Opportunity Sets and the Measurement of Information”
- 98/7 **Walter Bossert and Hans Peters**, “Multi-Attribute Decision-Making in Individual and Social Choice”
- 98/8 **Walter Bossert and Hans Peters**, “Minimax Regret and Efficient Bargaining under Uncertainty”
- 98/9 **Michael F. Bleaney and Stephen J. Leybourne**, “Real Exchange Rate Dynamics under the Current Float: A Re-Examination”
- 98/10 **Norman Gemmell, Oliver Morrissey and Abuzer Pinar**, “Taxation, Fiscal Illusion and the Demand for Government Expenditures in the UK: A Time-Series Analysis”
- 98/11 **Matt Ayres**, “Extensive Games of Imperfect Recall and Mind Perfection”
- 98/12 **Walter Bossert, Prasanta K. Pattanaik and Yongsheng Xu**, “Choice Under Complete Uncertainty: Axiomatic Characterizations of Some Decision Rules”
- 98/13 **T. A. Lloyd, C. W. Morgan and A. J. Rayner**, “Policy Intervention and Supply Response: the Potato Marketing Board in Retrospect”
- 98/14 **Richard Kneller, Michael Bleaney and Norman Gemmell**, “Growth, Public Policy and the Government Budget Constraint: Evidence from OECD Countries”
- 98/15 **Charles Blackorby, Walter Bossert and David Donaldson**, “The Value of Limited Altruism”
- 98/16 **Steven J. Humphrey**, “The Common Consequence Effect: Testing a Unified Explanation of Recent Mixed Evidence”
- 98/17 **Steven J. Humphrey**, “Non-Transitive Choice: Event-Splitting Effects or
- 98/18 **Richard Disney and Amanda Gosling**, “Does It Pay to Work in the Public
- 98/19 **Norman Gemmell, Oliver Morrissey and Abuzer Pinar**, “Fiscal Illusion and the Demand for Local Government Expenditures in England and Wales”
- 98/20 **Richard Disney**, “Crises in Public Pension Programmes in OECD: What Are the Reform Options?”
- 98/21 **Gwendolyn C. Morrison**, “The Endowment Effect and Expected Utility”

- 99/17 **Indraneel Dasgupta, Subodh Kumar and Prasanta K. Pattanaik,** “Consistent Choice and Falsifiability of the Maximization Hypothesis”
- 99/18 **David Fielding and Paul Mizen,** “Relative Price Variability and Inflation in
- 99/19 **Emmanuel Petrakis and Joanna Poyago-Theotoky,** “Technology Policy in an Oligopoly with Spillovers and Pollution”
- 99/20 **Indraneel Dasgupta,** “Wage Subsidy, Cash Transfer and Individual Welfare in a Cournot Model of the Household”
- 99/21 **Walter Bossert and Hans Peters,** “Efficient Solutions to Bargaining Problems with Uncertain Disagreement Points”
- 99/22 **Yongsheng Xu,** “Measuring the Standard of Living – An Axiomatic
- 99/23 **Yongsheng Xu,** “No-Envy and Equality of Economic Opportunity”

- 99/37 **Tae-Hwan Kim, Stephen J. Leybourne and Paul Newbold**, “Spurious Rejections by Perron Tests in the Presence of a Misplaced or Second Break Under the Null”
- 00/1 **Tae-Hwan Kim and Christophe Muller**, “Two-Stage Quantile Regression”
- 00/2 **Spiros Bougheas, Panicos O. Demetrides and Edgar L.W. Morgenroth**, “International Aspects of Public Infrastructure Investment”
- 00/3 **Michael Bleaney**, “Inflation as Taxation: Theory and Evidence”
- 00/4 **Michael Bleaney**, “Financial Fragility and Currency Crises”
- 00/5 **Sourafel Girma**, “A Quasi-Differencing Approach to Dynamic Modelling from a Time Series of Independent Cross Sections”
- 00/6 **Spiros Bougheas and Paul Downward**, “The Economics of Professional Sports Leagues: A Bargaining Approach”
- 00/7 **Marta Aloi, Hans Jørgen Jacobsen and Teresa Lloyd-Braga**, “Endogenous Business Cycles and Stabilization Policies”
- 00/8 **A. Ghoshray, T.A. Lloyd and A.J. Rayner**, “EU Wheat Prices and its Relation with Other Major Wheat Export Prices”
- 00/9 **Christophe Muller**, “Transient-Seasonal and Chronic Poverty of Peasants: Evidence from Rwanda”

- 00/10 **Gwendolyn C. Morrison**, “Embedding and Substitution in Willingness to
- 00/11 **Claudio Zoli**, “Inverse Sequential Stochastic Dominance: Rank-Dependent Welfare, Deprivation and Poverty Measurement”
- 00/12 **Tae-Hwan Kim, Stephen Leybourne and Paul Newbold**, “Unit Root Tests With a Break in Variance”
- 00/13 **Tae-Hwan Kim, Stephen Leybourne and Paul Newbold**, “Asymptotic Mean Squared Forecast Error When an Autoregression With Linear Trend is Fitted to Data Generated by an I(0) or I(1) Process”
- 00/14 **Michelle Haynes and Steve Thompson**, “The Productivity Impact of IT Deployment: An Empirical Evaluation of ATM Introduction”
- 00/15 **Michelle Haynes, Steve Thompson and Mike Wright**, “The Determinants of Corporate Divestment in the UK”

Members of the Centre

Director

Oliver Morrissey - aid policy, trade and agriculture

Research Fellows (Internal)

Adam Blake – CGE models of low-income countries

Mike Bleaney - growth, international macroeconomics

Indraneel Dasgupta – development theory

Norman Gemmell – growth and public sector issues

Ken Ingersent - agricultural trade

Tim Lloyd – agricultural commodity markets

Andrew McKay - poverty, peasant households, agriculture

Chris Milner - trade and development

Wyn Morgan - futures markets, commodity markets

Christophe Muller – poverty, household panel econometrics

Tony Rayner - agricultural policy and trade

Research Fellows (External)

V.N. Balasubramanyam (*University of Lancaster*) – foreign direct investment and multinationals

David Fielding (*Leicester University*) - investment, monetary and fiscal policy

Göte Hansson (*Lund University*) – trade, Ethiopian development

Robert Lensink (*University of Groningen*) – aid, investment, macroeconomics

Scott McDonald (*Sheffield University*) – CGE modelling, agriculture

Mark McGillivray (*RMIT University*) - aid allocation, human development

Jay Menon (*ADB, Manila*) - trade and exchange rates

Doug Nelson (*Tulane University*) - political economy of trade

David Sapsford (*University of Lancaster*) - commodity prices

Finn Tarp (*University of Copenhagen*) – aid, CGE modelling

Howard White (*IDS*) - aid, poverty