



The poverty impact of the proposed graduation threshold in the Generalised System of Preferences (GSP) trade scheme

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Executive summary

The proposed GSP changes

The European Commission's (EC's) proposal for a new Generalised System of Preferences (GSP) includes more stringent provisions on graduation (whereby countries' eligibility for the GSP is removed) than does the current system. The proposal is that the number of countries eligible for the GSP is reduced from 176 states to about 80. Exact figures are not yet known: the Commission has only proposed the eligibility *criteria* and that these should be applied definitively shortly before implementation (expected to be in 2014) and periodically thereafter. But the proposal includes an illustrative list of country eligibility if the criteria were applied now, and it is this list that has largely been used for the results in this report.

Although the cut will be achieved partly by tidying up, it will also involve increasing European Union (EU) tariffs on imports from two groups of countries:

- 1 all imports from upper-middle income countries (UMICs) that do not have a free trade agreement (FTA) with the EU – 'income graduation';
- 2 some imports from those lower-middle and low-income countries (LMICs and LICs) not covered by an FTA or the Special Incentive Arrangement for Sustainable Development and Good Governance (GSP+) regime – 'product graduation'.

The EC proposal argues that this will create space in the European market for poorer states that find it difficult to compete head on with richer and highly competitive developing countries. The explanatory memorandum argues that graduation 'would focus GSP preferences on the countries most in need'.

But will it help poor states' exports? And what will be the net effect on poverty reduction: are the producing communities in the states that may gain exports poorer than those in the graduates, and will the relative economy-wide poverty reduction effects be greater? This report answers both questions.

The report does not consider the possible effects of the EC proposal to alter the eligibility criteria for GSP+, partly because this would involve speculation over which countries will fulfil the social, political and environmental requirements. Two complementary studies of the reform proposals (by the EC and the University of Sussex) do assess the assumed effects of the GSP+ change but do not look in as much detail at the effects of graduation. Taking account of these differences, the findings of all three studies are broadly compatible with each other, which increases confidence that the results described below provide an accurate picture.

The big picture

Product and income graduation is not an effective way of helping poor, uncompetitive states. Too many of the goods on which there will be new graduation are ones that poor, uncompetitive countries cannot supply. Of those that they can supply, the tariff increases may not be sufficiently large to check the graduate's pace of growth or, if they are, the gain will more often be captured by non-poor states (including the richest in the world) than by the poorest.

The number of GSP beneficiaries will fall by over half. The value of EU imports that are graduated out of the GSP by product or from UMICs not covered by an equally good FTA will more than double from €244,831 mn (annual average 2008–10) to €504,349 mn. These headline figures, though, greatly overstate the effects since many of the goods affected by graduation face zero or very low most-favoured-nation (MFN) duties, and/or account for only a small share of EU imports from countries graduated solely on the income criterion.

When account is taken of the share of each graduate's exports to the EU that will face significantly higher tariffs, the countries facing the most substantial effects include (in addition to China and India) Costa Rica, Cuba, Gabon, Indonesia, Panama, Thailand, and Vietnam. The

severity of the impact varies widely and is not always obvious from headline figures as it depends both on the number of products involved and also on the MFN tariffs on graduated items. In relation to product graduation, for example, China is obviously heavily affected as it will be graduated on 90% of the Harmonised System (HS) chapters covered by the GSP, but for 42% of the 7092 affected items the MFN tariff is zero and for 32% it is 5% or less. By contrast, although Vietnam will be newly graduated on only 256 goods, just under half of these face MFN tariffs of 5–10% whilst nearly one-third face MFN tariffs of over 10% and/or a specific duty. When taking account of the share of exports facing high MFN tariffs, Cuba is one of the states most affected by income graduation.

Which countries might gain market share if EU imports from the graduates fall? The ‘big picture’ answer is that it will much more often be HICs, UMICs and non-graduated LMICs than the poorest. This picture does not change materially even if the assumed graduation thresholds are lowered to 15% (12.5% for clothing and textiles).

The picture is simply a function of the arithmetic of the EU’s import sources. There will be no effect on goods that are not covered by the GSP or on those that are covered but face an MFN tariff of zero. These two groups account for 60% of EU imports. Of the remainder, 40% is imported from rich states that are ineligible for the GSP and only 2% from LICs – the same share as least developed countries (LDCs), which are not a separate income category but are spread (currently in the EU’s lists) between all four of the income groups. Countries that appear frequently as potential beneficiaries include the United States (US), Switzerland, Norway and Russia.

In the case of product graduation this is largely because of the nature of the affected products. Almost three-quarters are agricultural or fisheries, with much of the remainder accounted for by organic chemicals. Natural resource endowment rather than competitive edge is likely to be the determining factor in a country’s capacity to export many of these items, and this is of course unaffected by GSP reform. In the case of income graduation a large part of the explanation for the larger, more competitive states is that a significant proportion of their sensitive exports is already excluded from the GSP

Focusing on cases where a poor-country gain is most likely

But the main concern of this report is not with the ‘big picture’ but with a very narrow focus on the goods where poor countries might gain. The big picture may overlook important gains for vulnerable states. Though small relative to the aggregate effects of the change, the gains could be very important for particular poor countries or communities within them. In a series of steps we have focused down on a shortlist of cases where poor-country gains look particularly likely. There are just ten items on the shortlist: nine of the only ten items for which the potential gains for LDCs as a group are at least €0.1 mn¹ plus one of only three items (the others having already been selected among the ten) for which a non-LDC LIC (Kenya) was calculated to have potential gains of at least the same level. The limited length of the shortlist emphasises both the small number of goods on which significant poor country gains can be expected, and the extreme focusing that has been required to identify them.

From this shortlist we selected for in-depth analysis eight case studies, in each of which we have assessed the potential poverty, environmental and fiscal effects of graduation. There is a strong body of evidence that even a transitory shock can result in declines in consumption and well-being that can have substantial and surprisingly long-term impacts. These are transmitted to households through a set of channels around which we have framed our analysis: prices, employment, taxes and transfers, access to goods and services, authority and assets. By looking at these we have been able to assess potential poverty, environmental and fiscal effects of the GSP changes.

The eight case studies are:

¹ The tenth, frozen octopus, was analysed but not included in the final list because the literature suggests it has low price elasticity of demand,

- the shrimp industry in Vietnam (the graduate), India, Bangladesh and Madagascar (potential beneficiaries);
- the leather industry in India (the graduate) and Bangladesh (the potential beneficiary); and
- the processed vegetable sector in China (the graduate) and Kenya (the potential beneficiary).

Throughout this focusing process the picture that emerges of the likely distribution of gains is repeated again and again; it is the one identified in the aggregate analysis. The poorest countries gain least. Even for the shortlist of ten items selected as most likely to produce significant poor-country gains, LDCs would receive only 16% of the total estimated gains, a slightly lower share even than HICs (for a group of products that are typically 'low income') and dwarfed by the share of UMICs (39%) and LMICs (29%).

Some of the effects on countries' trade are very small, though shrimp is an exception. This is not surprising for the graduates given that they are graduated on product-share grounds and, hence, are likely to be globally competitive. But it was also true of most beneficiaries. Beneficiaries' potential gains are small not only in terms of absolute value but also, mostly, as a share of their total exports of the goods.

No clear pattern emerges from the case studies of less-poor producers in buoyant industries being graduated in favour of poorer producers in fledgling or struggling industries. In the case of shrimp, India, which is a potential beneficiary, is the world's second-largest shrimp exporter; in Bangladesh shrimp plays a central role in the fisheries sector, which is one of the country's highest earning and fastest growing exports. For leather, India (the graduate) is one of the three largest world producers but Bangladesh is not a new entrant. After two decades of double-digit growth its exports are already substantial, a handful of large enterprises dominate its exports and tannery working conditions are some of the worst in the world. In India any effect of graduation might be felt by the low-caste and women workers found in high concentrations in the leather sector who may not have the job mobility enjoyed by others, leaving them more vulnerable to the consequences of job losses.

The overall conclusion, therefore, is that although the poverty effect of graduation will be relatively small there could still be some gains and losses. None the less, it is hard to conclude that these changes add up to a coherent shift in EU trade policy to reduce poverty. This report does not consider the alternative ways (that do exist) of using the GSP more effectively to reduce poverty in very poor, uncompetitive states. But it does show the level at which graduation sets 'the bar' for assessing the relative effectiveness in reducing poverty of the alternatives. It is low.

1 The context

1.1 The Commission's proposals

ODI has assessed the poverty implications of the graduation regime proposed by the EC for the next GSP. Under the GSP the EU levies tariffs on many imports from developing countries at a lower level than the somewhat misnamed 'most favoured nation' rate it applies to imports from those industrialised states with which it does not have an FTA.² There are three main elements of the GSP (see Box 1) which offer different levels of trade preferences to their beneficiaries: the basic or 'Standard GSP', GSP+ and the Everything But Arms (EBA) regime. They differ in terms of their breadth and depth. *Breadth* refers to how many products have preferential tariffs. *Depth* describes how much the GSP tariffs are below MFN levels. EBA is the broadest and deepest, while the Standard GSP is narrowest and shallowest.

Box 1: The GSP

The current EU GSP, which operates on the basis of Council Regulation (EC) No 732/ 2008 of 22 July 2008, and its immediate predecessor for 2006–08,³ should have expired at the end of 2011 but will now continue until the new regime is in place, probably 2014. It covers three regimes:

- the basic or 'Standard' GSP for which all 175 developing countries and territories are eligible and which covers many but not all goods;
- the GSP+ programme, which covers more goods and offers additional tariff reductions on top of the general GSP to a selected group of 15 developing countries that are vulnerable and are implementing specified core international human, labour and environmental standards and with respect to good governance;⁴
- the EBA programme, which offers duty-free and quota-free market access for virtually all goods to 50 LDCs.

Of the goods that are covered by the Standard GSP, treatment depends on whether or not they are deemed 'sensitive' (which is determined by whether or not they are produced in the EU and by the competitiveness of European producers). Non-sensitive goods enter the EU duty free; sensitive goods receive a 3.5 percentage point reduction in MFN tariffs. All EBA goods have zero duty access to the EU market. For GSP+ all *ad valorem* tariffs on items covered by the standard GSP (and some additional items) are suspended entirely,⁵ as are specific duties which do not also include an *ad valorem* element.

An independent mid-term review has indicated that the GSP is a modest success.⁶ It covers a larger number of developing countries and offers them broader, deeper preferences than do the schemes of most other major trading countries. It has increased LDC exports and welfare, a significant share of the gain accrues to the exporting country, and utilisation rates are typically high. At the same time the Standard GSP regime actually provides lower tariffs to only 8% of the beneficiaries' exports, with the figure for GSP+ being higher but still only 25%. This is because many of these countries' exports face zero MFN tariffs (so no preference is possible) and a substantial share of the remainder are excluded from the GSP.

