**UNITED NATIONS
ECONOMIC COMMISSION
FOR LATIN AMERICA
AND THE CARIBBEAN -
ECLAC**

Reunión de Expertos sobre liberalización comercial en Centroamérica y la República Dominicana. Implicaciones para la industria textil en la región

San Salvador, El Salvador, 29 de noviembre de 2005

TRADE POLICY, WELFARE AND POVERTY: THE NAFTA EXPERIENCE AND POSSIBLE LESSONS FOR CAFTA

05-11

CONTENTS

ABSTRACT

Changes in trade policy, such as the formation of preferential trade agreements, can yield substantial benefits for the countries involved. Nevertheless, simple ex-ante predictions about changes in welfare from such trade reforms do not seem possible and, more importantly, even in the case of overall welfare gains, changes in welfare differ according to regions, sectors and across individuals. Certain groups will almost inevitably lose from trade reform. With respect to poverty the connection to trade reform is ambiguous. While trade could lead to poverty reduction via a positive impact on growth, trade reform will by no means automatically lead to poverty reduction. Therefore, trade liberalization policies should not be viewed as a reliable mechanism for generating self-sustaining growth and reducing poverty, let alone achieving other positive human development outcomes. Instead, it is deemed important to think about complementary policies in order to reduce poverty and the implementation of social safety nets to minimize adverse impacts of trade reform on certain population groups, in particular in the agricultural sector.

I. INTRODUCTION

In May 2004 the United States signed the Central American Free Trade Agreement (CAFTA) [1] with Costa Rica, El Salvador, Honduras, Guatemala and Nicaragua, and later, in August 2004, the Dominican Republic was integrated into the agreement. Under CAFTA more than 80% of tariffs on US manufacturing exports and duties on over half of the value of US agricultural exports to the region will be eliminated immediately, with phase-out periods of up to 20 years for remaining tariffs. On the other hand, the agreement will improve upon and make permanent the trade benefits for Central America and the Dominican Republic allowed under various US programs, such as the Caribbean Basin Initiative, and open the US market for several goods that were excluded or received limited preference under these programs. Moreover, the agreement improves upon regulatory transparency and establishes a secure and predictable legal environment for US investments into the region.

BOX: US-CENTRAL AMERICA-DOMINICAN REPUBLIC FREE TRADE AGREEMENT

Negotiations on an FTA between the US and Central America commenced in January 2003 and less than a year later, in December 2003, negotiations between the US and El Salvador, Guatemala, Honduras and Nicaragua were successfully completed. Meanwhile, negotiations with Costa Rica continued and negotiations were started with the Dominican Republic. In January 2004 the negotiations with Costa Rica were also successfully concluded, while negotiations with the Dominican Republic continued until April. The FTA between the United States and the Central American states was signed in May and in August the Dominican Republic was integrated into CAFTA. The agreement still needs to be ratified by US Congress and the legislatures of the Central American states and the Dominican Republic.

The structure of CAFTA is similar to other recent FTAs negotiated by the United States, such as the FTA between the United States and Chile in 2003, and covers issues ranging from market access, rules on investment and trade in services to intellectual property rights, labour standards and environmental protection. The aim of the treaty is to simplify and expand regional trade in goods and services and establish secure and predictable legal frameworks to promote US investment in the region.

In 2003, US merchandise exports to CAFTA countries were valued at $14.4 billion, while US imports from the region were valued at $16.7 billion. 80% of these imports, in particular textiles and apparel from the maquila-industry, already enter the United States duty-free either under Normal Trade Relations (NTR) rates or under one of the various US programmes, such as the US Generalised System of Preferences (GSP) or the Caribbean Basin Initiative (CBI).

---

[1] Also referred to as US-CAFTA, DR-CAFTA or US-CA/DR FTA.

Under CAFTA, the signing states agree to eliminate tariffs on originating goods under the agreed schedules. The immediate reciprocal tariff elimination under CAFTA will include 80% of tariffs on US merchandise exports to the region and the duties on over half of the value of US agricultural exports. For the Central American states and the Dominican Republic, preferential trade treatment under the various US programmes will be made permanent and improved upon and tariffs on several goods not covered under these programmes will be eliminated. Phase-out periods for remaining tariffs vary across sectors and last up to 20 years.

Duties on textiles and apparel that meet the rules of origin, as well as qualifying footwear, will be eliminated immediately. The US-quota on duty-free imports of sugar will be doubled in the first year of the treaty, followed by an annual increase of 2%. Restrictive quotas on US corn and rice will be removed over a period of up to 20 years. With respect to trade in services, foreign providers will be guaranteed market access and national treatment in many areas, particularly in telecommunications, insurance and banking services.

Several FTA safeguards are also included in the agreement, allowing sensitive sectors to be protected from import growth during the transition period. Special Agricultural Safeguards can be implemented when agreed upon import volumes are surpassed and are of particular importance for the Central American states to protect sensitive products, such as bovine meat, pig and chicken meat, rice and others.

Source: CEPAL (2004), Cordero (2004), USITC (2004).

The potential benefits from a free trade area (FTA) such as CAFTA are considerable. Traditional trade theory points to the gains from trade arising from the specialisation in production associated with inter-country differences in endowments and tastes, allowing countries to reap the benefits from their comparative advantages. New trade theory, in turn, draws attention to the gains from trade associated with the advantages of access to larger markets in the presence of increasing returns to scale. This access to larger markets could be particularly important for the Central American economies and the Dominican Republic, whose small domestic markets might not allow the low per-unit costs associated with large-scale production. Moreover, increased international competition could lead to efficiency gains associated with the elimination of monopoly losses, thereby further lowering costs. Finally, trade liberalization lowers the cost of imported capital inputs and gives more certainty with regard to trade, which could lead to increased investment and, hence, dynamic long-run gains.

The extent of these benefits, however, depends not only on the particular agreement and the characteristics of the countries involved in the FTA, but also on the general circumstances in world trade. In particular, further multilateral or unilateral trade liberalisation and additional trade agreements by one of the FTA countries could dilute the benefits of the preferential market access granted by the FTA and thereby reduce its relative attractiveness. For example, the planned Free Trade Area of the Americas (FTAA) could erode Central America's preferential access to the US. Similarly, the planned global liberalisation of textile and clothing quotas in 2005 under the Agreement on Textiles and Clothing of the Uruguay Round is expected to significantly reduce Latin America's advantages of preferential US trade policy and expose the region to the competition of Asian low-cost producers, particularly China (IADB, 2004).

Moreover, it needs to be recognised that the formation of FTAs and the increased integration into world markets could also have negative side-effects, such as increased volatility and greater vulnerability to external shocks, as well as regional dependence and deterioration in the terms-of-trade. In addition, certain groups within the economy could suffer considerable hardship as a result of tariff reductions, even in the case of overall welfare gains from trade reform. For example, there may be substantial differences in terms of welfare effects between men and women, or urban and rural workers. Hence, changes in developing countries' trade policies could have negative social repercussions. In fact, the reduction of trade barriers and the integration into world markets often directly impact on social outcomes such as poverty, and while the importance of policies to moderate these impacts is widely recognized, social dimensions have still not been adequately integrated into most trade agreements (CEPAL, 2004).

Given the ambiguity of trade outcomes and the disagreement over the benefits of trade reform, this paper aims at giving an overview over the different welfare effects of trade liberalisation. In particular, emphasis is put on individual vs. aggregate welfare and on the impact on poverty. The North American Free Trade Agreement (NAFTA) is taken as an example to illuminate some of these linkages and possible lessons are drawn from its experience for CAFTA countries.

II. AGGREGATE WELFARE EFFECTS: TRADE CREATION
VS. TRADE DIVERSION

The analysis based on Viner (1950) suggests that customs unions are welfare enhancing as long as the positive effects due to trade creation outweigh the negative ones caused by trade diversion. "The benefit of a union to the union area as a whole derives from that portion of new trade which is wholly new, whereas that portion of the new trade between members which is a substitute for trade with third countries must be regarded as a consequence of the union which is injurious for the importing country, for the external world, and for the world as a whole, and is beneficial only to the supplying member country" (Viner, 1950). The net welfare effect is then assumed to depend on the relative importance of trade creation as opposed to trade diversion: "Where the trade-creating force is predominant, one of the members at least must benefit, both may benefit, the two countries combined must have a net benefit, and the world at large benefits. [...] Where the trade-diverting effect is predominant, one at least of the member countries is bound to be injured, both may be injured, the two combined will suffer a net injury, and there will be injury to the outside world and to the world at large." (Viner, 1950). Hence, according to the basic Vinerian analysis of customs unions the creation of a preferential trade agreement will have positive welfare effects as long as trade creation is greater than trade diversion.

According to Viner (1950), a preferential trade agreement must meet the following three criteria to be classified as a customs union: "(1) the complete elimination of tariffs as between the member territories; (2) the establishment of a uniform tariff on imports from outside the union; (3) apportionment of customs revenue between the members in accordance with an agreed formula". Hence, FTAs such as NAFTA and the envisaged CAFTA are less restrictive, since the agreement only implies reduction or elimination of tariffs for many products, i.e. only the first criterion applies while member states maintain different outside tariffs.

It is a common presumption in the discussion of FTAs that the basic results from the Vinerian analysis of customs unions still apply to other forms of trade agreements, such as the FTAs analyzed in this study. This means that if the benefits to a country arise because of increased trade, but only due to trade diversion, the gains may be eroded as:

- New FTAs are signed with other countries that are more competitive than the own country, since the partners' purchases may switch to this last entrant to the agreement, or if.
- The agreement is signed with countries which are less competitive than a third one outside the group, since the opportunity to get cheaper access to imports would be lost.

**BOX: TRADE CREATION AND TRADE DIVERSION IN A SIMPLE
NUMERICAL EXAMPLE**

The shifts between high- and low-cost produces as a result of free trade agreements can best be illustrated using a very simple numerical model (Lipsey, 1960). Assume three countries, A, B and C, which trade a single product, X.

The autarchy prices of good X in the three countries are assumed to be 35 in country A, 26 in B and 20 in C, respectively. Thus, country A is the high-cost producer and would, in the absence of any trade restrictions, import the good from country C.

However, with a 100% tariff imposed by country A, importing the good from B or C would then cost 52 and 40, respectively, and country A would produce domestically. In this case, the formation of an FTA between A and B, but not with C, would imply costs for country A of 26 when importing from B and costs of 40 when importing from C. Hence, country A would import from B and the formation of the FTA between A and B would lead to trade creation and enhance welfare.

In contrast, with an initial tariff of 50%, and hence import costs of 39 and 30 from B and C, respectively, country A would import from country C rather than produce domestically. In this case, the formation of an FTA between A and B would again lead country A to import from B. However, this time it would be a shift of importing from country C, the low-cost producer, to importing from country B, a higher-cost producer. This would be a case of trade diversion, implying welfare losses for country A.