² Primarily Australia, Canada, Hong Kong, Japan, New Zealand, Singapore, South Korea, Taiwan, United States, and any country that is suspended from the GSP – currently Belarus and Myanmar.

³ Council Regulation (EC) No 980/2005 of 27 June 2005.

⁴ Sixteen countries (Armenia, Azerbaijan, Bolivia, Colombia, Costa Rica, Ecuador, El Salvador, Georgia, Guatemala, Honduras, Mongolia, Nicaragua, Paraguay, Peru, Sri Lanka and Venezuela) were granted GSP+ preferences from January 2009, but in mid-2009 Venezuela was deleted from the list of beneficiary countries.

⁵ With the exception of those under HS sub-heading 030613, for which the duty is 3.6%.

⁶ CARIS (2010).

One key feature of the GSP provided by the EU (and by many other, mainly developed, countries) is that it is autonomous. This means that it is neither negotiated with the countries that benefit from its tariff preferences and nor are any trade 'concessions' demanded in return. It is a decision made solely by the EU to offer non-reciprocal preferences to the countries it selects as beneficiaries and on the terms it imposes, subject only to an appeal to the World Trade Organization (WTO) (see Box 2).

Box 2: The GSP and the WTO

The only constraint on a GSP granting state's freedom of action is provided by the WTO. The discrimination that the GSP imposes on non-beneficiaries is justified as a breach of the WTO's principles of non-discrimination on the basis of 'the Enabling Clause' that allows special and differential treatment in favour of developing countries. Judgements by the WTO Appellate Body have confirmed that GSP-granting states may include some differentiation in treatment between developing countries, but the exact limits of such differentiation remains a grey area. It would always be possible for an aggrieved state to take a case to the Dispute Settlement Mechanism for a ruling on whether differentiation between developing countries in the next GSP is allowable. Such a question, though, falls outside the remit of this study. It must assume that anything proposed for the next GSP is WTO compatible.

Another key feature is that it has a finite life, having to be renewed at regular intervals. The EC proposals analysed in this report, which were published in May 2011, set out its ideas for the next regime (EC 2011a). They include changes to what is known as 'graduation': the withdrawal of preferences for all or some of a country's exports (see Box 3). Current beneficiaries of the GSP will lose their eligibility entirely if they are: dependent territories of an EU state, beneficiaries of another EU trade regime that is equivalent to or better than the GSP, too rich, or too competitive for certain products. The first two of these are uncontroversial in themselves, and represent a tidying up exercise that will remove confusion;⁷ it is the others that have attracted attention. A country will become ineligible for the GSP if it 'has been classified by the World Bank as a high-income or an upper-middle income country during three consecutive years immediately preceding the update of the list of beneficiary countries' (Article 4.1.a).

⁷ There has often been controversy for example over whether the GSP is actually used – with critics overlooking the fact that only countries without better access under another regime need to use the GSP.

Box 3: Graduation in the GSP

All of the EU's GSPs have included some provision for *income graduation* (i.e. the removal of any eligibility for countries that exceed a certain income level) and *product graduation* (i.e. the removal of preferences from a country in those product groups in which it supplies more than a stated share of EU imports). Income graduation has been relatively rare but under the current regime both the Standard GSP and GSP+ (but not EBA) are subject to product graduation if a country's covered exports in a broad product group⁸ exceed 15% (or 12.5% in the case of textiles and clothing) of total EU GSP imports of that group over the three most recent consecutive years for which data are available. Product graduation also operates in reverse, with countries being reintegrated into the GSP when the share of their exports falls. Hence GSP preferences are currently withdrawn from Vietnamese exports of footwear, headgear, artificial flowers, etc. (Section XII), but have been reinstated for exports of mineral products (Section V) from Algeria, and for pearls, precious metal and stones (Section XIV) from India.

Under the Commission's proposals there will be much more extensive income graduation in the next GSP – which will have a knock-on effect on product graduation because it will reduce dramatically the value of imports in the denominator of the calculations. Although the GSP+ will now be excluded from product graduation, the thresholds for the Standard GSP will be increased to 17.5% (and 14.5% for textiles/clothing) – but of the value of imports from about 80 states instead of 176 states as at present. The product groups for which the calculations are made have also been changed. Instead of using the 21 large 'sections' into which the HS is divided by international agreement, the calculations will be in relation to one of 32 sub-groups ('GSP Sections') that have been created for this purpose from the HS by the EC.

In order to give the GSP a more permanent character than the present and past ones, the EC's proposal sets out only the criteria and formulae that it suggests should henceforth apply indefinitely to the GSP subject only to a five-yearly review. Although the proposal includes at places lists of affected countries, these are intended only as illustrative examples and have been compiled by applying the suggested criteria/formulae to the data currently available. The EC has said that it will revise the lists shortly before the next GSP becomes operational to use the most recent data available. And it proposes that this exercise be repeated regularly in the light of new data (so that some states will lose and others may gain eligibility, some may be freshly graduated and others reintegrated).

1.2 The focus and methodology of the report

It is the income graduation proposals for UMICs and the new product graduation criteria (explained in Box 3) that are the focus of this report. The proposed change to the graduation criteria will result in some countries losing GSP preferences on some or all of their exports. In other words, the EU will increase the import tax it imposes on some imports. This will not necessarily have a net adverse poverty effect in developing countries – there is one circumstance in which the poverty reducing impact could be positive. The EC has focused on this possibility, arguing in the Explanatory Memorandum that the 'draft proposal would focus the GSP preferences on the countries most in need' because the exports of the countries that would be graduated 'are putting pressure on the exports of much poorer countries that genuinely need help.'

The focus of the research has been to establish how far this hope is likely to be fulfilled. How far could graduation *on its own* help poor countries to increase or diversify their exports to the EU. This is a narrow focus – it is always possible to think of a range of packages that combine an element of trade policy with aid, investment and other measures to support poor countries in sustaining and diversifying their exports. But this is inevitable – no such package is being proposed at present; the only proposal on the table is the change to the GSP that applies only to EU import tariffs. Not even the rules of origin, the critical 'small print' of any trade regime, are under review. The GSP's rules of origin were subject to reform in 2010 and are no longer 'on the table'.

⁸ Product groups are defined in the current GSP at section level of the HS. And 'covered exports' include all goods within a section that are listed in the GSP regulation.

Box 4: Graduation and trade diversion

By definition any potential change in EU import patterns noted in this study will be the result of a deliberate change in EU trade policy to alter the relative treatment of partners from *status quo ante*. It is tempting, therefore, to label all as a case of trade diversion given that this term is employed in analyses of the effects of trade policies that do not treat all partners equally. But this may give rise to confusion since the term 'trade diversion' has a specific meaning in economics that will neatly cover some but not all of the cases that will arise under this project. The term is used typically to describe what happens if pre-existing imports from a competitive supplier are displaced by imports from a less competitive supplier as a result of the importing state applying differential tax (or other) treatment – with taxes on the latter falling relative to those on the former. Whilst the pre-tariff price of imports from the competitive supplier is lower than those from the uncompetitive one, the post-tariff price is higher.

Trade diversion as a result of graduation could occur if, for example, the imposition of (higher) MFN duties on the graduate results in a shift to more expensive imports from a country still eligible for the (lower) tariff under the GSP or another preferential trade regime. But in other cases, a graduation-induced change in import sourcing would not fit so easily into the standard definition of trade diversion. If the *status quo ante* is that the graduate is the less competitive supplier than, say, a country already subject to the MFN, then graduation might result in the reversal of previous trade diversion, with the competitive supplier able to regain its market once the preference of the graduate has been removed.

Achieving this result has required three sequential research steps (which are reported in the chapters indicated) to:

- 1 identify the countries and product groups that would be graduated and the other sources of EU imports of these goods (Chapter 2);
- 2 assess the potential for a shift in EU imports from graduated states to other developing countries (Chapter 3); and
- 3 evaluate the poverty impact in cases where both the potential graduate and beneficiary are developing countries (Chapters 4 and 5).

Do the results identified qualify as 'trade creation' or 'trade diversion'? The answer, as explained in Box 4, is that they could be either, or could more accurately be described as a 'diversion reversal'. Only some of these changes may qualify as 'trade diversion' as the term is normally understood in trade analysis because, as will be seen, there is enormous variety in the current trade regime status of the countries that are supplying the EU with items that would be subject to new graduation.

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1.3 Complementary studies

Two other analyses have been made of the proposed GSP reforms, and their findings are broadly consistent with the ones in this study. The EC (2011b) has undertaken an impact assessment that includes partial equilibrium modelling of several scenarios, one of which is similar to the proposed regime (though none is identical).

Using a model based on the SMART partial equilibrium model developed by several international organisations led by the World Bank, the EC has estimated a range of economic effects from several alternative scenarios. One of these makes some assumptions that are very similar or identical to those in the EC proposal: income graduation for UMICs and HICs (as well as withdrawal of GSP from dependencies and states with equal or better access under an FTA),

a change to the HS groups used to calculate product graduation, and changes to the GSP+ entry mechanism to make it simpler and 'more flexible' (EC 2011b: Vol. 1, 4.3). But the scenarios for the product graduation thresholds are rather different from those in the proposal. Scenario C1 leaves the current thresholds unchanged; Scenario C2 cuts them by half and removes the current safety net (so that there would tend to be more graduations). All simulations are in relation to a baseline that plots the effects of continued preference erosion.

The report argues that the simulated results from C1 (which is closest to the EC proposal) show that 'the countries most in need are in a better position *as a whole*' with gains of 'about €25 million' (Vol. 1, 5.4.1, emphasis in original). But this is against a backdrop of a large net fall in EU imports compared to the baseline (of 'about €4 billion') made up of an increase in imports from countries that have never benefited from the GSP (i.e. primarily rich countries) of 'approximately €1 billion' and a fall in imports from graduates of 'around €5 billion'. In other words, there would be some gains to needy countries in aggregate but these are small relative both to rich country gains and to the fall in imports from graduates. Most of these gains appear to result from the changes to GSP+ (Vol. 2: Annex 6.4, Table 6-5).

This is a similar conclusion to that of the second complementary study, by the University of Sussex (CARIS/TradeSift 2011). This assesses the potential shift in trade patterns resulting from income graduation and also from the proposed new GSP+ rules on the assumption that these 'increase the spread of the GSP+ system to many other old GSP beneficiaries' (p. 13). It concludes that the effects of graduation 'on GSP retaining countries are going to be small in magnitude' but that the assumed extension of GSP+ to more countries will bring gains to some of them (p. 13). Despite this, it also concludes (p. 14) that the proposed reforms 'have not dealt with the structural constraints of the system' and that 'the EC has not taken heed of the recommendations' in the CARIS mid-term review of the GSP (CARIS 2010).

Both studies are complementary to this one and their findings reinforce the 'big picture' described below. Both are relatively 'broad brush' (in terms of the product detail). The CARIS/TradeSift report explicitly explains that it has 'taken a very crude approach to the analysis of the impact of the EC's new GSP proposal, [and that] a more thorough tariff line approach would be advisable' (p. 13).