The key element of the formation of preferential trade agreements lies in the removal or reduction of protective duties, i.e. duties which act to increase domestic production by reducing imports. With the reduction of these duties there will be shifts in production. In particular, some products that were formerly produced domestically will be imported and some products that were formerly imported from non-union countries will be imported from a member country. While the former shifts constitute trade creation, the latter are referred to as trade diversion.

These shifts imply movements between high- and low-cost producers. In fact, "the *primary purpose* of a preferential trade agreement, and its *major consequence* for good or bad, is to shift sources of supply, and the shift can be either to lower- or to higher-cost sources, depending on circumstances" (Viner, 1950; emphases added). While the shifts of supply associated with trade creation entail movements from a high- to a low-cost producer, shifts associated with trade diversion are from lower to higher real cost sources of supply. [2] These movements between high- and low-cost producers are the reason for the welfare effects of customs unions.

However, there are several theoretical problems associated with Viner's conclusion, owing to the restrictive implicit assumptions of zero price elasticity of demand and fixed real prices. Therefore, the resulting simple conclusions are only valid in special circumstances and "cannot be applied in most real-world situations" (Lipsey, 1970).

---

[2] It is here implicitly assumed that tariffs before the formation of the union differed only between products but not between countries, i.e. before the preferential trade agreement the country in question acted on the principle of Normal Trade Relations (NTR) or Most Favoured Nation (MFN).

In order to understand the effects of FTA it needs to be acknowledged that the creation of these agreements will change consumption through price changes. According to Lipsey (1970), there are two sources of prices changes: changes in real prices, i.e. those arising from changes in the terms-of-trade, and the fall in domestic prices following the reduction in tariffs when real prices are held constant. As a consequence, there will be changes in consumption, which can be divided in "inter-commodity substitution", i.e. the substitution between different goods as a result of changes in the relative price of goods, and "inter-country substitution", i.e. the substitution between countries in the purchase of a given good.

With zero price elasticity of goods and given real prices the only form of inter-country substitution that is possible is then trade creation and trade diversion as described by Viner. However, goods are likely to have price elasticities greater than zero (in absolute value), leading to inter-commodity substitution even in the case of constant real prices. Thus, even if a certain good is purchased before as well as after the creation of the FTA from the same member country, there can still be an increase in the volume of trade in that good due to the substitution away from other goods purchased outside the union. For this reason, in the presence of inter-commodity substitution there can be no clear presumption that trade diversion is welfare-reducing. Moreover, if changes in real prices are also taken into consideration it becomes impossible to make a-priori predictions about the welfare outcome of a FTA. As Lipsey (1970) points out, the study of customs unions or FTA in general equilibrium models illustrates "the extreme complexity of customs unions in general equilibrium settings and, thus, the extreme difficulty of a priori reasoning about the possible effects of these unions". [3]

Also, as pointed out by Meade (1955), the volumes of trade that are created or diverted are not sufficient to determine whether a union will be welfare-enhancing or welfare-reducing, since the final welfare effect depends also on the extent of cost reduction due to trade creation and cost increases due to trade diversion. Moreover, following Lipsey (1970), the analysis of customs unions or FTA should be made within a general equilibrium framework since the creation of there trade areas involve several large tariff changes, which renders the ceteris paribus assumption, and hence any partial equilibrium analyses, incorrect. In fact, the issue of customs unions can be seen as a particular case of the theory of second best, which implies that no simple conclusions about welfare effects from trade creation and trade diversion can be drawn.

Therefore, no simple a priori predictions about the welfare effects of customs unions or preferential trade agreements seem possible. Rather, the final welfare effect of such changes in trade policy seems to be an empirical question where each case has to be looked at individually. In the following, a number of studies on welfare effects of NAFTA and CAFTA are discussed.

Krueger (1999) claims that the changes in trade flows after NAFTA do not give much support to the view that NAFTA was trade-diverting. She points out that between 1992 and 1998 Mexico gained four percentage points in the share of total US imports while East Asia lost 2.5%. However, after 1994 Mexico was in fact gaining share not only in the US but also in the rest of the world. She also analyses gravity equations of trade, i.e. estimations of the determinants of trade, and examines the shifts therein as a consequence of NAFTA and finds "little evidence of major alterations of trade patters as a result of preferential trade arrangements" (Krueger, 1999).

---

[3] For a survey on welfare effects of customs unions see Panagariya (2000).

In fact, Mexico's exports to the US grew most in those commodity groups in which exports to the rest of the world also increased most, providing evidence against the view that the increase in Mexican-US trade was trade-diverting.

This is consistent with the analysis made by Moreno-Brid, Ruiz and Rivas (2005) who show that Mexico went into unilateral trade liberalization and foreign investment deregulation since the 80'. The NAFTA in the 90' served the purpose of institutionalizing this global reform process. "NAFTA greatly facilitated Mexico's liberalizing goals, allowing Mexico to become a dynamic player in export of non-oil products and to insert itself into global markets". And also "A remarkable trait in the Mexican transition to trade liberalization was the lack of drastic reallocating processes in capital and labour within the manufacturing industry. To a certain extent, the trade patterns and industrial composition after NAFTA do not radically differ from its previous tendencies...Curiously enough, some of the most successful exporting sectors have their roots in the import-substituting era and the sector-specific promotion policies implemented during that time".

In contrast, Fukao, Okubo and Stern (2002) find in their econometric trade flow analysis evidence of considerable trade-diversion, using data at a more disaggregated level. In particular, they find evidence of trade diversion in US imports of textiles and apparel at the expense of Asian suppliers. Similarly, Romalis (2004) finds that NAFTA has had a substantial impact on international trade and claims that there is strong evidence of trade-diversion as a result of NAFTA.

However, as also pointed out by Krueger (1999), the basic problem with empirical analyses of trade creation and diversion is to separate the effects of trade reform from other macroeconomic shocks. In fact, in the case of Mexico, the real appreciation of the Mexican peso between 1987 and 1994 and the following sharp depreciation during the peso crisis in 1994/5, as well as Mexico's unilateral tariff-dismantling in the late-1980s, appear to have been more important in determining trade patterns than NAFTA.

In sum, there appears to exist some evidence of trade diversion in the case of NAFTA. This was principally a move on part of the US to import from Mexico rather than from non-NAFTA members, especially those in Asia. However, despite the possibility of trade diversion away from non-NAFTA members, or rather *because* of this trade diversion, there seems to be no evidence of overall welfare losses to Mexico as a result of the free trade area with the US and Canada. This would support the case for Central America's decision to establish a similar free trade agreement with the US.

In fact, for CAFTA a number of ex-ante studies on trade creation, trade diversion and welfare effects based on computable general equilibrium (CGE) simulations point to potential welfare gains for the Central American countries, the Dominican Republic and the US.

Hilaire and Yang (2003) use the Global Trade Analysis Project (GTAP) model to analyse the effects of several different FTAs in which the US are engaged. Their simulations for CAFTA show important welfare gains for the Central American countries. In fact, GDP in the region could increase by as much as 1.5% under CAFTA. The main source of the welfare gain for CAFTA countries would come from the expansion of textile, clothing and processed crop exports

to the US. There would also be some trade creation, as basic manufacturing imports from the US would supplant CAFTA countries' own production.

In a similar study, Brown, Kiyota and Stern (2004) simulate the potential impacts of an FTA between the US and Central American and the Caribbean (CAC). [4] In their study, which incorporates aspects of imperfect competition from new trade theory, the bilateral removal of tariffs would lead to an even greater welfare gain for Central America. They estimate that welfare in the CAC would increase by $2.7 billion due to the elimination of manufacturing tariffs and $1.9 billion due to the elimination of service barriers. The total improvement in welfare would represent 3.8% of GNP. While they also find some evidence of trade diversion for non-CAC countries, welfare losses associated with this trade diversion are estimated to be small.

Welfare benefits to the US, in turn, are estimated to be small, owing to the small market size of the Central American region relative to the US. In fact, the effects of CAFTA on US sectorial output and employment are estimated to be comparatively negligible. According to Brown, Kiyota and Stern (2004), US economic welfare will be increased by $3.9 billion as a result of the elimination of manufacturing tariffs and $13.5 billion as a result of the bilateral elimination of service barriers. The combined improvement would however represent only 0.17% of US GNP. In a similar study, the USITC (2004) estimates even smaller welfare benefits for the US of around $166 million, or less than 0.01% of US GNP.

It should, however, be emphasised that these CGE studies only model the effects of the removal of trade barriers. Therefore, the estimates should be taken as lower bounds of welfare benefits as the non-trade aspects of the agreements could mean additional benefits for all countries involved.

In conclusion, the ex-post NAFTA studies as well as the ex-ante CAFTA simulations appear to suggest that CAFTA could lead to some trade diversion but a net welfare benefit. In particular for the CAFTA countries, aggregate welfare gains could be substantial as a percentage of GDP.

However, the above discussion and outlined empirical studies are only concerned with changes in aggregate welfare. In fact, intra-country welfare effects could differ substantially according to region or sector. Thus, the finding that CAFTA could infer sizable welfare benefits on the Central American countries does not reveal much about the effects on individual industries or population groups within these countries. In order to shed some light on these disaggregated welfare effects, the winners and losers of trade reforms need to be identified.

---

[4] The inclusion of the non-CAFTA countries in the study was a result of data limitation. However, according to the authors, results for CAFTA would only be slightly different given that most of the trade share between the CAC and the US is due to the trade between CAFTA countries and the US. Hence, the CAC countries can be taken as a reasonable proxy for CAFTA countries.

III. WINNERS AND LOSERS OF TRADE LIBERALIZATION

1. Theories that explain welfare impacts from trade liberalization

Looking at the welfare effects of trade liberalisation at a more disaggregated level, different models can be used to illustrate the differential impact that trade liberalisation can have at the sectorial or individual level. The most common models that show the emergence of winners and losers of changes in trade policy are versions of the simple Heckscher-Ohlin-Samuelson model (HOS).

According to HOS, which builds on the classical supply-side theories, differences in countries' factor endowments give rise to mutually beneficial trade, which raises each trading partner's total welfare. In particular, a country will specialise (though not completely) in the production of goods whose production is relatively intensive in the factor with which that country is relatively well endowed. Within the commonly used 2x2x2 model (two countries, two final goods and two factors of production) it can then be shown (Samuelson, 1949) that countries' factor prices will eventually become the same, conditional on the equalisation of final goods prices under perfectly free international trade. This finding, known as the factor price equalisation (FPE) theorem, predicts that the returns to a country's abundant factor will rise as a result of international trade while those to the scarce factor will fall. Consequently, those factors of production employed in the production of exported good will gain as a result of trade liberalisation, while those factors employed in the import competing industries will lose.

The two factors of production that are usually looked at in empirical applications of this simple model are capital and labour or, alternatively, skilled and unskilled labour. Applying this model to the formation of a preferential trade area between the US and a developing country, one would expect labour (in the case of labour and capital) or unskilled labour (in the case of skilled and unskilled labour) to result as the winner in the developing country, presuming that developing countries are relatively abundant in (unskilled) labour.