This report provides just such a follow-up, tariff-line analysis. It overlaps only partly with the other two studies. On the one hand, it looks much more closely at product graduation – the countries and goods that will be newly affected – which appears not to have been included in the simulations. On the other hand, it makes no assumptions about which countries will gain from the proposed new GSP+ rules. In contrast to the position for income graduation, the EC proposal does not include any illustrative list of potential GSP+ beneficiaries. Whilst it is possible to identify those countries currently barred on the vulnerability and size criteria that might become eligible, any assessment of those that might also fulfil the social, environmental and political criteria is speculative. Given that both studies derive most of their estimated gains for poor countries from the assumed extension of GSP+, their findings are not incompatible with those of this report.

2 Graduation - the countries and products

The first step is to identify which countries may be graduated on which products – and whether poor countries supply these items. As explained in Box 3, there is no definitive list of these. This is because the EC's document proposes the criteria that it believes should apply to graduation and that these should be applied shortly before introduction of the new regime using the most up-to-date statistics available at that time. It includes an illustrative list of the impact of the criteria were they to have been applied in May 2011 and it is this list that ODI has largely followed (see Box 5).

Box 5: Assumptions underlying the identification of the products and countries affected by new graduation

1. That the denominator for calculating graduation is the value of imports from all countries listed in Annex II of the proposal *except*:
 - Azerbaijan, Colombia, Iran and Peru (on the assumption that they will remain UMICs until the new GSP enters into force); and
 - Myanmar (on the assumption that its suspension from the GSP will not have been lifted by the time the new GSP enters into force).
2. A general note to Annex V (list of products included in the general arrangement) states:
For reasons of simplification, the products are listed in groups. These may include products for which Common Customs Tariff duties [were] withdrawn or suspended.
3. We have assumed that, where Annex V lists simply 'Chapter 73', 'Chapter 74' etc. (i.e. entire HS chapters), the value of *all* imports in these chapters is included in the EU import totals from which the individual beneficiary shares are calculated – not just those items for which the MFN rate is not zero.
4. The totals used **do not** include the value of imports recorded under alphanumeric codes (mostly relating to confidential trade or trade broken down at chapter level only). These codes do not appear in the tariff schedules.
5. The EC has acknowledged that there was an error in Annex V, and that there is a GSP Section 6b (not shown in Annex V) covering HS Chapters 31 to 38; our research assumed (correctly) that this was the case.
6. We initially assumed that two micro-states – Cook Islands and Niue – which were not included in Annex II (list of beneficiary countries) had been excluded as UMICs, although it was not possible to verify this because they do not appear in the World Bank income group lists. But in mid-September the EC indicated that these countries had been omitted from the list of beneficiaries in error. They have therefore been removed from our calculations relating to UMIC graduates, but their tiny exports have not been included from the denominator when calculating product graduation.
7. That where only part of an EU Combined Nomenclature (CN) 8-digit code receives the GSP preference, the imports listed from the GSP beneficiary countries are in the particular sub-code to which the preference **does** apply. The goods in question are:

CN8	Description	Dates/quantity/item covered
07070005	cucumbers, fresh or chilled	16 May–31 Oct
07099080	fresh or chilled globe artichokes	1 July–31 Oct.
08052010	fresh or dried clementines	1 March–31 Oct.
08052030	fresh or dried monreales and satsumas	1 March–31 Oct.
08052050	fresh or dried mandarins and wilkings	1 March–31 Oct.
08052070	fresh or dried tangerines	1 March–31 Oct.
08052090	fresh or dried tangelos, ortaniques, malaquinas and similar citrus hybrids	1 March–31 Oct.
08061010	fresh table grapes	1 Jan.–20 July & 21 Nov.–31 Dec. excl. variety Emperor 1–31 Dec. Containers of net capacity =< 2 kg
08062030	sultanas	1 May–30 June
08082050	fresh pears (excl. perry pears, in bulk, from 1 august to 31 december)	1 Jan.–31 May & 1 Aug.–31 Dec.
08091000	fresh apricots	1 Jan.–20 May & 11 Aug.–31 Dec.
08092095	fresh cherries (excl. sour cherries 'prunus cerasus')	1 Jan.–10 June & 1 Oct.–31 Dec.
08093090	peaches, fresh (excl. nectarines)	1 Jan.–10 June & 1 Oct.–31 Dec.
08094005	fresh plums	1 Jan.–30 April & 1 Aug.–31 Dec.
08101000	fresh strawberries	Quinoa
10089090	cereals	Other than unwrought
28443011	cermets containing uranium depleted in u 235 or compounds of this product	Other than unwrought
28443051	cermets containing thorium or compounds of this product	'Other'
32019090	tanning extracts of vegetable origin	

There can only be a possibility of graduation creating market space for imports from a poor, less competitive state if all the following three conditions apply.

- 1 A country must face *new* graduation for a product (i.e. it should not already be graduated for that product).
- 2 The tax change as a result of graduation relative to the EU's treatment of competitors must be sufficiently large to support a plausible case that imports from the graduate might decline.
- 3 Any potential beneficiary states of such a decline must already be exporting the products concerned to the EU on a sufficiently large scale to support a plausible case that they might be able to increase sales solely as a result in the change of tax treatment relative to the graduate.

Using the latest available data, ODI has identified a 'longlist' of cases that fulfil all three conditions.

2.1 The countries and products that will be graduated

The overall picture

Table 1 summarises the broad picture that has emerged from the first step as applied to both product and income graduation. The value of EU imports that are graduated out of the GSP by product or from UMICs will more than double from €244,831 mn (annual average 2008–10) to €504,349 mn. Whilst most of this increase will occur as a result of the income graduation of UMICs, there is also a 13% net increase in the value of trade subject to product graduation.

Table 1: Summary of graduations by value

Country	Value of EU imports (average 2008–10, € mn)					Share of value of GSP-covered items	
	<i>Total^a</i>	<i>GSP-covered items^b</i>	<i>Currently graduated</i>	<i>New graduation</i>	<i>New de-graduation</i>	<i>Currently graduated</i>	<i>Graduated from 2014</i>
Product graduation							
China	250,671	240,480	236,030	3,169	98	98.1%	99.4%
India	31,143	27,458	1,365	4,175	–	5.0%	20.2%
Indonesia	13,302	11,431	1,503	890	–	13.1%	20.9%
Vietnam	9,167	8,886	2,096	1,890	–	23.6%	44.9%
Thailand	16,617	15,221	1,042	1,522	1,042	6.8%	10.0%
Ukraine	11,249	6,731	–	799	–	–	11.9%
Nigeria	13,643	13,575	–	12,759	–	–	94.0%
Iraq	7,537	7,536	–	7,528	–	–	99.9%
Totals	353,330	331,318	242,036	32,732	1,140	73.1%	82.6%
Income graduation (UMICs without other agreements with the EU)							
Argentina	9,583	3,732	–	3,732	n/a	–	100.0%
Azerbaijan	9,266	9,249	–	9,249	n/a	–	100.0%
Brazil	32,155	15,168	2,301	12,866	n/a	15.2%	100.0%
Costa Rica	3,859	3,333	–	3,333	n/a	–	100.0%
Cuba	354	259	–	259	n/a	–	100.0%
Gabon	1,018	935	–	935	n/a	–	100.0%

Country	Value of EU imports (average 2008–10, € mn)					Share of value of GSP-covered items	
	<i>Total^a</i>	<i>GSP-covered items^b</i>	<i>Currently graduated</i>	<i>New graduation</i>	<i>New de-graduation</i>	<i>Currently graduated</i>	<i>Graduated from 2014</i>
Iran	13,357	12,941	–	12,941	n/a	–	100.0%
Kazakhstan	14,733	14,092	–	14,092	n/a	–	100.0%
Libya	28,055	27,791	–	27,791	n/a	–	100.0%
Malaysia	18,118	17,205	494	16,711	n/a	2.9%	100.0%
Palau	0.1	0.1	–	0.1	n/a	–	100.0%
Panama	724	591	–	591	n/a	–	100.0%
Russian Fed.	131,608	120,563	–	120,563	n/a	–	100.0%
Uruguay	1,173	430	–	430	n/a	–	100.0%
Venezuela	4,857	4,429	–	4,429	n/a	–	100.0%
Totals	268,860	230,718	2,795	227,922		1.2%	100.0%

Notes:

(a) In HS Chapters 1–97; does not include values in alphanumeric codes.

(b) Includes value of zero MFN items where these are in chapters listed in their entirety in the annexes detailing GSP product coverage.

Source: Eurostat COMEXT database.

The next sub-section explains the selection process underpinning these figures and is followed by sub-sections giving more detail on product and on income graduations.

Selection process

The first step is to identify the cases in which there would be product graduation. This was done by applying the 17.5% (and 14.5% for clothing/textiles) thresholds to the EU's average imports over the three years 2008–10 of goods covered by the GSP from the 80 states deemed likely to be eligible for the GSP. We also undertook a sensitivity analysis by noting the difference in outcome if the graduation thresholds were reduced to 15% (and 12.5% for clothing/textiles)

We then removed from the list those items for which the country concerned is already graduated. This resulted in a list of the goods on which potentially there could be 'new graduations'; by definition the *status quo* will be affected only by new graduations.⁹

The next step was to apply the condition that the tax change must be sufficiently great that the exports of the graduate might plausibly decline. We removed from the list all items with:

- an MFN tariff of zero;
- a positive MFN tariff of less than 5%.¹⁰

In the first case (of zero MFN) there is no GSP preference to be lost and so the change will have no effect on trade.

⁹ Because the graduation calculations are undertaken for large groups of products, a graduate will not necessarily export all of the items covered by the group for which they are graduated or may export only small values of some items. We removed from the list items in which there were only insignificant imports from the graduate, defined as those accounting for less than 1% of the country's exports in the GSP section concerned. This means that there might be a fall in imports from graduates on a larger number of products than are identified in this report but, by definition, the values would be very small. Hence, whilst we may have underestimated the potential adverse effects of the EC proposals on graduates, we will have done so only to a very minor degree.