Moreover, certain predictions about employment effects could be deducted. Although the model assumes full employment at all times since factor rewards adjust to clear markets, shifts of factors between different sectors of the economy are predicted. Hence, in the presence of labour market imperfections short-term unemployment could result from opening up to world markets. The greater the labour market imperfections are, the longer these adjustments could take, and the greater would be the associated adjustment costs. In particular, if there is hysteresis in unemployment, for example due to loss of skills, short-term unemployment due to the reallocation of labour between industries could turn into long-term unemployment. If the new reallocation is not attained soon enough, not only skills may be eroded and equipment may become obsolete, but trade imbalances may emerge and government revenues may fall (Akyüz, 2005).

The predictions of the model rely on several assumptions whose violation could significantly alter the behaviour of factor prices. For example, the presence of scale economies,

i.e. a violation of the constant returns to scale assumption, could invalidate the FPE theorem by offsetting the negative effect on the scarce factor through a rise in both factors' marginal product, causing both factors' returns to rise (Bhagwati and Dehejia, 1994). A violation of the no-factor-intensity-reversal assumption, or simply an extension of the model to include four instead of two goods, can also alter factor prices, which could then actually diverge as a result of trade reform even in the face of convergence of final goods prices (Deardorff, 1986).

The model is thus rather restrictive in its assumptions. In fact, Baghwati and Dehejia (1994) state that the assumptions underlying the FPE theorem are "extraordinarily demanding", leading them to conclude that "few would find the theorem compelling as a guide to thinking about the real world if only they were familiar with these assumptions". In fact, at an empirical level the HOS model performs rather poorly, "hopelessly inadequate as an explanation for historical or modern trade patterns" (Feenstra, 2004).

Given such weaknesses of the simple HOS model, other channels should also be considered through which trade could produce winners and losers. For example, factors of production could also be affected differently through the effect of skill-biased technological transfers. Increases in foreign direct investment and greater cooperation at the firm-level, both of which are often associated with the creation of FTAs, can lead to significant technology transfers. When these technological transfers are skill-biased, increased demand for capital instead of labour and for skilled instead of unskilled labour could be the result. Hence, despite being the relatively abundant factor in a developing country, unskilled labour could lose as a result of trade reform.

An alternative view is the "Australian Model" that applies to small open economies. [5] This is a model incorporates a distinction between tradable and no tradable and the real exchange rate. Oslington (2001) extends the literature on this subject by developing a general equilibrium trade version of the model. He measures welfare using the trade indirect utility function for the representative individual, which depends on the prices of the goods consumes and the income of the consumers. Further, the author considers unemployment is generated by a minimum wage to all industries, but that is only binding in the lowest productive sector producing the import competing good. This restriction may be due to social security reasons. This model can be adapted to the region by saying that there are two factors of production: skilled and unskilled labour, which produces: a) a high productivity good for export, in the first case, and b) a low productivity good for the internal market. This last product, b, is not competitive for export and, in fact, it is also import competing. The wage restriction may be reinterpreted as a subsistence income, for example in rural areas, or alternatively as the poverty line.

Conclusions may hold in this adaptation when the model predicts that an increase in the relative price of the exporting good, or relative decrease of the imported good, for example through lowering tariffs, will also increase the price for good b, if this sector employs at least some of skilled labour. This would mean that it is important for the non traded goods, or the import competing sectors to lift productivity levels so as to profit from the gains from trade that would come through the change in factor prices. Anyway, if the increase in the price for the

---

[5] This model is based on the original ideas of Wilson, Swan and Salter, with other contributions by Dornbush and Neary, among others.

exported good is higher than for good b, then it could be possible that the demand for good b falls. This is also because the imported good becomes cheaper. This would explain the difficulties in rural areas to keep their traditional way of production. As long as labour can migrate to other sectors, or attain the qualifications to enter the higher productivity sector, poverty will not increase.

Welfare increases may be accompanies by identifiable losers. This may happen when tariff cuts offer good b at a lower price for consumption, and may also increase production of good a, but at the same time the import competing industry may decrease. This model also predicts increase of welfare if the endowment of high productive factor increases, if there is no unemployment for it. But is the model is interpreted differently, conclusions may differ. If the minimum wage is applied to the most dynamic sector, while the non tradable has a lower income, then unemployment may appear in the first one. Other forms of market segmentation may cause the same effect, i.e. unemployment, like the presence of barriers of entry from one sector to another, being qualification a characteristic that may keep some workers away from the fastest growing sectors.

Another view may also offer some help to understand the process. The dual model based on Harris Todaro, shows that unemployment will be generated in a growing sector if there is a large enough pool of low-wage low-productivity workers seeking higher incomes in the fist sector. But this would only happen in case the import competing sector reduces its employment level. If unemployment is not generated, because none of the industries are reducing their sales level, but anyway the dynamic sector increases wages, the least productive sector will press this new wage gap down, unless there are barriers to entry to the high wages sector. If this happens, employment would grow in this new dynamic sector, and also productivity, but wages will stay low. This may be the case of export oriented industries, as *maquila*. This is because there is a pool of workers whose cost of opportunity, or alternative income, is not higher than the wage paid. So, dualism will be a problem in any case. This idea makes it necessary for governments to implement policies that would increase the opportunity costs of low skilled population s that the gap between the high productive and the low productive sector disappears.

One important matter to ensure welfare gains is that industrialization is not threatened by any FTA. Akyüz (2005) says that industrialization is a necessary step towards a continuous growth path (because greater productivity growth and more feasible expansion of production than with agricultural-based economy). According to his view, the early stages of industrialization are characterized by sectorial specialization in exploiting endowments of natural resources and unskilled labour. Central America seems to be at this stage. [6] These industries do not usually need heavy protection, but more skill and technology intensive new industries may need promotion in some way. He argues that some tools used by already developed countries in their early stages of industrialization may now be unavailable to developing countries because of multilateral commitments to WTO, like agreements on subsidies, TRIMS and TRIPS. Making commitments on tariffs based in the present industrialization stage may reduce flexibility in the

---

[6]   A further level is a "diversification into a wide spectrum of technologically more advanced activities, accompanies by increased internal integration through a dense set of linkages among sectors". The most developed nations can have again a sectorial specialization, but this time "at the top end of the technology ladder".

future. This is why his suggestion is that a country needs to keep open the opportunity to use industrial and commercial tools if it desires to enter any new industry and develop it to international levels of productivity. Negotiation over an average tariff instead of undertaking obligation for a line-by-line reduction could be an option.

In conclusion, it is evident that trade reform will impact differently on the various sectors and groups of an economy. In several theories, the factors market is the main transmission mechanism from the trade policies to welfare, particularly through the labour market. Thus, there may be distributional impacts of trade liberalisation. However, these distributional impacts remain ambiguous and the different mechanisms that cause some groups to gain and others to lose may work in opposite directions. Therefore, the ultimate distributional impact depends on the specific country characteristics and is a question that needs to be answered not only theoretically, but also empirically for each individual country.

In order to shed some light on the winner-loser effects of changes in trade policy, the experience of NAFTA and ex-ante studies on CAFTA are examined with respect to changes in wages, employment and the income distribution to see if any of the theories analyzed explains the phenomenon and would help to understand possible outcomes for the CAFTA countries.

2. Empirical evidence

In Mexico, average manufacturing wages have been stagnant or falling since the onset of trade reform, contrary to what a simple HOS model with labour and capital as factors of production might suggest. As pointed out by Dussel (2004) real wages in manufacturing in 2003 were only 84% of their 1980-level. Moreover, the employment generated in the export-intensive branches of the economy is associated with "real wages that have a downward tendency with respect to the rest of the economy during 1988-2001" (Dussel, 2004).

A much discussed topic with respect to Mexican wages and one of the most examined cases of applications of the HOS model is the development of skilled relative to unskilled wages in the aftermath of Mexico's export-orientation. The empirical evidence shows that the reduction of tariffs led to a rise in the relative wage of skilled workers, again contradicting the predictions of the HOS model under the presumption that Mexico is relatively abundant in unskilled labour. Several studies (Revenga, 1997; Harrison and Hanson, 1999; Hanson, 2003; Nicita, 2004; Morley and Diaz-Bonilla, 2004) have found that skilled workers have benefited relatively more from trade liberalisation and that the wages of unskilled workers have fallen in many regions. According to Harrison and Hanson (1999) wage inequality had been declining prior to trade reform, but rose dramatically after 1985. While this appears to contradict the HOS model, they argue that it is in fact consistent with the Stolper-Samuelson theorem of factor price equalisation, since the most protected sectors prior to 1985 were those intensive in the use of unskilled labour. However, they also mention the possibility of outsourcing, skill-biased technological change, falling minimum wages and the decline in union strength as possible contributing reasons for the change in the wage structure. Moreover, Hanson (2003) claims that Mexico's comparative advantage in low-skill activities was actually lower than expected and assembly operations associated with the maquila industry were skill-intensive relative to other Mexican manufacturing plants.

An issue closely related to the development of wages is that of productivity growth. While highly export-oriented sectors could increase their productivity growth since the 1980s, and thereby their competitiveness, productivity growth in the manufacturing sector as a whole remained unchanged and even declined for the economy as a whole (Palma, 2003). Therefore, it might be suspected that the disappointing development of real wages could be attributed to low productivity growth.

However, low productivity growth is unlikely to have caused the poor wage performance, given that even sectors with very high productivity growth did not see any substantial improvement in their wages. Real wages in the dynamic maquila sector increased by only 10% between 1990 and 2003, while productivity increased by more than 115% (Dussel 2004). In consequence, a gap opened up between real wages and productivity. In fact, this wage-productivity gap was particularly pronounced in those sectors of the economy that opened up to trade and became export-oriented. As a result of these developments, the share of wages in GDP fell dramatically and Samuelson's theorem of trade-related wage-equalisation across countries (leading to an upward adjustment in the low-wage DC) was not even close to reality (Palma, 2003).

On the other hand, it is difficult to disentangle the effects of trade liberalisation on wages from the effects of other macroeconomic adjustments, shocks and institutional changes. In particular, Mexican labour market institutions have been biased against wage increases (Polaski, 2003). This institutional bias against wage increases becomes evident in the development of minimum wages, which are politically fixed and represent an important reference point for collective wage bargaining. Between 1980 and 2003 minimum wages lost 30% of their real value. Moreover, the two crises in 1982 and 1994/5 led to major wage declines. Finally, the stagnation-decline in wages began already in 1976, long before the onset of trade liberalisation and in the midst of Mexico's oil boom (Palma, 2003), pointing to institutional rather than just trade related reasons for the decline in wages.