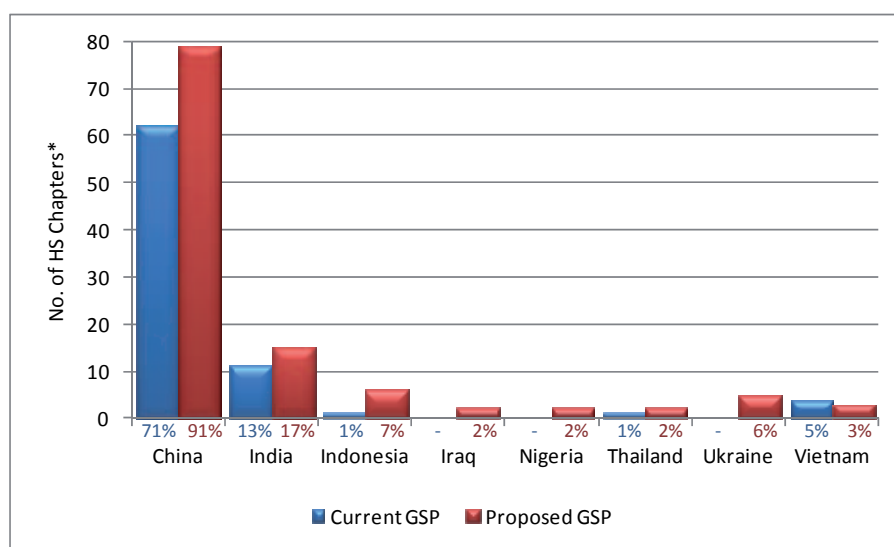
¹⁰ Items facing an MFN tariff of zero were also removed during the sensitivity analysis (assuming thresholds of 15% and 12.5%) so as to identify all the additional positive MFN graduations that would result, but the MFN 5% filter was not applied to the additional items thrown up by the sensitivity analysis.

The reason for the second filter (removing items with tariffs of under 5%) was to focus attention on the goods where a shift in the pattern in imports to the benefit of poor countries is more likely. As explained in the next chapter, there are several possible responses by the graduates to the loss of GSP tariffs. If the tariff hike is small compared to the variations in price that occur all the time (as a result, for example, of exchange rates and freight charges) it may be more likely that the increase is simply absorbed by the export value chain and there is no fall in EU imports. If there is no fall in imports from the graduate there is no possibility of offsetting gains for poor-country exporters. The graduates will lose export revenue (which will accrue as increased tax revenue to the EU) and so by excluding these items we are understating their losses. But, as the research is primarily concerned with the possibility of gains for poor countries rather than estimating the losses for graduates, it is more important to focus on those items where such a gain is more likely (and more likely to be significant).¹¹

Which countries will face new product graduation?

Figure 1 provides a broad-brush snapshot of product graduation, intended to give an impression of the relative scale of the change compared to the *status quo*. It shows country by country the number of HS chapters in which they are currently graduated plus those from which they would be graduated under the proposed new regime. Hence, China is currently graduated out of 62 HS chapters (in which there are GSP-covered items); under the new regime this number increases to 79.

Figure 1: Summary of change in graduations by HS chapter



Notes: Brazil and Malaysia, subject to graduation under the current GSP, are not GSP beneficiaries under the new proposal. GSP coverage within some HS chapters is partial. The counts here indicate the number of chapters affected by graduation — complete or partial. The percentages shown indicate the share of chapters in which there is graduation in the total in which there is GSP coverage (87).

The first impression is of significant but not dramatic increase. The number of HS chapters from which China and India are graduated increases by about one-quarter and one-third respectively. But this change needs to be seen against the background that there are only 87 HS chapters in which GSP preferences are available. Hence, China (but not India) would be substantially graduated out of the entire GSP — it would retain preferences in less than one-tenth of the covered chapters. There are proportionately larger but absolutely small changes for Indonesia and Thailand, and a decline in the extent of graduation for Vietnam.

¹¹ The same applies to items facing higher MFN tariffs but on which the GSP margin of preference is only a 3.5 percentage point reduction in the tariff. These have been identified on a case-by-case basis when selecting and analysing the case studies.

Although three countries – Iraq, Nigeria and Ukraine – are graduated for the first time on the proposed thresholds, as indicated in Table 2, their affected exports face MFN tariffs that are either zero or very low, and so the practical (as opposed to the symbolic) effect of this change will be trivial. The table shows the number of items that the EU actually imports from the graduated states in the HS chapters from which they will be graduated (Column 2) and the MFN tariff bands into which they fall (Columns 3–6). In all cases a significant proportion of imports face a zero MFN tariff and so graduation will have no effect. For China, Ukraine, Iraq and Nigeria the MFN zero category is the largest.

Table 2: Summary of product graduations by tariff band

Country	Threshold ^a	No. exports affected	Proportion of value in tariff band (%):			
			MFN 0	MFN >0 to 5%	MFN >5 to 10%	MFN > 10% (or specific duty)
China	17.5%	7,092	41.6	31.7	11.2	15.5
	15%	7,133	41.6	31.7	11.2	15.5
India	17.5%	1,446	35.7	19.6	43.8	1.0
	15%	1,480	34.3	18.8	42.2	4.7
Indonesia	17.5%	139	24.8	49.5	16.6	9.1
Iraq	17.5%	8	100.0	0.0	–	–
Nigeria	17.5%	28	97.9	1.9	0.2	–
	15%	134	97.0	2.5	0.5	0.0
Thailand	17.5%	146	31.2	41.1	1.1	26.5
	15%	525	24.4	45.7	3.9	26.0
Ukraine	17.5%	82	88.6	11.2	0.0	0.2
	15%	118	57.1	10.1	32.6	0.1
Vietnam	17.5%	256	20.0	4.0	45.1	31.0

Note:

(a) Our analysis indicates no new graduations for textiles and clothing, to which the lower 14.5% (proposed) and 12.5% (current/scenario) thresholds apply. For clarity, the thresholds applied are therefore shown simply as 17.5% and 15% in this and succeeding tables. Where no 15% threshold is shown, the country concerned has no additional graduations at this level.

Source: Derived from data obtained from Eurostat's COMEXT database and tariff schedules available in UNCTAD's TRAINS database.

If the lower thresholds are adopted matters are more serious for Thailand, Ukraine and, to a lesser extent, India. Indonesia, Iraq and Vietnam are unaffected as there is no spread of graduation. Of the others, China experiences virtually no change. The newly graduated items for India (small in number) and for Thailand (large in number) fall disproportionately in the category with an MFN of over 10%. Ukraine has almost one-third of its affected items in the MFN over 5% and less than 10% group. For Nigeria there is a large increase in the number of affected items but most are still in the MFN zero and under 5% groups though the possibility of problems arising from the reimposition of even small tariffs should not be ruled out without further detailed investigation of the product markets concerned.

The effects of income graduation

We completed an analogous set of steps for 15 states that appear likely to be graduated out of the GSP solely because they are UMICs (and not additionally because they have an FTA with

the EU).¹² All EU imports from these states currently covered by the GSP and on which they are not currently graduated were identified, and those facing MFN tariffs of zero or less than 5% were put to one side. Overlaps between the remaining items and those on which at least one country is likely to be product-graduated were noted.

Table 3 provides summary features of the exports of UMIC graduates which will be affected, listed according to the relative importance of affected exports in their total exports to the EU. (In other words, countries near the base of the table have significant exports that are either not covered by the GSP, so will be unaffected by graduation, or face MFN tariffs of 5% or less).

Table 3: Summary of affected UMIC exports ^a

UMIC exporter	No. exports affected	Share of affected exports in total value of exports to EU ^b	Value of total exports to EU (€ mn) ^c	No. of 'key' exports (accounting for 1%+ of total exports to EU)	Share of 'key' exports in total value of exports to EU ^b
Palau	8	88.9%	0.1	3	88.3%
Cuba	240	39.6%	354	8	35.5%
Argentina	1,626	23.1%	9,583	5 ^d	10.9%
Costa Rica	538	16.6%	3,859	1	10.9%
Panama	460	12.5%	724	5	9.0%
Uruguay	669	11.9%	1,173	2	3.5%
Malaysia	1,872	11.6%	18,118	1	1.1%
Brazil	2,020	11.2%	32,155	–	
Gabon	110	10.1%	1,018	2	9.1%
Venezuela	541	8.4%	4,857	3	5.1%
Iran	977	4.3%	13,357	1	1.2%
Russian Federation	2,456	2.8%	131,608	–	
Kazakhstan	431	1.7%	14,733	–	
Libya	165	0.5%	28,055	–	
Azerbaijan	206	0.1%	9,266	–	

Notes:

(a) Here defined as those which:

- are covered by the GSP (and for which the country in question is not already graduated); and
- face an MFN rate of 5% or more (or a specific/combined duty).

(b) Shares calculated on the values shown in Column 4.

(c) Average 2008–10. These values exclude those in alphanumeric codes (which relate to confidential trade or trade broken down at chapter level only).

(d) A sixth item appearing to meet the 1%+ of total export value on an annual basis (CN 08082050 – fresh pears) is not included, as imports in the only two months in which the GSP preference applies (May and June) fall well below the 1% threshold.

Sources: Eurostat COMEXT database; UNCTAD TRAINS database.

¹² i.e. Argentina, Azerbaijan, Brazil, Costa Rica, Cuba, Gabon, Iran, Kazakhstan, Libya, Malaysia, Palau, Panama, Russian Federation, Uruguay and Venezuela.

This assumes that, for example, no EU–Mercosur FTA is agreed before 2014 (so that Argentina, Brazil and Uruguay are graduated solely on income grounds), and that the Southern African Development Community interim Economic Partnership Agreement is signed by Namibia so that it retains preferential access even after the expiry of the temporary autonomous preferences that the EU has applied to initialising states.

It also assumes that the FTAs agreed with Colombia and Peru, two of the four states which (as noted in Box 5) are UMICs but have not yet been so classified for three full years, are likely to be in force by 2014.

Belarus has not been considered, even though it is a UMIC, since it has been 'temporarily' suspended from the GSP for some time. Whilst the EC proposal would crystallise its exclusion, it would not alter the position compared to the present and recent past.

If Palau, which is at the top of the table, is discounted on the grounds that its position is influenced by its tiny exports (absolutely and proportionately) to the EU, seven of the remaining 14 graduates are Latin American states, one is African, two are North African/Middle Eastern, and three are former Soviet Union; only one is Asian.

Looking at Column 5, it would appear that in most – but not all – cases graduation will affect only a very small number of items accounting for 1% or more of each state's exports to the EU. An exception is Cuba, which has over one-third of its total exports to the EU in goods that are currently covered by the GSP and face an MFN tariff of 5% or more. Some 11% of Argentina's €9.6 billion exports to the EU fall into the same category, while for Gabon (the only sub-Saharan African country in the list) the figure is 9.1%.

2.2 Potential beneficiaries of graduation

Which countries might gain market share if EU imports from the graduates fall? The 'big picture' answer is that it will much more often be high-income countries (HICs), UMICs and non-graduated LMICs than the poorest. This is simply a function of the arithmetic of the EU's import sources. There will be no effect on goods that are not covered by the GSP and, as noted, on those that are covered but face an MFN tariff of zero. These two groups account for 60% of EU imports. Of the remainder, 40% is imported from rich states that are ineligible for the GSP and only 2% from LICs – the same share as LDCs, which are not a separate income category but are spread (currently in the EU's lists) between all four of the income groups.

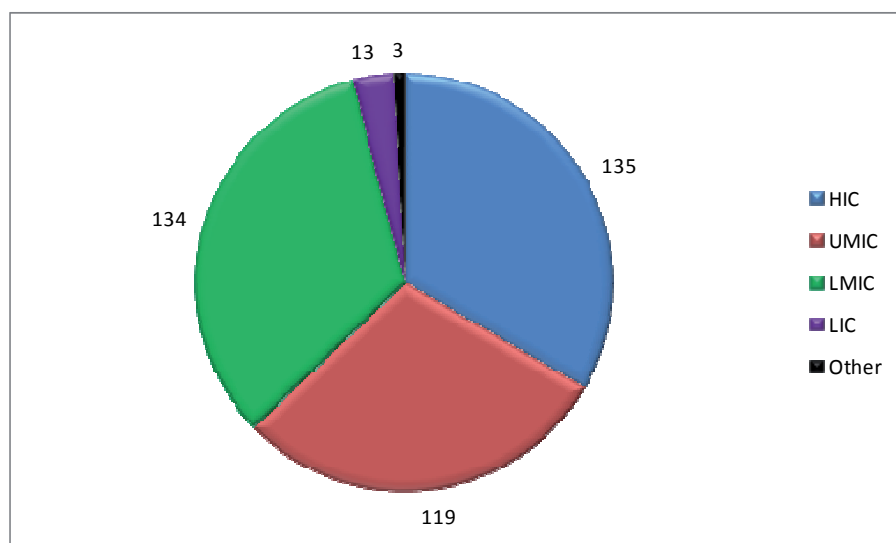
But the focus of this report is not on the 'big picture' but on the very narrowly focused one of the goods where poor countries might gain. Though small in absolute numbers and value, these gains could play a disproportionate *relative* role in helping to diversify or sustain poor-country trade. To focus on the cases where any effect would be most substantial we concentrated initially on countries supplying at least 5% of EU imports for any of the graduated products, because it seems implausible that any state supplying less than such a low share of such a narrowly defined product group is being prevented from expanding mainly because the graduate – and only the graduate – is too dominant in the market. Other factors, such as supply capacity or competition with non-graduates as well as graduates, are more plausible explanations for the low market share.¹³

Just to be sure that no important products had been excluded by this 5% import share filter, it was relaxed when analysing in detail an initial longlist of products for which poor-country gains appear most likely. The analyses in Chapter 3 looked at all suppliers of the longlisted products regardless of import share when compiling the shortlist of items that were assessed for their suitability as case studies.

These steps were then repeated for the lower, sensitivity analysis thresholds to identify any major changes.

The broad pattern of EU import sources for the goods affected by both product and income graduation is shown in Figure 2. This confirms two things. The first is that the broad picture for these 'key products' is very similar to that described above for all items covered by the GSP that face a positive MFN tariff: LICs supply only a tiny share. Of the 404 country/product combinations in Figure 2, almost two-thirds relate to HICs and UMICs; LICs account for only 3.2% of the total. The second is that, small though it is, this share is larger than the LICs' 2% share of all items covered by the GSP facing a positive MFN tariff. So, at least when the filter of a minimum market share of 5% of imports is applied, graduation could have a disproportionately large positive impact on LICs.

¹³ It should be noted that this cut-off is lower than that suggested by the EC in relation to safeguards – Article 29.2 exempts from safeguard measures states supplying less than 8% of imports, presumably on the grounds that they are minor suppliers. Although the two figures are not directly comparable the suggestion that 5% is not seriously too high does seem to be supported. The safeguards are in relation to imports of 'products from GSP section ...'. It is inferred that this means the 8% is applied to GSP imports in any CN8 code within the specified sections. The 5% used in this study similarly applies to specific CN8 items but is applied to all extra-EU imports and not just GSP imports.

Figure 2: Main EU import sources for key graduated products

Note: Income groups based on World Bank classifications at January 2011.

'Other' = countries not listed by the World Bank (other than Taiwan, which is included in HICs), and countries not specified in the trade statistics.

Product graduation

A summary of the sources of EU imports for the goods affected by *new* product graduation is given in Table 4.

It provides an overview of how likely it may be that any reduction in imports from graduates results in an increase in imports from poor states. The answer (predictable from Figure 2) seems to be: possibly in some but probably not most cases. Since the results on the scenario of lower thresholds are not substantially different in type (as opposed to scale) the discussion refers primarily to the effects of adopting the EC's proposals.¹⁴

Apart from Thailand, India, Vietnam and Peru, all of the countries from which the EU imports on a significant scale three or more of the 54 key products on which China will be graduated are HICs or UMICs. The EU has trade agreements with six of the 15 states from which it imports three or more of these goods and so, potentially, will be treating their products more favourably than those of China. At the same time, there are a number of poor states (including four LDCs, shown in bold) that supply one or two of the key exports on which China will be graduated. They could potentially benefit from any trade shift on these items. A similar picture applies to the other graduates. Of the 108 items listed in Column 1, LDCs supply at most 15 between them (and fewer if some export the same items as others).

¹⁴ The inclusion of additional graduation at the scenario 15% threshold results in a long-list of 142 country/product combinations, covering 128 discrete products. Of these, 13 are key for more than one country. These are the six shown in footnote 15, plus:

19023010	dried, prepared pasta	21039090	sauces and preparations
19059055	extruded or expanded products, savoury or salted	21069092	food preparations n.e.s.
19059090	pizzas, quiches and other unsweetened bakers' wares	23091090	dog or cat food put up for retail sale

In all of which the overlap is between China and Thailand, plus
 18040000 cocoa butter
 in which the overlap is between China, Nigeria and Thailand.

Table 4: Most frequent EU import sources for key product-graduated exports

Country	Threshold ^a	No. key exports identified ^b	Most frequent EU import sources ^c <i>Country</i>	<i>on no. of key exports</i>
China	17.5%	54	United States	14
			Thailand, Turkey	12
			Switzerland	8
			Norway	7
			Argentina, India, Vietnam	6
			Iceland, Russian Fed., Serbia	5
			Chile, New Zealand, Peru	4
			Malaysia	3
			Bangladesh, Ecuador, Egypt, Faroes, Indonesia, Macedonia, Madagascar, Mexico, Moldova, Morocco, Senegal, Singapore, South Africa, Ukraine	2
			Albania, Belarus, Brazil, Cameroon, Colombia, Costa Rica, Côte d'Ivoire, Croatia, Falklands, Ghana, Greenland, Guatemala, Hong Kong, Israel, Japan, Kazakhstan, Kenya, Mauritania, Namibia, Pakistan	1
India	15%	No additional key exports		
	17.5%	29	China	20
			United States	19
			Switzerland	16
			Brazil, Japan	9
			Singapore	7
			Argentina, Pakistan	4
			Egypt, Uruguay	3
			Bangladesh, Mexico, Norway, Russian Fed., Turkey	2
			Indonesia, Israel, Korea Rep., Moldova, South Africa, Taiwan, Vietnam	1
	15%	10	Brazil, United States	8
Indonesia	17.5%	1	Malawi	5
			China, Tanzania	3
			Argentina, Indonesia, Mozambique, Zambia	2
			Bangladesh, Canada, Serbia, Uganda, Zimbabwe	1
			Turkey, Vietnam	1
Nigeria	17.5%	No key exports identified		
	15%	2	Côte d'Ivoire, Ghana, Indonesia, Malaysia	2
Thailand	17.5%	12	Ecuador, Mauritius, Vietnam	4
			Canada, Indonesia, Philippines	3
			Chile, China, Colombia, Côte d'Ivoire, Ghana, Greenland, Iceland, India, Morocco, Seychelles	2
			El Salvador, Guatemala, Korea Rep., Macedonia, Norway, Turkey, United States	1

Country	Threshold ^a	No. key exports identified ^b	Most frequent EU import sources ^c <i>Country</i>	<i>on no. of key exports</i>
	15%	19	China	10
			Switzerland, United States	8
			Indonesia	6
			Kenya, Turkey	4
			Philippines, Vietnam	3
			India, Singapore	2
			Costa Rica, Côte d'Ivoire, Croatia, Ghana, Korea Rep., Malaysia, Mexico, New Zealand, Norway	1
Ukraine	17.5%	No key exports identified		
	15%	3	Argentina, Russian Fed.	3
			Serbia	2
			Bosnia/Herzegovina, Brazil, Moldova, Norway	1
Vietnam	17.5%	12	China	6
			Chile, India, Thailand	4
			Argentina	3
			Bangladesh, Kazakhstan, Korea Rep., Morocco, Peru, Senegal	2
			Ecuador, Falklands, Greenland, Iceland, Indonesia, Madagascar, Mauritania, Mexico, Russian Fed., South Africa, United States	1

Notes:

(a) Where no lower threshold is shown, the country concerned has no additional graduations at this level.

(b) 'Key exports' here defined as those:

- facing graduation under the proposed GSP and not already graduated under the current GSP;
- which face an MFN rate of 5% or more (or a combined/specific duty); and
- which account for 1% or more of the country's exports in the GSP section concerned.

No exports meeting these criteria were identified for Ukraine, Iraq or Nigeria.

(c) 'Import sources' here defined as any country supplying 5% or more of EU imports of the product concerned from extra-EU. LDCs in bold font.

One striking feature of the table is that graduates for some products are major suppliers of others where another country will be graduated (yet there is very little overlap in the products on which states are graduated).¹⁵ India and Vietnam each supply six of the key exports on which China will be graduated; China is the most frequent supplier of the 29 key exports on which India will be graduated; Vietnam supplies the one key export on which Indonesia will be graduated and is one of the most frequent suppliers of the goods on which Thailand will be graduated (followed by Indonesia, China and India); whilst China is the most frequent supplier of the 12 key exports on which Vietnam will be graduated, followed by India and Thailand. There is obviously some potential for the graduation partly to result in a carousel in which graduates swap exports with each other.

¹⁵ Only six of the products on which there are new graduations at the proposed 17.5% threshold have been identified as key for more than one graduate:

03042919	frozen fillets of freshwater fish	03061380	frozen shrimps and prawns
03042999	frozen fillets of saltwater fish	03074938	squid 'loligo spp.', frozen
03061350	frozen shrimps of the genus 'penaeus'	03075910	frozen octopus 'octopus spp.', with or without shell

The overlap is in all cases between China and Vietnam.

One possible reason there are so few poor-country suppliers is that the products on which there will be new product graduation are heavily concentrated on a small number of sectors. This is illustrated in Table 5, which aggregates to the HS 2-digit level the CN 8-digit items on which there will be new product graduation for the five countries (seven under the lower threshold scenario) listed in Table 4. Of the 102 separate items (128 with the lower threshold scenario) covered by the table, 72% (77% for the lower threshold) are agricultural or fisheries. The only other product groups (under either scenario) are organic chemicals and raw hides/skins/leather (taken here to be a manufacturing input rather than an agricultural output).