With respect to employment, the NAFTA experience has been similarly disappointing. The net gain in employment as a result of NAFTA has been very small and the jobs that have been created in export-oriented manufacturing firms have hardly kept up with the loss of employment in agriculture. According to Polaski (2003), 30% of the jobs that were created in the maquila industry have already disappeared since then, so that in 2003 the maquila industry employed roughly 550,000 more workers than before NAFTA. The increase of non-maquila jobs as a result of exports to the US are approximately 450,000. However, at the same time agricultural employment has fallen by 1.3 million, partly as a result of increased agricultural imports. Consequently, "the reservoir of low-wage low-productivity workers shows no sign of being absorbed by Mexico's export sector in the foreseeable future" (Polaski, 2003). As a result of this development the informal sector has grown significantly in recent years. In fact, only 31.09% of the increase in the economically active population was absorbed by an increase in formal employment between 1991 and 2003, translating into informal employment growth and/or migration to the US (Dussel, 2004).

This poor development of Mexican post-NAFTA employment could at least partially be attributed to the effects of trade reform, given that the "process of trade liberalisation coincides with a deterioration in the generation of employment and its quality" (Dussel, 2004). Many

export-oriented sectors lack backward-linkages with the rest of the economy and the agricultural sector experienced a significant reduction of employment associated with greater imports. Moreover, the reduction of tariff barriers has lowered the cost of capital inputs and induced a substitution of capital for labour (CEPAL, 2004). However, other factors such as the effect of large-scale privatisations of public companies and the greater participation of women in the labour force also need to be considered and, according to Hanson (2003), part of the decline in agricultural employment can also be explained by the reform of the land tenure system and the break-up of rural cooperatives.

Notwithstanding the difficulty of disentangling trade effects from other economic and political developments, it appears that the opening up of trade has not benefited everyone in Mexico. Rather, trade liberalisation has produced losers as well as winners and has consequently had distributional impacts. According to Nicita (2004) trade liberalisation has increased inequality "between the south and the north of the country, urban and rural areas, and the skilled and unskilled labour". In the 1990s the top-10% of households have increased their share of national income while the other 90% have lost income share or seen no change (Polaski, 2003).

Palma (2003) points out those workers – no matter how skilled they are – will hardly be found at the very top end of the distribution of income. Therefore, even if trade liberalisation can be held responsible for the introduction of new techniques of production with 'asymmetrical labour demand' [...] this factor alone is very unlikely to account for a significant amount of the region's huge income inequality". Similarly, Vos, Ganuza and Morley (2004) claim that in Latin America trade liberalisation was not the cause for the rising inequality. Yet in general, it seems justified to say that that the asymmetric liberalisation of markets, i.e. opening up the trade in goods and capital and at the same time keeping the movement of labour restricted, benefits the more mobile factors of production, i.e. capital and skilled labour, and harms those whose mobility is restricted (CEPAL, 2004).

In conclusion, the study of NAFTA shows that reform will produce not only winners but also losers and that aggregate welfare gains can hide important losses at the individual level. In Mexico, it appears, skilled workers and capital owners gained relatively more from the opening up to trade than did unskilled workers and, especially, agricultural households.

In Central America similar winner-loser effects are expected from CAFTA. Brown, Kiyota and Stern (2004) predict significant increases in employment in Central America in textiles (47,887 jobs, which represents an employment increase of 27% in the sector), wearing apparel (225,091; 43%) and leather products & footwear (7,915; 13%). However, they estimate that at the same time jobs will be lost in all other sectors, since the expansion of the labour-intensive sectors with employment growth will attract workers from other sectors of the economy. Thus, there will be substantial adjustment costs associated with employment reallocation and worker displacement.

A series of CGE counterfactual simulations of different trade liberalisation scenarios in Latin America also show that the gains of trade in Central American countries would be spread unequally. For example, Sauma and Sanchez (2004) find that further trade liberalisation in Costa Rica would lead to an overall increase in incomes and employment, but also increased

income inequality and particular losses of employment and income for agricultural workers. In general, these simulations emphasise that the gains from trade will not be equally spread.

Sánchez (2005) computes a similar CGE model which simulates the changes in the economic structure and employment after 1997, which is the base year. He simulates liberalization, and compares it to the real liberalization occurred in the region since that year. Ha also combines this simulation process it with two other effects: a) external shocks on foreign saving, remittances and a loss in terms of trade, all which bring about currency appreciation; and b) nominal depreciation. He shows that in the first case El Salvador is hurt in its export industries and turns out to be a services economy. The "dollarization" occurred prevented from exchange rate from going down too much due to the external shocks in a). Also, when simulating a nominal depreciation, El Salvador is not able to grow led by exports. This also happens in Honduras, and this effect even larger in this country, may be because of low diversification and productivity in agriculture. His conclusion for Honduras is that any policy that affects non tradable goods and services, even if promoting exports, may affect growth. For Costa Rica, the agricultural sector is the key element for export led growth, which is more diversified and productive than in the other countries. The FDI received had to be compensated by small depreciations in its exchange rate. It is important to note that this is the only one, among the three, where exports can outweigh imports in the simulation with liberalization and no external shocks. The other countries will show an increased commercial deficit. As it was said, this study simulates the effects of the liberalization from 1997 onwards, and not the CAFTA itself, so care should be taken to extend these conclusions to the special case of FTA with United States.

IV. POVERTY IMPACTS OF TRADE LIBERALIZATION

Wage impacts and changes in employment due to trade liberalisation can have serious social consequences in the affected countries. In particular, adverse income changes due to trade reform can be sufficient to push individuals under the poverty line. Moreover, if poverty traps are present, short-term adjustment costs, for example in terms of temporary unemployment, could have serious long-term consequences in terms of poverty. On the other hand, positive impacts from trade reform could lift people out of poverty and lead to significant poverty reductions.

In general, the link between changes in trade policy and poverty is made via the impact of trade on growth, especially when looking at the long-term relationship. This link refers to the 'lifting-all-boats'-idea that trade reform will lead to higher growth, which will eventually increase everyone's income and thereby reduce poverty. However, this connection depends firstly on the effectiveness of trade reform in enhancing economic growth, and secondly on the effectiveness of economic growth in reducing poverty. In the following, these two links are examined.

The connection between trade reform and growth is based on the view that trade leads to specialisation, allocative efficiency and fuller utilisation of countries' endowments. However, while economic theory is rather clear about the positive potential that trade can have for growth, [7] the empirical evidence is more ambiguous. A study of the UNDP (2003) compares the experiences of Viet Nam and Haiti to make this point. While Viet Nam, which is not a WTO member, has taken a gradual approach to economic reform, following a two-track programme with state trading, import monopolies and high tariffs, Haiti undertook comprehensive trade liberalisation in the mid-90s and became a member of the WTO. Yet, Viet Nam has achieved high annual growth rates of over 8% and sharply reduced poverty, while Haiti's economy has stagnated and not made any progress in the reduction of poverty.

On the other hand, various studies on the trade-growth nexus using large samples of countries find positive relationships between the two. For example, Dollar and Kraay (2001) classify countries into globalisers and non-globalisers based on their post-1980 trade growth and find that globalisers have higher growth rates, pointing towards a positive trade-growth connection. However, their approach has been criticised on the grounds that trade growth is the outcome of many factors, including an economy's overall economic performance, and hence a bad proxy for changes in trade policy (UNDP, 2003). In contrast, there is no systematic relationship between direct measures of trade policy, such as average tariff and non-tariff measures, and subsequent economic growth; rather, the only systematic relationship that the evidence shows is that all countries reduce trade barriers as they get richer (UNDP, 2003). This accounts for the fact that today's industrialised countries developed in fact behind tariff barriers and opened up to trade in later stages of development (Chang, 2002).

---

[7] Despite the numerous theoretical arguments on how openness can promote growth, economic theory also points to possible circumstances in which increased openness might harm growth, e.g. in the presence of infant-industries.

These studies are just some examples of the vast empirical literature on the trade-growth nexus, which essentially deals with the right choice of data and methodology. Eminent papers in this debate are those by Dollar (1992), Sachs and Warner (1995) and Edwards (1998), all claiming to have found evidence of a positive relationship between trade and growth, and the paper by Rodriguez and Rodrik (2000) questioning the methodology and data of the aforementioned studies.

Dollar's (1992) analysis, one of the most heavily cited papers on the issue, is based on the relationship between growth and indices of real exchange rate distortions and real exchange rate variability, which are used as indices of outward orientation, or rather of the lack of it, since outward orientation should in theory lead to stable and undistorted real exchange rates. Finding a significant negative sign for both these variables, he concludes that there is a positive relationship between trade and growth. Sachs and Warner (1995), on the other hand, run cross-country regressions of growth performance on a number of variables, including a binary variable whether a country is open or closed according to their criteria, and find a significant positive influence of trade openness on growth. Finally, Edwards (1998) uses cross-country regressions to test the influence of trade policy on total factor productivity growth, using different indices of openness to trade. He finds a significant positive relationship between openness and productivity growth.

However, all of these papers have been subject to criticism. Rodriguez and Rodrik (2000) examine the mentioned studies and argue that many of the results are not robust to the inclusion of standard control variables, a result which appears common in the critique of empirical growth studies, and question the theoretical and econometric methodology of the authors. Moreover, they criticise the choice of data, in particular the use of the different measures of openness. They conclude that the results do not stand up to close scrutiny and that "the issue [of the link between openness and growth] is far from settled on empirical grounds". [8]

In sum, there appears to be no clear empirical evidence of a positive link between openness to trade and higher growth. In fact, the link is likely to be country-specific and "cross-country econometric studies [...] typically are not very enlightening about the mechanisms by which trade liberalisation and export promotion affect growth" (Vos, Ganuza, Morley, 2004). However, presuming a positive relationship between openness and growth, a positive connection between increased openness and poverty reduction still requires a negative relationship between economic growth and poverty.

Several economists agree on this negative relationship and see economic growth as a precondition for sustained poverty alleviation. Still, this is a deep field in which agreement has not been made yet. Cline (2004) states that "ultimately it is economic growth that will be the major engine that lifts hundreds of millions out of poverty". Yet, the strength of the link between growth and poverty crucially hinges upon the growth elasticity of poverty, i.e. how responsive poverty is to changes in growth, which in turn depends on the distributional structure of the

---

[8]   For a survey of the issues involved in the trade-growth-poverty link see also Berg and Krueger (2003).

economy.[9] The growth elasticity of poverty is lower where inequality is greater, so additional growth in unequal countries lowers poverty less than in more egalitarian ones.

Ravallion (2001) tries to explain why there can be opposite conclusions when analyzing the effect of growth on the poor. He tests that growth does dot affect inequality on average. That means that any growth will be enjoyed disproportionately by the richer than by the poorer groups. Anyway, this would mean that the poor will have at least a minimum share of the gains from growth. So, growth would be poverty reducing. He calculates the "growth elasticity" of poverty, which seems greater than 1, i.e. for every 1% growth, poverty will be reduced more that 1%. This happens on averages, but when looking beyond averages, things may be different. The coefficient of the elasticity estimation has a confidence level, which means that the real value can be higher or lower than that average value. In fact, it may be true that poverty can increase in some countries if growth is not equitable. But this is not enough to say that poverty would have been reduced faster if certain country's growth was more equitable because growth could have been lower if inequality did not rise. This relates to the old theory of Kuznetz, where growth, at lower per capita values is usually accompanied by rising inequality. There has been a lot of empirical work on this issue. The inverted U shape seems to be due only to the fact that many studies use cross section information where Latin American high-inequality middle-income countries are considered among low-inequality low-income and low-inequality high-income countries. But the author then concentrates in the relationship between the elasticity and the initial level of inequality in a growth process. He argues that when inequality is high, the poor will tend to share less of the growth because poverty is reduced less if initial inequality is high.

The importance of changes in inequality in this respect is also highlighted in a study by the United Nations Economic Commission for Latin America and the Caribbean (UN-ECLAC), which emphasises the importance of reductions in inequality for poverty reduction: a "one- or two-point reduction in the Gini coefficient would achieve the same reduction in the incidence of poverty as many years of positive economic growth" (CEPAL, 2002). In fact, they claim that the reason for the disappointing results of recent poverty reduction efforts in Latin America is that the high levels of inequality in the region are highly intractable. Bussolo et al (2003) also state that poverty elasticities of growth are very low in Mexico, "mainly due to the fact that Latin America is a region with high levels of inequality".

The remaining question is therefore whether changes in trade policy significantly affect the income distribution and, thereby, the effectiveness of growth to reduce poverty. For a cross-section of countries, Dollar and Kraay (2001) do not find any significant relationship between openness to trade and changes in incomes shares, but the find a positive relationship between poverty reduction and growth. So they conclude that trade will reduce poverty. Similarly, McCulloch, Winters and Cirera (2001) claim that trade reform does not affect the income distribution in a systematically adverse way.

The studies presented here may suggest that even if openness may not change inequality, the high level of inequality may prevent the poor from profiting from the gains from trade. However, given the absence of clear empirical evidence on the trade-growth-poverty nexus, it is

---

[9]   The link between poverty and growth is the subject of a vast economic literature on pro-poor growth. For an overview see, for example, Ravallion (2004).

important to understand and analyse the individual transmission channels through which changes in trade reform can affect individual welfare and, hence, poverty. Winters (2000) and McCulloch, Winters and Cirera (2001) give detailed account of these channels and Nicita (2004) emphasises the importance of tracing these channels in empirical work.

The analyses by Winters (2000) and McCulloch et al (2001) are based on the farm-household model and examine the impact of trade reform on the incomes and expenditures that households face. The three broad channels identified, which are described in more detail in the following, are:

- The impact of trade liberalisation on goods prices,
- The impact on profits and hence on employment and wages, and
- The impact on the government's fiscal position.

Changes in tariff and non-tariff barriers will directly impact on domestic prices. In fact, large scale trade reforms such as FTAs will result in large changes of many prices at once. However, how the changes in border prices translate into changes in prices faced by households depends on the competitive structure, the operation of government institutions and market organisations and the extent of the domain of trade. Moreover, there will be indirect price effects even in markets of goods that have not been liberalised since the substitution between goods will have second-round effects. The response of households to these price changes will depend on households' ability to adjust to these prices, such as households' assets and the availability of substitutes of goods whose prices have risen. The total effect of price changes on households' welfare, and hence poverty, will then depend on whether the household is a net supplier or consumer of the goods whose prices have risen. Intra-household distribution is not considered here.

The enterprise channel refers to the effect of trade reform on firms' profits and, thereby, on wages and employment. The effect on employment and wages of changes in profits will essentially depend on the flexibility of employment vs. wages. Where wages are more rigid, the adjustment will fall on employment, and vice versa. Wage and employment changes, which have also been explored above in the case of NAFTA, will directly impact on households' incomes and thereby on poverty.

Finally, changes in trade policy will also impact on poverty via changes in tax revenues. Firstly, a lowering of tariffs will lower tariff revenue, which could lead to a squeeze of social expenditures, and hence increases in poverty. Secondly, openness might affect taxation since more mobile factors of production cannot be easily taxed as they could move location in response to higher taxation. Thirdly, governments might try to offset the fall in tariff revenue through other forms of taxation, in particular sales tax or VAT. These taxes could also hurt poor consumers.

Apart from these three main channels, potential links also include the effects of trade reform on external shocks, short-run risk and adjustment costs. In addition, trade liberalisation could affect poverty also via its impact on education and human capital accumulation. Bourguignon and Verdier (2003) explain how external liberalisation could affect human capital accumulation through changes in educational behaviour. For example, an increase in the wage

gap, as in the case of NAFTA, could provoke positive endogenous educational responses, as incentives to accumulate human capital become stronger. On the other hand, an increase in uncertainty due to unpredictable foreign competitive pressures and external shocks could reduce the incentive to invest in sector-specific education as workers are more likely to move between sectors. Such impacts on human capital accumulation could have dynamic impacts on people's earning capacity and hence future poverty levels.

However, it should be pointed out that not all of these channels are of equal importance with respect to changes in poverty. As pointed out by Reimer (2002), the factor price, income and employment link could have the greatest importance, given that households tend to be more specialised with respect to factor earnings than with regard to consumption, i.e. changes in factor earnings impact more strongly on poor households than changes in final goods prices.

Other aspects that should be considered when analysing the connection between trade liberalisation and poverty are the particular importance of agriculture, the gender-dimension of poverty and the general multi-dimensionality of poverty.

Cline (2004) points out that the agricultural sector plays a particularly important role with respect to poverty because most of the poor live in rural areas, which imply that their incomes closely depend on agricultural prices, and because food comprises the bulk of the poor's consumption basket. The loss of employment and the fall in wages in rural areas in Central America as a result of the decline in world coffee prices, and the associated negative social impacts, are a recent example of the importance of agricultural price changes (Flores et al, 2002).

In general, world agricultural prices are artificially held down and agricultural liberalisation that reduces or eliminates agricultural subsidies in the US, Europe and Japan could have important consequences, as world food prices would rise. As long as the share of food in the consumption basket of the poor is smaller than the fraction of their income received from agricultural activity, the rise in agricultural prices would reduce poverty. Moreover, the associated fall in relative prices of non-food products could lead to static welfare gains in developing countries with a comparative advantage in food.

However, the formation of CAFTA is more likely to reduce agricultural goods prices in Central America where competition from US producers can be expected to depress agricultural prices in previously protected activities. This would have adverse consequences on rural employment and wages. The adverse impact on small Mexican maize producers of the introduction of strong competitive pressures from Iowa corn farmers that followed NAFTA (Taylor, 2002) highlights the comparative advantage of US staples production and points to the potential adverse impacts that CAFTA could have on farmers in Central America. In addition, high transaction costs and a lack of access to capital could exclude the rural poor from the potential benefits of CAFTA and exacerbate poverty (Taylor, 2002). Therefore, in analysing poverty impacts of preferential trade agreements, the agreement's terms on agricultural goods, the situation of the rural poor and the potential impact on food prices need to be closely analysed.

The gender-dimension of poverty should also be considered. As pointed out by the UNDP (2003), trade liberalisation could increase particularly female employment, as female-intensive sectors are more likely to expand. Moreover, greater competition associated with openness could

lead employers to look for more flexible sources of labour, which could also benefit women. On the other hand, intra-household distributions are usually biased against women who often have to bear relatively more of the adjustment costs associated with trade reform.

Finally, poverty should be thought of as a multi-dimensional phenomenon and a deprivation of basic capabilities rather than merely as lowness of income (Sen, 1999). Therefore, the connection between changes in trade reform and poverty needs to address not only the impact of trade liberalisation on incomes but also on people's opportunities and capabilities in different social dimensions. Therefore, a close analysis of the link between trade reform and poverty should not be confined to the examination of changes in poor people's incomes or consumption but should include the study of a wide variety of social indicators. An example of a framework for poverty analysis that goes beyond simple income poverty and takes account of the multi-dimensionality of poverty is the World Bank's Social Impact and Poverty Analysis (PSIA). The World Bank's PSIA provides suggestions on how to evaluate social impacts of policy reforms, incorporating various tools and techniques from economic and social approaches. It implies "an analysis of the distributional impact of policy reforms on the well-being or welfare of different stakeholder groups, with particular focus on the poor and vulnerable." (World Bank) As such, the approach includes the analysis of income as well as non-income policy effects, and advocates the use of "mixed-methods" using numeric and non-numeric data and quantitative as well as qualitative data analysis, depending on the type of reform.

However, in practice most empirical studies of the connection between trade liberalisation and poverty focus only on economic aspects of poverty, such as changes in income or expenditure. Nevertheless, such studies can provide important information about the trade-poverty nexus, especially since the impact of changes in trade policy will depend on specific country characteristics, such as a country's production patterns and endowments. Therefore, empirical studies on individual countries, rather than cross-sectional studies, could be particularly insightful.

Empirical studies that aim to quantify the poverty effect of trade reform are currently an area of intense research. Reimer (2002) summarises and classifies a large number of empirical studies on trade liberalisation and poverty according to their methodology. His survey divides the studies into four main categories: cross-country regression, partial-equilibrium/cost-of-living analysis, general-equilibrium simulation, and two-step micro-macro synthesis. These different approaches include both "bottom-down" approaches, which mainly build on econometric analyses of household expenditure data and emphasise the heterogeneity of individual , and "top-down" approaches, which are based on CGE models and usually use the representative household assumption from microeconomic theory. The general conclusion of Reimer's survey is that the connection between trade and poverty needs to be informed by both of these approaches. In fact, the last of his methodological categories, the two-step micro-macro simulations, aim at combining the two.

Using six household surveys spanning the period between 1989 and 2000, Nicita (2004) makes use of econometric analysis for an ex-post estimation of the impact of trade reform on the welfare of Mexican households. In his study trade effects are first translated into price and wage changes, which are then plugged into a farm-household model to estimate the effect on

households' welfare. He finds that trade liberalization in Mexico had the direct effect of reducing poverty by about 3 percent.

Using a CGE model, Morley and Diaz-Bonilla (2004) simulate the impact of Mexico's trade liberalisation and also find that poverty declined as a result. However, they also find large differences between urban and rural workers. Agricultural workers are hurt due to the real appreciation of the exchange rate and rural poverty increases. Extreme poverty also increases, given that most extreme poverty is found in rural households.

Counterfactual CGE and microsimulation studies for the CAFTA countries show similar results. Sauma and Sanchez (2004) find that their trade liberalisation scenarios in Costa Rica lead to small reductions in poverty, owing to the positive employment effects. Similarly, the increase in employment would also lead to poverty reductions in the Dominican Republic (Aristy, 2004), El Salvador (Acevedo, 2004) and Honduras (Cuesta and Sanchez, 2004).