Table 5: Summary of products identified as key for newly product-graduated countries

HS2	HS2 description	No. of 8-digit items identified as 'key' for at least one newly graduated country	
		17.5%	15%
03	fish and crustaceans, molluscs and other aquatic invertebrates	24	24
29	organic chemicals	21	21
16	preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates	12	12
20	preparations of vegetables, fruit, nuts or other parts of plants	10	18
07	edible vegetables and certain roots and tubers	9	9
41	raw hides and skins (other than furskins) and leather	8	8
08	edible fruit and nuts; peel of citrus fruits or melons	3	3
17	sugars and sugar confectionery	3	3
19	preparations of cereals, flour, starch or milk; pastrycooks' products	3	5
21	miscellaneous edible preparations	3	4
23	residues and waste from the food industries; prepared animal fodder	3	3
02	meat and edible meat offal	1	1
04	dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included	1	1
18	cocoa and cocoa preparations	1	2
24	tobacco and manufactured tobacco substitutes	–	10
15	animal and vegetable fats and oils	–	3
22	beverages, spirits and vinegar	–	1

This strong focus probably reflects the fact that EU imports of manufactures tend either to be already liberal compared to some agricultural and fisheries groups or, if not, that the item is already subject to graduation in the GSP. It might also partly be because, counter-intuitively, the effect of removing the UMIC and richer states from the denominator has been to reduce the size of the denominator more for agricultural/fisheries goods than for manufactures/industrial goods (so that a given value of imports of the former more frequently exceeds the graduation threshold than do those of the latter).

Whatever the reason, the strong product bias is likely to have an impact on the potential for poor countries to increase exports as a result of graduation. Given the rules of origin (which tend to require all agricultural/fisheries and most processed food/fish products to be wholly originating) it is often much clearer whether or not a supply capacity exists in relation to agricultural/fisheries items than manufactures, where, at least in principle, appropriate investment could result in increased supply capacity to take advantage of any trade shift.

Analysis of these data resulted in the creation of a 'longlist' of items arising from product graduation worthy of further investigation (reported in Chapter 3). Between them, the 57 items on this longlist cover 12 of the 14 HS chapters listed in Table 5. They are ones in which:

- EU average imports exceed €40 mn;
- there are at least three main sources of EU imports for each of these items apart from the graduate (which weeds out cases where only a few states have a supply capacity).

There are 22 supplier/product combinations on the longlist which involve neither HICs nor UMICS. This means that there exists some chance that the exports of poorer states might benefit from any trade shift.

Income graduation

Three of the items on the longlist are also significant EU imports from countries subject to income graduation. In addition there are items (listed in Table 6) that meet the criteria for the selection of the 57 item longlist but are affected only by income graduation. None of these additional products is imported on a significant scale from a LIC.¹⁶

Table 6: Goods subject to income but not product graduation that meet the longlist criteria

Key product for	CN8	Description	Main suppliers (5% or more of total EU imports from Extra-EU)	Avg. imports from extra-EU, 2008–10 (€ mn)
Argentina	87042191	motor vehicles for the transport of goods, with compression-ignition internal combustion piston engine "diesel or semi-diesel engine" of a gross vehicle weight ≤ 5 t, of a cylinder capacity ≤ 2.500 cm ³ , new	All suppliers	3,161.7
			Turkey	2,209.2
			Thailand	416.7
			Japan	183.1
			<i>Argentina</i>	<i>130.0</i>
Gabon	44123110	plywood consisting solely of sheets of wood ≤ 6 mm thick, with at least one outer ply of one the following: dark red meranti, light red meranti, white lauan, sipo, limba, obeche, okoumé, acajou d'afrique, sapelli, virola, mahogany "swietenia spp.", palissandre de rio, palissandre de para or palissandre de rose	All suppliers	62.4
			Gabon	32.2
			Morocco	11.8
			China	10.2
			Indonesia	3.7
Malaysia	39232100	sacks and bags, incl. cones, of polymers of ethylene	All suppliers	911.5
			China	319.2
			Malaysia	196.4
			Vietnam	81.1

¹⁶ One item – yellowfin tuna – is imported from a LMIC that is an LDC (Senegal). As processed tuna is already on the long-list (and so subject to value chain analysis, which also covers the fresh product) it was decided not to add it as a 58th item.

Key product for	CN8	Description	Main suppliers (5% or more of total EU imports from Extra-EU)	Avg. imports from extra-EU, 2008–10 (€ mn)
			Turkey	69.6
			Thailand	58.0
Panama	03034290	frozen yellowfin tunas "thunnus albacares" (excl. for industrial processing or preservation)	All suppliers	45.3
			Panama	7.8
			Senegal	7.4
			Cape Verde	7.3
			Neth. Antilles	6.3
			Mexico	5.9
			Seychelles	4.2
Panama	08071100	fresh watermelons	All suppliers	70.1
			Costa Rica	14.8
			Brazil	14.3
			Panama	13.8
			Tunisia	5.5
			Turkey	4.7
Panama	08071900	fresh melons (excl. watermelons)	All suppliers	259.5
			Brazil	118.8
			Morocco	49.2
			Costa Rica	36.2
			Honduras	16.9
			<i>Panama</i>	<i>10.5</i>
Venezuela, Iran	29051100	methanol "methyl alcohol"	All suppliers	1,345.2
			Russia	192.9
			Trinidad/Tobago	187.4
			Iran	166.9
			Saudi Arabia	136.6
			Norway	107.8
			Libya	100.1
			Venezuela	70.8
Venezuela	29091990	acyclic ethers and their halogenated, sulphonated, nitrated or nitrosated derivatives (excl. diethyl ether and tert-butyl ethyl ether [ethyl-tertio-butyl-ether, etbe])	All suppliers	613.1
			Saudi Arabia	200.6
			United Arab Emirates	121.3
			Venezuela	115.2
			United States	41.9
			Qatar	39.3
			Brazil	32.7

Key product for	CN8	Description	Main suppliers (5% or more of total EU imports from Extra-EU)	Avg. imports from extra-EU, 2008–10 (€ mn)
Venezuela	76051100	wire of non-alloy aluminium, with a maximum cross-sectional dimension of > 7 mm (excl. stranded wire, cables, plaited bands and the like and other articles of heading 7614, and electrically insulated wires)	All suppliers	391.3
			Norway	97.1
			Russia	66.9
			Venezuela	62.0
			Iceland	57.0
			Brazil	40.0

3 Selecting the case studies

Identifying the countries and products that would be affected by graduation if it were to be introduced now is a relatively straightforward task; estimating what effect it will have on trade patterns is more tricky. New graduation could have one or more of four potential effects.

- 1 **Margin trimming:** it may have no effect on the volume of imports from the graduated state (which is able to remain competitive even when paying MFN tariffs by reducing costs or trimming margins).
- 2 **European protection:** it may result in a fall in EU imports as domestic suppliers become more competitive with imports from the graduated state.
- 3 **Increased rich country exports:** it may result in a decline in imports from the graduated state and an increase in imports from rich states that trade with the EU on MFN or FTA terms.
- 4 **Increased poor-country exports:** it may result in a decline in imports from the graduated state and an increase in imports from other GSP beneficiaries.

Only in the fourth case is there a possibility of offsetting development gains, with any loss for the exporting state being set against (possibly larger) gains for a poor state that is able to increase its exports.

In Case 1, trade patterns do not change at all: since there is no decline in imports from the graduate there can be no market share gain by another state (or by EU producers) as a consequence of graduation. Money is simply taken out of the supply chain and transferred to the European budget, so that there is a negative effect in the graduate (and potentially for EU consumers) but no offsetting gain for any other producer group.

In Cases 2 and 3 the gain from any fall in imports from the graduates is offset by increased supply from countries that are not poor. Whilst there could be poor producing communities in some of these beneficiary states, such a shift does not fulfil the Commission's stated objective that the reform will 'focus the GSP preferences on the countries most in need' (EC 2011a: 2).

Deciding what assumptions to make about the relative incidence of margin trimming compared to the other three cases is not made easier by the fact that the EC proposal makes statements that in most circumstances would appear to be contradictory. On the one hand, it argues that graduation will help reduce 'pressure on the exports of much poorer countries that genuinely need help' and 'would focus the GSP preferences on the countries most in need.' On the other, it argues that 'thanks to increased trade, many developing countries and export sectors have successfully integrated within the global marketplace. In such cases, they are able to continue to *expand unaided*' and that graduation 'suspends unwarranted preferences' for 'competitive imports'. (emphasis added). The implication of the second statement is that graduates will continue to be able to export the same volumes through margin trimming. But, to the extent that this is true, it means that graduation will not create space in the market from which other suppliers could benefit. Only in cases where a poor country is losing market share because it cannot match the prices of the graduate would graduation offer relief – and then only to the extent of halting or slowing down a decline in poor-country exports not by boosting them.

However, the aim of this study is to examine in detail instances that *could* fall into Case 4 in order to identify and compare the positive and negative effects (to the communities involved and the broader economy) for the graduate and potential beneficiary. For this reason we have assumed that all graduations for the longlist of items (which excludes products with low MFN tariffs for which margin trimming is a more likely response to graduation) could involve increased imports from rich and poor countries. And, from within the longlist, we have selected a shortlist of products for which there appears the greatest likelihood that some poor countries could benefit. This chapter describes how this focus group was selected.

Based on the assumption that there will be no margin trimming or overall reduction of EU imports, we analysed the products identified in Chapter 2 to assess the extent to which poor

countries might be able to take up part of the slack. The aim was to identify a small sample of country/product combinations where the likelihood of poor country gains are particularly likely to allow case study analysis to be undertaken in each of them (which is reported in Chapter 5).

The first step in this process is to create a broad understanding of the relative potential scale of the GSP changes by looking both at the size of the tariff increase and the value of imports from poor countries. This was done by a very simple exercise assuming unit price elasticity of demand for all goods and it reduced the longlist to a shortlist of 11 products in which LDC or LIC gains appear likely to be particularly significant. This shortlist was then subject to two sorting exercises. First, a value-chain analysis was undertaken to understand the scope of poor-country producers actually to be able to take advantage of an apparent price advantage over graduates. Second, the assumption of unit elasticities was replaced in an exercise that used elasticities calculated for each product.

3.1 The relative scale of the changes

Table 7 presents a summary table on how much tariffs will change for the graduates and products identified in Chapter 2. These range from an increase of just 3.5 to 13 percentage points.¹⁷ But while a large tariff change will tend to have a greater effect than a small one, if the latter applies to a substantial EU import the absolute level of the change to flows could be greater than a large tariff increase on an item that is not traded on any scale. A first step, therefore, is to take account of both elements: the size of the tariff increase and the level of imports.

Measures of the responsiveness of trade flows to price changes, or elasticities, are subject to broad estimation based on limited information. This is because partial equilibrium analyses focus on the relationships between supply and demand and exclude other factors and their interaction which also influence an economy as a whole.¹⁸ Estimates are made on the basis of existing trade flows, which means there is no way of knowing whether a change in preference margins will induce a supply-side response for those products against which zero trade has been recorded. Other assumptions include the full utilisation of preferences: if utilisation rates are less than 100% then the value of a given preference is lower, therefore so too is the risk from their erosion.