Sánchez (2005) computes a similar CGE model which is based in the 1997 situation. He shows details for separate policies of import liberalization and export promotion, as separate policies and also as a joint effect. With a model for each country, he is able to replicate the results that the liberalization that Costa Rica, El Salvador and Honduras produced during these past years. In general, poverty is reduced, but inequality increases. External shocks that push the exchange rate down, not only hurt exports, but also widen the gap between rich and poor, especially in Costa Rica and moderately in El Salvador. Also, if Costa Rica did not depreciate its currency during these past years, poverty would have been larger, particularly in rural areas, according to the simulation that combines liberalization and appreciating external shocks. In El Salvador the external shocks make consumption of local products cheaper and so poverty reduces slightly. Only when remittances are considered, poverty and distribution improve, but at the expense of the so called "remittances disease" that the author exposes. Another conclusion of this work is that Costa Rica was able to profit from liberalization because of higher productivity and qualifications of its working force, which made possible that poverty reduced since the base year considered.

A study by Paunovic (2004) on the fiscal implications of CAFTA sheds light on possible impacts of trade reform through the tax revenue channel described above. The study finds that the loss of revenue through the reduction of tariffs and indirect taxes of imports is likely to outweigh the positive revenue effect through the increase in the volume of imports, resulting in a net loss of fiscal revenue. While in Costa Rica, El Salvador, Guatemala and Nicaragua net losses are estimated to not exceed 0.4% of GDP by the end of the transition period, Honduras could have serious fiscal losses due to CAFTA, up to 0.83% by the end of the transition period. In fact, in Honduras fiscal losses could reach almost five percent of the tax revenue already in the first year of the Agreement.

V. MICRO SIMULATIONS OF THE EFFECT OF LIBERALIZATION

A microsimulation is made to study the effect of an external shock, specifically the impact of liberalization, on income distribution. Since some sectors are expected to grow, while others decrease, it is relevant to analyze the global impact and compare the situations both before and after the liberalization. This technique is based on household surveys information, where the income of the families is modified in different amounts, positive or negative, depending on the sector their members work in, so that poverty and inequality measures for both situations before and after the 'shock' can be compared.

The surveys used are for Honduras in 2002, Costa Rica in 2001 and El Salvador 2001 compiled by BADEINSO at ECLAC. The size of the asymmetric sectorial shocks on employment and wages are brought in from the paper presented by Sánchez (2005). This study uses a macro and micro approach, through a CGE model and micro simulations to replicate the liberalization occurred in Costa Rica, Honduras and El Salvador since 1997. This study considers several situations. In each of these alternatives, two events are simulated and its effects are combined:

- The change in employment in four industries: Agriculture, Manufacturing, Construction and Services
- The change in average wage in these economic sectors

These changes are simulated through changes in the job income of each person. Then, the family income is calculated based on the new distribution of income, where other sources of income are added, like remittances. The income of the personnel on domestic service is not considered. Finally, the per capita household income is calculated. Since the variation on income is applied to individual incomes, and more precisely, on the main job income, the calculations are more accurate than if total household income is altered, no matter if there are more than one income-earner working on a different industry which is not altered, or if income comes from other sources apart from the sector that is being 'shocked'.

The chosen 'shocks' or events considered for simulation in this study, following Sánchez (2005), are:

- Ref3: Combination of a liberalization on imports through a reduction in 50% tax on imports, and liberalization on exports through a reduction of 50% on export taxes.
- Ref4: This is Ref3 plus external shocks that appreciate the real exchange rate through 25% increase in external saving, 25% increase in remittances and 5% decrease in world prices for exported products.
- Ref5: This is Ref3 plus a nominal depreciation of 2.5%.
- Ref6: This is Ref3 plus a 5% increase in FDI and factor productivity in exporting industries. This is called the productivity shock.

- Ref7: This is Ref3 plus a 5% increase in qualification of the labour force, i.e. some non qualified employees now become qualified.
- Ref8: This is Ref6 and Ref7 together.

In each case, the variation on employment levels for all the four industries considered is combined with the change in average wages in the same sectors. The unemployment resulting from the shock is simulated by changing the main job income of certain employees, working on the chosen sector, to zero. These employees are chosen randomly. Then, from the increased pool of unemployed, the people are again chosen randomly to be hired on the jobs created in other industries. The following step is to reduce or increase the wages in each industry considered. The average percentage variation is applied to all employees according to the impact on the industry they are working in.

The results are presented in graphs using kernel distributions for the per capita income calculated as described before. Only the lowest values of the income variable are presented so that the reader may have a clear picture of the changes in the thickest part of the distribution. The sample values are weighted according to the expansion factor from the survey, so that the expanded income variable may represent more closely the population distribution.

The Table 1 provides the results from Sánchez (2005). These impacts are then applied to the 2001 or 2002 surveys. The main limitation of this technique is that the impacts on employment and wages are a result of the simulation of the liberalization occurred in the late nineties and may not be the same after the CAFTA-DR. If the shocks considered can anyway seem feasible for the following years, this exercise is worth doing. Another limitation is that the poverty impact also depends on the price of the basic products contained in the consumption basket. Here, the lower prices of the imported goods compensate with the higher relative prices for the exportable products, so that the poverty lines do not change. If it is possible to switch from more expensive products to lower price goods in basic consumption, then this exercise is too pessimistic.

Table 1
Microsimulations for commercial liberalization on employment and wages
(Percentage variations)

Item	Honduras					
	Ref3	Ref4	Ref5	Ref6	Ref7	Ref8
Employment						
Agriculture	0,8	-2,1	-12,3	7,6	3,4	10,8
Manufacturing	1,9	1,6	0,9	4,3	10,1	12,7
Construction	2,0	-0,7	-17,4	10,2	4,9	13,6
Services	0,7	0,7	-1,6	3,6	4,8	7,7
Wages						
Agriculture	0,2	-0,3	-1,2	0,8	1,0	1,5
Manufacturing	1,4	2,1	9,5	2,1	-11,5	-11,2
Construction	-0,1	-0,2	0,0	0,0	-0,1	-0,1
Services	0,4	0,4	0,5	1,8	-9,7	-8,9

Source: Sánchez (2005)

The results that Sánchez (2005) found for three of the Central American countries, employment would rise in Cost Rica, El Salvador and Honduras, especially in the first one, if import liberalization took place together with and exports promotion. But it does not reach even a 2% increase. The income level would rise in El Salvador by 10.2%, but only 0.4% in Honduras; and decrease in Costa Rica by 0.2%. If also external shocks that would appreciate the exchange rate occurred, [10] Costa Rica would be the only favoured country in terms of income level. The agricultural sector is especially harmed in the presence of appreciation of the currency, both in employment and income levels. Depreciation is only beneficial for El Salvador.

In Honduras, productivity increases fuel the benefits from liberalization, fostering employment and also rising wages. Construction is the most favoured sector in employment creation. But if the country could get more qualified workers, manufacturing would be the industry where most jobs would be created. Anyway, this may also mean decreasing wages for them. When combining the effects of higher productivity and higher qualification for the workers, this latter effect prevails.

Graph 1. Per capita income kernel distribution for Honduras. Shocks Ref3 Ref4 and Ref5

_____
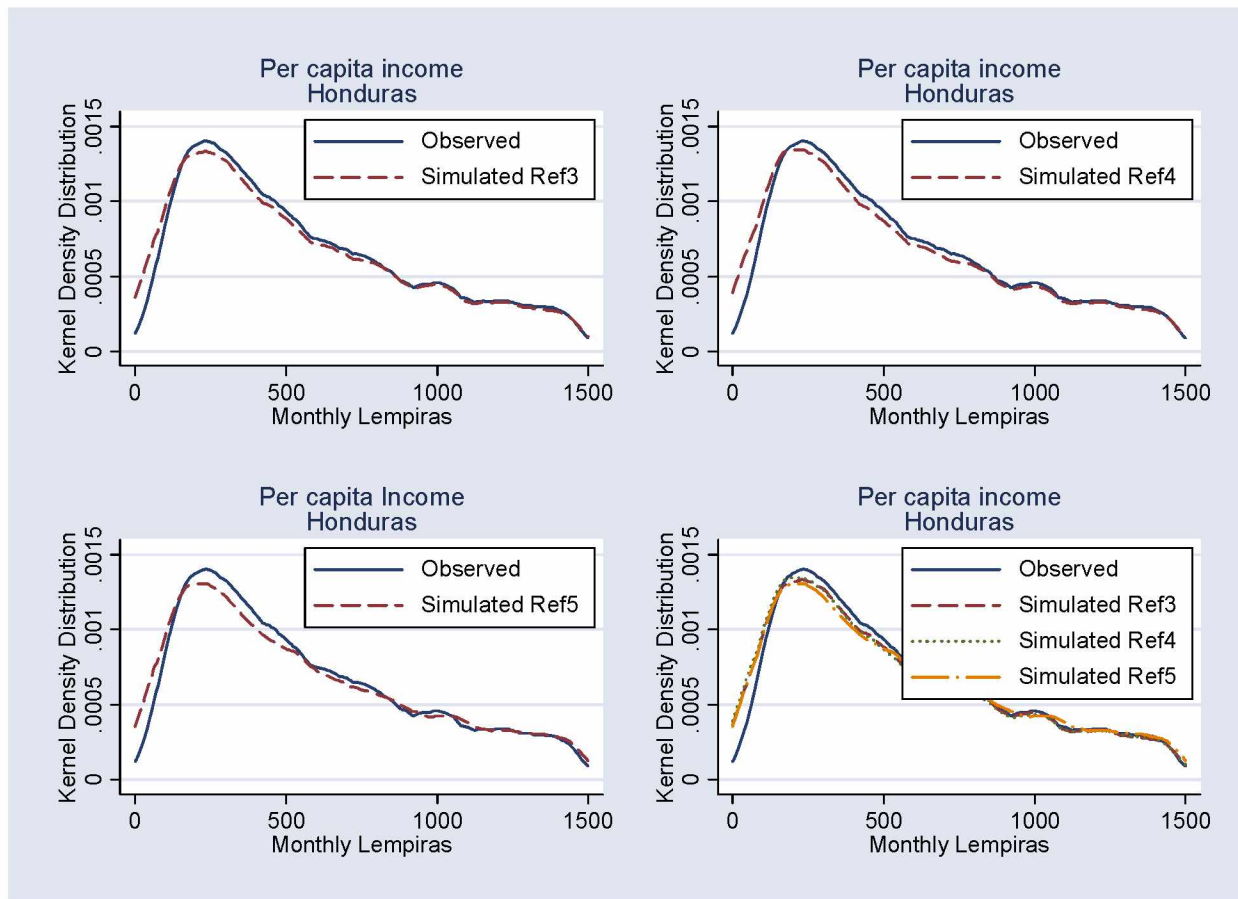
[10]   Appreciation caused for example by increase in external saving and/or remittances.

The Graph 1 present the results for the shocks Ref3, Ref4 and Ref5 for Honduras, and Graph 2 presents the results for combined effects in employment and wages for Ref6, Ref7 and Ref8. It is desired that the distribution moved to the right so that lees people have lower income. In the Honduras results, the income distribution in all cases seems to concentrate more on the left side after the shock, except for the positive shock productivity. This means that poverty increases. Only on Ref5 and Ref6 the headcount poverty index decreases, as can be seen on Table2. This means that when analysing the joint effect of employment creation and wage changes on the income distribution, only the productivity increase or de devaluation can contribute to poverty reduction.

The inequality is calculated with the Atkinson index, where the 'poverty aversion parameter' e is considered=1. The results can be seen on Table 2 and show that inequality decreases only when the workforce becomes more qualified. This may be because the wages of the manufacturing industry, which has one of the highest wage levels, get lower. More important, the liberalization by itself contributes to the highest increases in inequality, only decreased when productivity increases or the workers attain higher qualifications.

Table 2

Poverty and inequality variations for each shock
considered in Honduras

(Percentage variations)

Shock	Headcount ratio poverty index	Atkinson inequality index *
Ref3	0,78%	3,66%
Ref4	1,31%	4,61%
Ref5	-1,13%	3,76%
Ref6	-1,73%	0,88%
Ref7	1,71%	-0,53%
Ref8	2,87%	0,74%

* Atkinson index is A(e), where e is taken here as e=1

Source: Cepal

Graph 2. Per capita income kernel distribution for Honduras. Shocks Ref6 Ref7 and Ref8
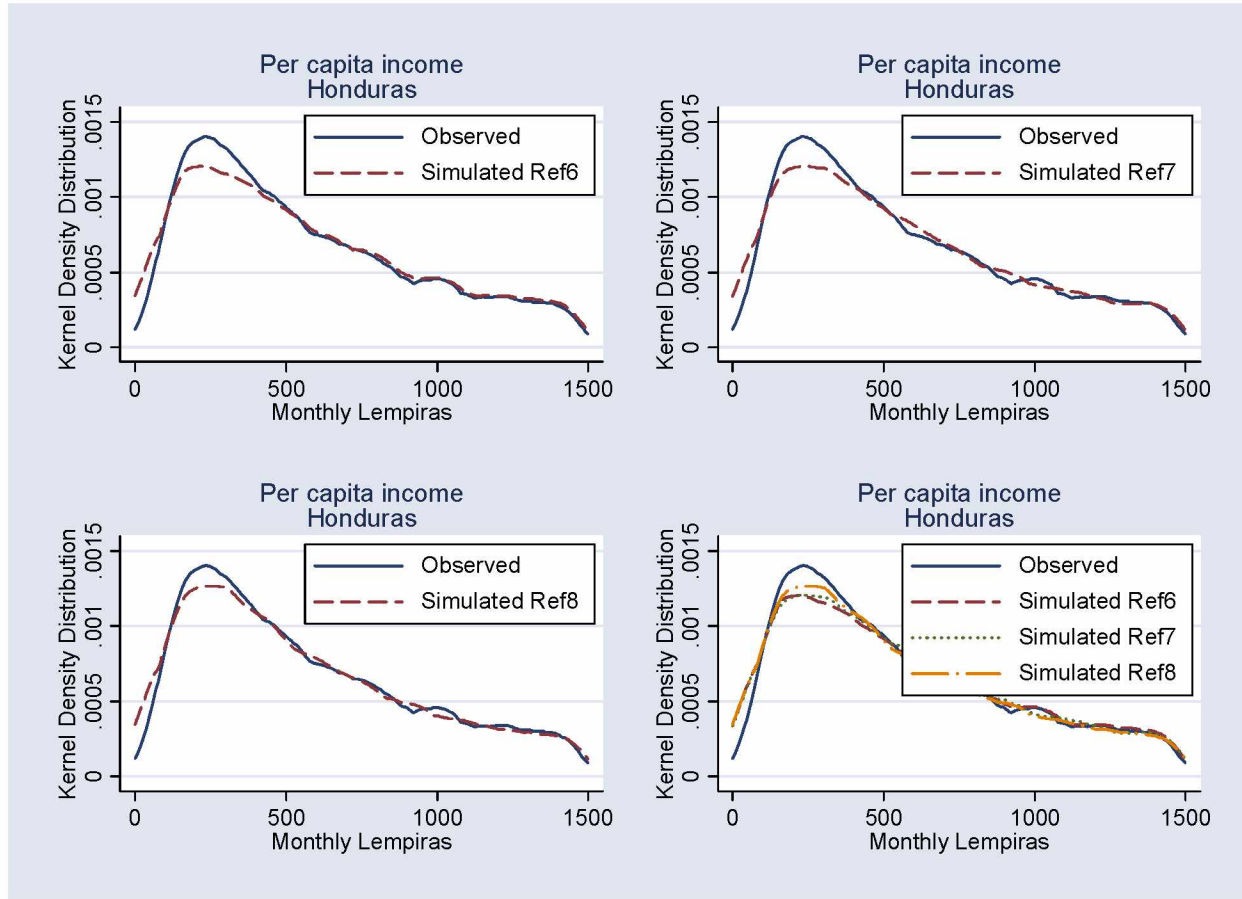
VI. FINAL REMARKS

Changes in trade policy, such as the formation of preferential trade agreements, can yield substantial benefits for the countries involved. However, simple ex-ante predictions about changes in welfare from such trade reforms do not seem possible and, more importantly, even in the case of overall welfare gains, changes in welfare differ according to region and sector and across individuals. Certain groups will almost inevitably lose from trade reform. While in theory losers could then be compensated so as to improve everyone's welfare, in practice governments are usually incapable of distinguishing winners from losers precisely and without cost. Moreover, lumps-sum transfers for redistribution are typically not possible and governments have to rely on distortionary taxes and subsidies with associated dead-weight losses to the economy.

With respect to poverty the connection to trade reform is ambiguous. While trade could lead to poverty reduction via a positive impact on growth, trade reform will by no means automatically lead to poverty reduction. Therefore, "trade liberalization policies should not be viewed as a reliable mechanism for generating self-sustaining growth and reducing poverty, let alone achieving other positive human development outcomes" (UNDP, 2003). Instead, it is important to think about complementary policies in order to reduce poverty and the implementation of social safety nets to minimise adverse impacts of trade reform on certain population groups, in particular in the agricultural sector.

A study revealed that poverty decreases less in there is a high level of initial inequality. This could have a relationship with the difficulty of the extreme poor to gain from the increase in the GDP, typically the low productivity agricultural sector. An explanation could be the difficulty to attain human or physical capital, for example due to credit rationing problems. If growth is due to new exports led by liberalization agreements, it would be interesting to test whether only middle or high income sectors tend profit from the new trade agreements or if nothing can be said about how inclusive can be the export led growth that is expected.

The micro simulations calculated show how the income distribution may move to the left, causing poverty increases. For Honduras, higher productivity seems to be the best strategy. Inequality can increase with liberalization and is only when it is accompanied by higher productivity or higher qualifications for the workforce when this 'side effect' of liberalization may be neutralized. Moreover, higher productivity is the sole alternative to raise both employment and wages in all sectors. Also, it would lower poverty by almost 2%. On the other hand, a real appreciation of the currency caused by increase in remittances, external saving, or decrease in world prices for exported products, may increase poverty.

Anyhow, it seems that complementary policies may be of great help. These could include educating and training workers to facilitate their reallocation from declining to growing industries and the development of infrastructure to improve access to markets. Moreover, rather than just serving as a means of postponing shocks, transition periods established through the gradual phase-out of tariffs in sensitive sectors should be used to provide workers and businesses with technical assistance and slowly adapt them to the competitive pressures. Yet, despite such efforts,

losers from trade reform will emerge and social safety nets will be necessary to cushion adverse income shocks. Such safety nets could take the form of cash-transfers, such as unemployment benefits, or targeted subsidies. Moreover, public works programmes could help to mitigate negative employment effects.

BIBLIOGRAPHY

Acevedo, C. (2004), "El Salvador: Efectos del Crecimiento Exportador sobre la Pobreza y la Distribución del Ingreso", in Ganuza, E., S. Morley, S. Robinson and R. Vos (eds.) "Quién se beneficia del libre comercio? Promoción de exportaciones en América Latina y el Caribe en los 90", UNDP.

Aküz, Y., (2005), "The WTO negotiations on industrial tariffs: what isa t stake for developing countries?", Geneva.

Aristy Escuder, J. (2004), "República Dominicana: Impacto de las exportaciones sobre el crecimiento", in Ganuza, E., S. Morley, S. Robinson and R. Vos (eds.), "Quién se beneficia del libre comercio? Promoción de exportaciones en América Latina y el Caribe en los 90", UNDP.

Berg, A. and A. Krueger (2003), "Trade, Growth, and Poverty: A Selective Survey", IMF Working Paper WP/03/30.

Bhagwati, J. and V. Dehejia (1994), "Freer Trade and Wages of the Unskilled – Is Marx Striking Again?", in Bhagwati, J. and M. Kosters (eds.) "Trade and Wages – Leveling Wages Down?", Washington, D. C.: AEI Press, pp. 36-75.

Brown, D. K., K. Kiyota and R. M. Stern (2004), "Computational Analysis of the Menu of U.S.-Japan Trade Policies", Research Seminar in International Economics Discussion Paper 510, University of Michigan.

Bourguignon, F. and T. Verdier (2003), "Globalisation and Endogenous Educational Responses: The Main Economic Transmission Channels", in Kohl, R. (ed.), "Globalisation, Poverty and Inequality", Paris: OECD.

Bussolo, M., D., Nicita A. (2005), "Trade Policy Reforms", in Coudouel, A. and Paternostro, S. (eds), "Analyzing the Distributional Impact of Reforms", World Bank, Vol.1, Washington D.C.

Bussolo, M., D. van der Mensbrugghe and J. Lay (2003), "A preliminary assessment of the economic and poverty impacts of the Doha and FTAA agenda for Latin America", IADB Conference Paper.

CEPAL (Comisión Económica para América Latina y el Caribe) (2002), "Meeting the Millennium Poverty Reduction Targets in Latin America and the Caribbean", Santiago, Chile: United Nations Publications.

CEPAL (2004), "Desarrollo Productivo en Economías Abiertas", LC/G.2234, Santiago de Chile, CEPAL.

Chang, H. J. (2002), "Kicking away the ladder", London:Anthem Press.

Cline, W. R. (2004), "Trade Policy and Global Poverty", Washington: Institute for International Economics.

Cobb, C., T. Halstead and J. Rowe (1995), "If the DGP is Up, Why is America Down?", Atlantic Monthly, Oct.1995, pp. 59-78.

Cordero, M. (2004), "El Tratado de Libre Comercio entre Centroamérica y Estados Unidos: resultados de la negociación y caracterísitcas principales", LC/MEX/R.854, México, D. F., Sede Subregional de la CEPAL en México.

Cuesta, J. and M. V. Sánchez Cantillo (2004), "Honduras: Crecimiento Exportador, Distribución y Pobreza", in Ganuza, E., S. Morley, S. Robinson and R. Vos (eds.), "Quién se beneficia del libre comercio? Promoción de exportaciones en América Latina y el Caribe en los 90", UNDP.

Deardorff, A. V. (1986), "FIRless FIRwoes: How Preferences can interfere with the theorems of international trade", Journal of International Economics, Vol. 20, pp. 131-142.