Despite the range of different approaches used, it is fair to say that elasticities calculated using different types of specification are generally insensitive to the models used.¹⁹ The literature also converges on the use of disaggregated trade data to permit more precise estimates of the degree of price elasticity or substitution between goods. We have undertaken our analysis using product codes at the EU's CN 8-digit level. As noted, we have excluded from the analysis any consideration of domestic producers. In addition, we have assumed export supply capacities across producers to be constant.²⁰

¹⁷ We have calculated these changes in terms of percentage points, rather than actual percentage increases, e.g. the difference between a 7% tariff and a 20% tariff being 13 percentage points.

¹⁸ Which general equilibrium analyses try to capture through consideration of the potential effects of a policy change on other markets and sectors of a given economy, so as to estimate trade and income effects.

¹⁹ Although cross-section studies tend to find higher substitution rates than time-series studies (Shiells and Reinert, 1993).

²⁰ This is a strong assumption since the findings of Goldstein and Khan (1978) which treated export demand and export supply elasticities separately were challenged by Riedel (1988) who found high price elasticities and insignificant income elasticities, with market share and export growth being determined mainly by supply-side factors (and who therefore argued that an alternative approach to the analysis of trade elasticities from economically small countries is to invert the demand function and instead to consider the export supply function).

Table 7: Range of tariff increases

Percentage point change in tariff	Count of product lines (CN8 digit level)	Product description
3.5	24	Cocoa butter, fats and oil; Leather, inc. parchment-dressed; squid; Dried onions; Walnuts; Tuna and bonito; Prepared or preserved tunas and skipjack; Boiled sweets; Dried prepared pasta; Grains split leather; Fillets loins of tunas or skipjack; Unshelled beans; Pizzas, quiches; Sauces and preparations; Dried mushrooms and truffles; Extruded or expanded products, savoury or salted; Frozen mushrooms; Pastes, marzipan, nougat and other prepared sugar confectionery; Sulphonamides; Frozen surimi; Apple juice; Amino-acids and their esters.
3.9	1	Food preparations.
4.3	2	Cyclic amides, incl. cyclic carbamates; Organo-sulphur compounds.
4.9	4	Frozen meat; Frozen fillets of cod; Frozen fillets of coalfish; Frozen fillets of haddock.
5.2	2	Frozen octopus; Crab.
5.3	1	Vegetables, prepared or preserved.
6.0	1	Preparations of surimi.
6.3	1	Preparations for animal food.
6.5	12	Heterocyclic compounds with oxygen; Carboxylic acids with additional oxygen; Nitrile-function compounds; Lactones; Heterocyclic compounds with nitrogen; Heterocyclic compounds with nitrogen; Nucleic acids and their salts; Carboxylic acid; Heterocyclic compounds with nitrogen; Heterocyclic compounds with nitrogen hetero-atoms (triazine ring); Heterocyclic compounds with nitrogen hetero-atom (unfused pyrazole); Heterocyclic compounds (unfused thiazole ring); heterocyclic compounds (unfused pyrazole); Heterocyclic compounds (furan ring).
7.1	1	Frozen saltwater fish.
7.2	1	Frozen molluscs.
7.8	2	Frozen shrimps of the genus 'penaeus'; Frozen shrimps and prawns, shell or not.
9.4	1	Frozen fruits and nuts.
13.0	4	Shrimps and prawns; Shrimps and prawns prepared or preserved; Mussels, snails and other molluscs; shrimps and prawns, prepared or preserved (> 2 kg).

To the best of our knowledge there are no studies which have specifically looked at changes in graduation thresholds and the resultant trade effects. Instead, most of the literature focuses on changes in preferential tariffs and the resultant trade effects.²¹ Because the direct estimation of export and import demand elasticities has a number of methodological as well as practical limitations, we adopt a market share approach.²² This approach recognises how firms set their pricing in a given market – considering the actions of other exporters – as well as how a firm's market share in turn influences its price setting policy.

In the first step, we assumed the price elasticity of demand across the 57 products brought forward from Chapter 2 to be unit elastic and equal to 1. This means that any increase in price because of changes in graduation thresholds results in an equal reduction in the quantity

²¹ For example, Hoekman et al. (2002) focus their analysis on the potential trade effects on changes in preferential regimes, such as the extension of preferences towards the LDCs, and derive common supply elasticities across countries using the methodology developed by Stern et al. (1976) and Shiells et al. (1986).

²² Adapted from Shiran and Johnson (1971) which in turn draws on the seminal work undertaken by Tesler (1962) whereby the market share of a given product is taken to be a linear function of its lagged market share and a price variable; the short-run and long-run elasticity of a firm's price elasticity of demand is equal to the elasticity of the products market share plus the elasticity of total sales (of all products) with respect to the price of the product.

demanding from the graduate and a corresponding increase in imports from other sources distributed among the countries identified in Chapter 2 according to their initial market shares.

This confirms the findings from Chapter 2 that, although some LDCs have potential gains from graduation, the largest gains appear to accrue to HICs such as Switzerland and the US and result mainly from potential increases in exports of heterocyclic compounds as a result of India's graduation. Only one non-LDC LIC is identified as being a sufficiently large supplier to the EU market²³ to potentially benefit from changes in graduation thresholds; this is Kenya in the case of unshelled beans (CN 20055900).²⁴

On the basis of this exercise we selected a shortlist of 11 potential candidates for the case studies. These include the only ten items for which the potential gains for LDCs as a group were at least €0.1 mn, plus an eleventh which was one of only three items (the others having already been selected among the ten) for which a non-LDC LIC (Kenya) was calculated to have potential gains of at least the same level. The fact that only 11 products met this low threshold underlines the two points that:

- 1 the greatest gains will accrue to less poor states; but that
- 2 this study has trained a microscope on those items where poor-country gains, small though they may be, could be greatest.

The 11 products are:

CN 03042999	frozen fillets of saltwater fish (excl. swordfish, toothfish, cod, fish of the species boreogadus saida, coalfish, haddock, redfish, whiting, ling, tuna, fish of the species euthynnus, mackerel, fish of the species orcynopsis unicolor, hake, sharks, plaice, flounder, herring, megrim, monkfish, alaska pollack or blue grenadier)
CN 03061350	frozen shrimps of the genus 'penaeus', whether in shell or not, incl. shrimps in shell, cooked by steaming or by boiling in water
CN 03061380	frozen shrimps and prawns, whether in shell or not, incl. shrimps and prawns in shell, cooked by steaming or by boiling in water (excl. 'pandalidae', 'crangon', deepwater rose shrimps 'parapenaeus longirostris' and shrimps of the genus 'penaeus')
CN 03075910	frozen octopus 'octopus spp.', with or without shell
CN 16041416	fillets known as 'loins' of tunas or skipjack, prepared or preserved (excl. such products in vegetable oil)
CN 16041418	prepared or preserved tunas and skipjack (excl. minced, fillets known as 'loins' and such products in vegetable oil)
CN 16052091	shrimps and prawns, prepared or preserved, in immediate packings of a net content of ≤ 2 kg (excl. shrimps and prawns in airtight containers)
CN 20055900	unshelled beans 'vigna spp., phaseolus spp.', prepared or preserved otherwise than by vinegar or acetic acid (excl. frozen)
CN 41071291	grain splits leather 'incl. parchment-dressed leather', of the whole hides and skins of bovine 'incl. buffalo' animals, further prepared after tanning or crusting, without hair on (excl. of bovine 'incl. buffalo' animals with a surface area of ≤ 2,6 m ² '28 square feet', chamois leather, patent leather and patent laminated leather, and metallised leather)
CN 41079210	grain splits leather 'incl. parchment-dressed leather', of the portions, strips or sheets of hides and skins of bovine 'incl. buffalo' animals, further prepared after tanning or crusting, without hair on (excl. chamois leather, patent leather and patent laminated leather, and metallised leather)

²³ Suppliers with less than a five percent market share are included within the category of RoW.

²⁴ As of 1 July 2011, further to the most recent revisions undertaken by the World Bank. See: <http://data.worldbank.org/about/country-classifications/country-and-lending-groups>

CN 41079910 leather 'incl. parchment-dressed leather' of the portions, strips or sheets of hides and skins of bovine 'incl. buffalo' animals, further prepared after tanning or crusting, without hair on (excl. unsplit full grains leather, grain splits leather, chamois leather, patent leather and patent laminated leather, and metallised leather)

This approach, simple though it is, has provided information that is more detailed than would be produced by a computable general equilibrium model which may not cover the detail of product and country combinations. But its drawbacks are obvious: it assumes constant import price elasticities regardless of the different ways in which competing goods have been produced. It is unable, therefore, to take account of the possibility that a small increase in prices and resultant trade effects could prompt the closure of an industry in one country, nor for the situations in which the structure of production within another may afford a greater degree of flexibility to absorb price increases. Moreover, the approach assumes that the goods exported are homogeneous, rather than differentiated. These limitations are addressed in relation to the 11-product shortlist in the next two sections.

3.2 The global value chain approach

The removal of tariffs does not automatically result in increased market access for developing country producers because the chain is governed by a limited number of buyers, typically within an oligarchic market structure. This market structure and the relative power of developing country producers within it determines how the effects of a change in tariffs may be passed on, result in price increases or decreases for end consumers, and the redistribution of rents across suppliers.

The global value chain (GVC) approach takes off from this point of departure and focuses on the dynamics of inter-firm linkages and international industrial organisation, as opposed to considering the production and export of goods in isolation. It emphasises how the governance structures within which producers trade influences the extent of price transmission (Box 6).

The term 'lead firm' is used in the literature to refer not only to the market share of such firms (in comparison to other firms in the same functional position), but also to the fact that their control of certain functions allows them to dictate the terms of participation of other actors in different functional positions in a given value chain (Gibbon and Ponte, 2005). In the case of particular retailers these factors may include the development of end-market share derived from economies of scale, marketing, and product differentiation.²⁵ The ability to govern a given value chain often rests on intangible competencies such as branding and marketing, which are typically characterised by high barriers to entry and command high returns.²⁶

We have reviewed the GVC studies for the shortlisted products and summarise below what they are able to tell us about the characteristics of the related GVC within which producers' trade. We supplement this information with analysis of market shares and unit values in order to identify how exports from the non-graduated countries actually compete with those from the graduates (e.g. on price or quality).

As Kaplinsky and Morris (2000:29) note, the exercise of power within a value chain can be expressed in two ways: firstly in terms of ensuring consequences along a chain; and secondly through active management and co-ordination of the links. Market share analysis provides an indication of a lead firm's ability to ensure consequences along a chain, and as such it is an

²⁵ Other factors also noted by Gibbon and Ponte (2005) include political connections, and/or lucking in on new locational advantages which arise from geopolitical changes. Although these factors are discussed with particular reference to sub-Saharan Africa, they are relevant to all countries and regions.