Dollar, D. (1992), "Outward-Oriented Developing Countries Really Do Grow More Rapidly: Evidence from 95 LDCs, 1976-85", Economic Development and Cultural Change, April/1992, pp. 523-544.

Dollar, D. and A. Kraay (2001), "Trade, Growth and Poverty", Policy Research Working Paper 2615, World Bank, Washington D. C.

Dussel Peters, E. (2004), "Efectos de la apertura comercial en el empleo y el mercado laboral de México y sus diferencias con Argentina y Brasil (1990-2003)", Documentos de Estrategias de Empleo, International Labour Organisation.

Edwards, S. (1998), "Openness, Productivity and Growth: What Do We Really Know?", Economic Journal, Vol. 108, N° 2, pp. 383-398.

Feenstra, R. C. (2004), "Advanced Trade Theory: Theory and Evidence", Princeton University Press.

Flores, M., A. Bratescu, J. O. Martínez, J. A. Oviedo and A. Acosta (2002), "Centroamérica: El impacto de la caída de los precios del café", Serie Estudios y Perspectivas N° 9/2002, México, D. F., Sede Subregional de la CEPAL en México.

Fukao, K., T. Okubo and R.M. Stern (2002), "Trade Diversion under NAFTA" in Stern, R. M. (ed.), Issues and Options for U.S.-Japan Trade Policies, the University of Michigan Press.

Hanson, G. H. (2003), "What has happened to wages in Mexico since NAFTA? Implications for hemispheric free trade", NBER Working Paper N° 9563.

Harrison, A. and G. H. Hanson (1999), "Who gains from trade reform: Some remaining puzzles", NBER Working Paper N° 6915.

Hilaire, A. and Y. Yang (2003), "The United States and the New Regionalism/ Bilateralism", IMF Working Paper WP/03/206.

IADB (Inter-American Development Bank) (2004), "The Emergence of China: Opportunities and Challenges for Latin America and the Caribbean", Draft Paper.

Krueger, A. (1999), "Trade Creation and Trade Diversion Under NAFTA", NBER Working Paper W7429.

Lipsey, R. G. (1960), "The Theory of Customs Unions: A General Survey", The Economic Journal, Vol. 70, N° 279, pp. 496-513.

_____ (1970), "The Theory of Customs Unions: A General Equilibrium Analysis", London School of Economics Research Monographs 7.

McCulloch, N., A. L. Winters and X. Cirera (2001), "Trade Liberalization and Poverty: A Handbook", London: Centre for Economic Policy Research.

Meade, J. E. (1955), "The Theory of Customs Unions", Amsterdam: North Holland Pub.

Moreno-Brid, J.C., Ruiz Nápoles, P., Rivas Valdivia, J.C., (2005), "NAFTA and the Mexican economy: A look back on a Ten-Year relationship", Mexico.

Morley, S. A. and C. Diaz-Bonilla (2004), "Mexico: Do the Poor Benefit from Increased Openness?", in Ganuza, E., S. Morley, S. Robinson and R. Vos (eds.) "Quién se beneficia del libre comercio? Promoción de exportaciones en América Latina y el Caribe en los 90", UNDP.

Nicita, A. (2004), "Who Benefited from Trade Liberalization in Mexico? Measuring the Effects on Household Welfare", Policy Research Working Paper 3265, World Bank, Washington D. C.

Nordhaus, W. and J. Tobin (1972), "Is Growth Obsolete?" in Milton Moss (ed.) "The Measurement of Economic and Social Performance", NBER Studies in Income and Wealth, N° 38.

Oslington, P. (2001), "An Australian Model: Nontraded Goods, Real Exchange Rates and Unemployment", Australian Economic Papers, Blackwell Publishing, vol. 40(3), pages 334-51.

Palma, G. (2003), "Trade liberalization in Mexico: Its impact on growth, employment and wages", ILO Employment Paper 2003/55.

Panagarya, A. (2000), "Preferential Trade Liberalization: The Traditional Theory and New Developments", Journal of Economic Literature, Vol. 38, N° 2, pp. 287-331.

Paunovic, I. (2004), "The United States-Central American Free Trade Agreement: Fiscal Implications for the Central American Countries", LC/MEX/L.616, México, D. F., Sede Subregional de la CEPAL en México.

Polaski, S. (2003), "Jobs, Wages and Household Income" in Audley, J., S. Polaski, D. G. Papademetriou and S. Vaughan "NAFTA's Promise and Reality: Lessons from Mexico for the Hemisphere", Carnegie Endowment for International Peace.

Ravallion, M. (2001), "Growth, Inequality and Poverty: Looking Beyond Averages", World Development, Vol.29, No.11, pp.1803-1815.

Ravallion, M. (2004), "Pro-Poor Growth: A Primer", Policy Research Working Paper 3242, World Bank.

Reimer, J. J. (2002), "Estimating the Poverty Impacts of Trade Liberalization", Policy Research Working Paper 2790, World Bank.

Revenga, A. (1997), "Employment and Wage Effects of Trade Liberalization: The Case of Mexican Manufacturing", Journal of Labour Economics, Vol. 15, N° 3, pp. S20-S43.

Rodriguez, F. and D. Rodrik (2000), "Trade Policy and Economic Growth: A Skeptic`s Guide to the Cross-National Evidence", en B. Bernanke y K. Rogoff (eds.), NBER Macro Annual 2000, Cambridge (MA): National Bureau of Economic Research.

Romalis, J. (2004), "NAFTA's and CUSFTA's Impact on International Trade", mimeo.

Sachs, J. and A. Warner (1995), "Economic Reform and the Process of Global Integration", Brookings Papers on Economic Activity, 1995:1, pp. 1-118.

Samuelson, P. (1949), "International Factor Price Equalisation Once Again", Economic Journal, reprinted in Bhagwati, J. (ed.), "International Trade: Selected Readings, 2nd ed.", 1987, Cambridge: MIT Press, pp. 5-20.

Sauma, P. and M. V. Sánchez Cantillo (2004), "Costa Rica: Énfasis exportador y sus efectos en el crecimiento, la desigualdad y la pobreza", in Ganuza, E., S. Morley, S. Robinson and R. Vos (eds.), "Quién se beneficia del libre comercio? Promoción de exportaciones en América Latina y el Caribe en los 90", UNDP.

Sen, A. (1999), "Development as Freedom", Oxford: Oxford University Press.

Taylor, J. E. (2002), "Trade Integration and Rural Economies in Less Developed Countries: Lessons from Micro Economy-wide Models with Particular Attention to Mexico and Central America", Report to the Latin America and Caribbean Regional Office of The World Bank, the World Bank.

UNDP (United Nations Development Programme) (2003), "Making Global Trade Work for People", London: Earthscan Publications.

USITC (United States International Trade Commission) (2004), "U.S.-Central America-Dominican Republic Free Trade Agreement: Potential Economywide and Selected Sectoral Effect", Investigation N° TA-2104-13, USITC Publication 3717.

Viner, J. (1950), "The Customs Union Issue", New York: Carnegie Endowment for International Peace.

Vos, R., E. Ganuza and S. Morley (2004), "Rising Exports, Slower Growth and Greater Inequality: Is Trade Liberalization to Blame?", in Ganuza, E., S. Morley, S. Robinson and R. Vos (eds.), "Quién se beneficia del libre comercio? Promoción de exportaciones en América Latina y el Caribe en los 90", UNDP.

Winters, A. L. (2000), "Trade and poverty: Is there a connection?", in Ben David, Nordstrom and Winters (eds.), Trade, Income Disparity and Poverty, Special Study N° 5, Geneva: WTO.

ANNEX

Graph A1. Impacts on per cápita income for Honduras alter shocks Ref3, Ref4 and Ref5
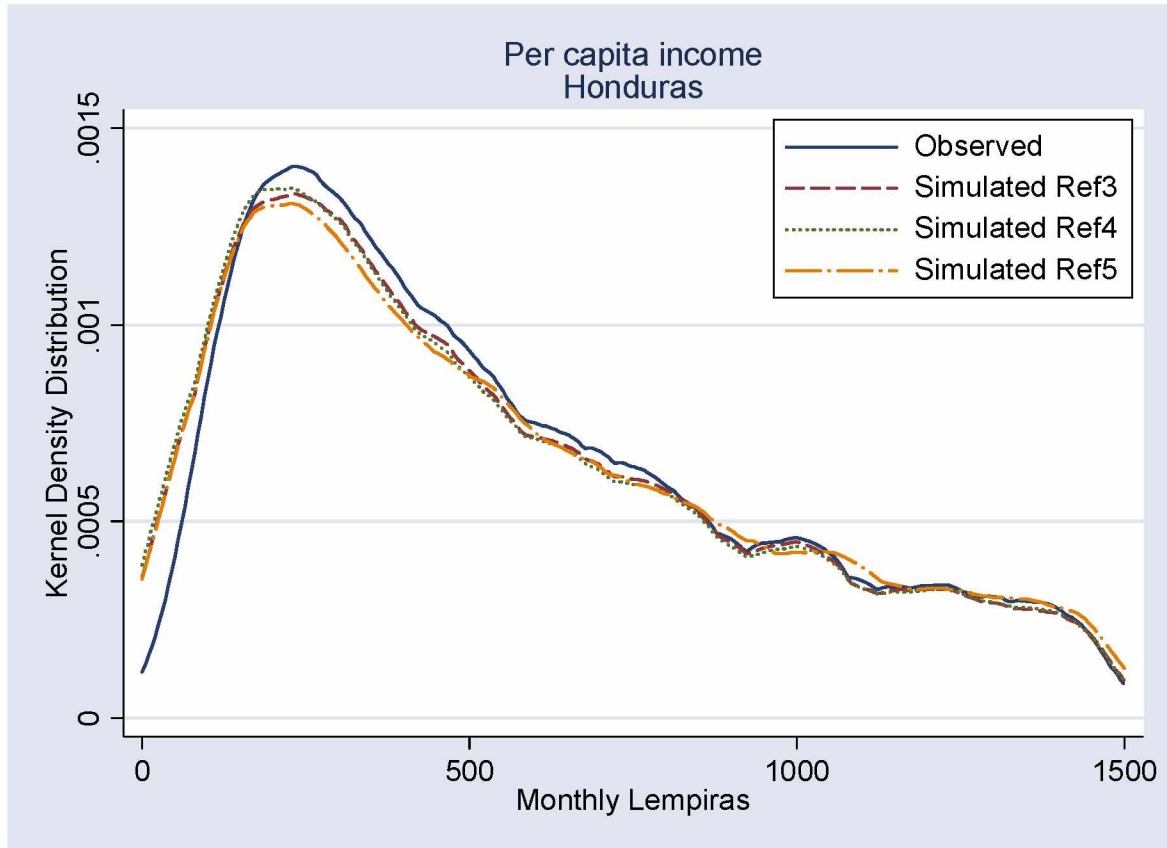
Graph A2. Impacts on per cápita income for Honduras alter shocks Ref6, Ref7 and Ref8

.