²⁶ See Kaplinsky (2001).

indication of market power.²⁷ An indicator of the ability to create barriers to entry is analysis of unit values, which can serve as a proxy for value-added.

Box 6: GVC typologies

One of the central tenets of the GVC literature consists of an understanding of the appropriation of rents within a given chain – as an indicator of power – and the governance structures which help to secure them. There is recognition of how the relative position of firms and the associated governance structures within which they trade – internal between private actors and firms, or external and determined by governments – conditions potential upgrading options. For example, parameter setting by lead firms may be reflected at the country, bilateral and multilateral level. Trade policy rents created at the multilateral level may serve either to exclude or include certain producers (Stevens 2001).

The initial distinction within the GVC literature was between industry specific governance structures, such as producer or buyer driven value chains (Gereffi, 1999). However, the GVC literature highlighted a broader range of organisational structures. The concept of governance was subsequently developed into a hierarchy of internal structures by Gereffi et al. (2005), each distinguished by the degree of coordination between actors at different stages of production, or value chain nodes and a function of: the complexity of a transaction, the ability to codify aspects of it, and the capabilities of producers. The governance structures posited range from market-based to hierarchical structures and vary according to the depth of inter and intra-firm relations and degree of coordination (see table below, which is adapted from Gereffi et al., 2005).

Key determinants of GVC governance

Governance structure	Complexity	Codification	Capabilities	Degree of explicit coordination, power asymmetry
Market	Low	High	High	Low
Modular	High	High	High	
Relational	High	Low	High	
Captive	High	High	Low	
Hierarchy	High	Low	Low	

It is generally accepted that chain governance is being re-defined from the un-nuanced notion of 'driving' towards that of 'parameter setting'. This refers to lead firms determining final prices, volumes, product specification, quality standards and delivery modes, rather than directly dictating the shape of production networks themselves (Gibbon 2004). This point refers to a general trend whereby the lead firms in consuming markets characteristically have large market shares, market power, and control of branding, marketing and retailing in developed country markets. As the capabilities of producers change it is posited that so too will the internal governance structures between producers; ultimately these changes will be reflected in the external governance of trade, for example, as more economically powerful actors seek to set the parameters and terms under which new entrants participate in and enter a given market.

Kaplinsky and Santos Paulino (2005) use the (export) unit price as a proxy for innovation and note that increasingly the situation is one in which knowledge intensive intangibles such as chain co-ordination, marketing, branding and skill intensity in production determines the innovative capacity of producers, which in turn reflects market power.²⁸ However, one of the

²⁷ The definition of market power taken from the EC is 'the ability of firms to price above marginal cost and for this to be profitable. In competition analysis, market power is determined with the help of a structural analysis of the market, notably the calculation of market shares, which necessitates an examination of the availability of other producers of the same or of substitutable products (substitutability). An assessment of market power also needs to include an assessment of barriers to entry or growth (entry barriers) and of the rate of innovation. Furthermore, it may involve qualitative criteria, such as the financial resources, the vertical integration or the product range of the undertaking concerned.' See http://ec.europa.eu/comm/competition/general_info/m_en.html

²⁸ Unit prices are calculated following Lall (2000) who makes a distinction between resource based, low technology, medium and high technology sectors according to a 3-digit trade classification (SITC). Lall (2000) derives his classification using Pavitt (1984) who divides according to the degree of technology utilised and the OECD (1994) who use a more detailed classification based on the technological activity within each category. Resource based

drawbacks of the use of unit prices as an indicator of barriers to entry is that it assumes these to be similar types across all firms within a given industry, even though there are different types of rents available. One way to overcome this limitation is to therefore link analysis of unit values to market shares (ibid.).

Analysis of the unit value of a country's exports and market share can therefore help to identify whether or not export performance is characterised by increasing or decreasing rents. It may help to identify the extent to which exporters are price takers or makers within the EU market and therefore able to absorb the price increases which may arise from changes in graduation thresholds, easily or not.

3.3 The shrimp GVC

In the current global agro-food system, which includes shrimp aquaculture, private food safety and quality standards, branding, contracts and certification are increasingly becoming the axes around which food retailers are organising production and competing, based on quality (Islam, 2007).²⁹ These governance structures, which are buyer driven, have evolved as the shrimp industry in developing countries with favourable climatic conditions has been transformed within the space of a decade. In many cases it has gone from a simple pattern of shrimp captured in the wild to a globalised factory farming system (ibid.). Since the 1980s there has been a dramatic increase in shrimp farming, especially in the coastal areas of the major developing country suppliers in Asia (Thailand, Vietnam, China, Bangladesh and India) and Latin America (Argentina, Ecuador) in what has become known as the 'blue revolution'.³⁰ Madagascar is a late entrant to this market, which has developed on the basis of targeting a higher value niche within the EU's shrimp market.³¹

The shrimp industry in LDCs such as Madagascar (on which this section focuses as an explanatory example) and Bangladesh is predominantly an export-oriented activity, with exports destined mostly for extra-regional markets.³² In contrast, shrimp production in South East Asia and Latin America initially developed to supply other more affluent East Asian neighbours³³. The EC market has in the last few years gained in importance for countries such as Ecuador due to higher prices than the US and the fact that tariffs have been reduced since 2007.³⁴

Shrimp production has a relatively complex supply chain where at least three major groups – shrimp farmers, local depot owners, and processing factories – interact within a governance structure that is largely driven by retailers in the EU market. Shrimp farmers tend to be small and medium size with contractual relations often in place with processors who supply credit to enable the purchase and cultivation of shrimp larvae, with the former group then being obliged to supply the latter.³⁵ That is, the system of shrimp aquaculture production is characterised by a high degree of vertical integration, usually organised by the processing companies which

manufactures includes the processing of materials. Kaplinsky and Santos Paulino (2005) find that Using Lall's (2000) sectoral taxonomy there appears to be a strong correlation between price behaviour and innovation intensity, with the exception of resource-based manufactures.

²⁹ See also Busch and Bain (2004), Hatanaka et al., (2005) and Henson and Reardon (2005).

³⁰ See Deb (1998) and Hatanaka (2010).

³¹ At present, exports depend on a niche clientele prepared to pay a price premium based on the French labels, the *Label rouge* and *Agriculture biologique*, and on consumers who are motivated primarily by the high quality of the species, *Penaeus monodon*. Through long term partnerships and direct investments in the Malagasy seafood sector French business actors contribute to develop high quality seafood adapted to the French market (Pettersen, 2007).

³² Shrimp exports from Bangladesh are the second largest foreign exchange earner after garments (Uddin, 2008).

³³ In Thailand the industry expanded rapidly in the mid 1980s, catalysed by transfer of technology from Taiwan. A catastrophic disease outbreak in Taiwan caused the collapse of its shrimp industry. One of the major producers, in partnership with Mitsubishi then began to introduce Taiwanese shrimp culture techniques to Thailand with the support of institutions such as the Asian Development Bank which lead to the intensification of production in existing areas of shrimp production (see Belton and Little, 2008; Goss et al. 2000).

³⁴ See Ordóñez (2009), who also notes that Ecuador along with other exporting destinations has for a period been impacted by the antidumping tariffs brought forward by the Southern Shrimp Alliance of the US.

³⁵ Who are supplied with fry, or shrimp larvae, by collectors at the upstream node who sell to local middlemen and then subsequently to shrimp farmers, to be reared.

supply feeds and laboratory services (testing for sanitary and phytosanitary and technical barrier to trade requirements) to associated growers.

Because of this, and to some extent contrary to expectations, within the shrimp GVC it has been argued that the most profitable node is that of supplying feed to growers.³⁶ For example, in Thailand – one of the largest seafood suppliers to global markets, accounting for around 30% of world trade in shrimps – production is organised through ten specialised feed companies, the largest of which is also a major global producer with overseas plants in Indonesia, China and one in India.³⁷

Despite some elements of a producer-driven shrimp value chain (by feed suppliers given the increasing commercialisation and intensification of activities), overall Gammage et al. (2006) argue that shrimp aquaculture exhibits buyer-driven tendencies, given the nature of hierarchical relations between lead firms and their suppliers. However, Islam (2008) points out increasingly the situation is becoming one in which although lead firms may govern the supply network environmental groups and certification agencies lay out and govern other regulatory aspects, sometimes both working in an overlapping manner.

These more recent developments have been driven not only by the increasing stringency of non-tariff barriers such as sanitary and phytosanitary requirements but also by recognition of the need for improved natural resource management so as to ensure the future sustainability of the industry, and increasing competition over quality attributes.³⁸ For producers such as Madagascar the whole industry has been designed to address sustainability concerns and in addition target a higher value niche market, within a hierarchical structure driven by large retailers (Box 7).

Box 7: The organisation of shrimp production in Madagascar³⁹

Unima France is a totally vertically integrated company and controls 60% of the Madagascar seafood sector, including own-farm production. Overseas Seafood Operations (OSO) is involved in shrimp farming (Royal Madagascar Gambas) as well as industrial fishing (PMM – Les Pêcheries du Ménabé et du Melaky). Both companies adhere to sustainability standards and have preferred supplier status with EU retailers. For example, recently Carrefour and Marks & Spencer have approved seafood products from the seafood processing factory of PMM which is a filial of the group OSO, for inclusion within their supply chains.

This suggests that quality attributes are a more important determinant than price for the inclusion of producers such as Madagascar within EU supply chains, which would suggest that changes in graduation thresholds could have little or no effect on such producers. In sum, this brief review of the available literature on the shrimp GVC suggests that although price matters in the EU market, other aspects related to the quality of products and how they have been produced are also becoming important for inclusion in some of the higher value supply chains feeding into the EU market.

Frozen shrimps: market share and unit value analysis

The unit value of frozen shrimps of the genus 'penaeus' (CN 03061350) has decreased since 1997 in the EU market for all major suppliers with the exception of those sourced from Madagascar, Vietnam and India. In relation to market shares, Ecuador's and Madagascar's have declined over this period whilst all other countries have been able to increase theirs,

³⁶ The significance of the feed industry is demonstrated by the fact that feed is the single most expensive item and accounts for around 50% of the cost of harvested products (Funge-Smith and Stewart, 1995, p. 17).

³⁷ See Uddin (2008).

³⁸ Islam (2008) makes reference to the current situation in Bangladesh, but is in fact referring to a more general trend in which the contemporary regulation of food safety, driven by lead firms, increasingly incorporates principles of quality management and systemic performance objectives in addition to those relating to sustainability concerns (see Ponte, 2007; Gibbon et al. 2010). Hall (2004) argues that intensive shrimp culture is a paradigmatic example of the export-oriented agricultural specialisation in high value non-traditional crops associated with the globalisation of food commodity chains and exhibits many problems frequently identified as outcomes of this process. See also Belton and Little (2008).

³⁹ Adapted from Pettersen (2007).

particularly Argentina, Vietnam (graduating countries) and to a lesser extent Bangladesh. The unit value of frozen shrimps and prawns (CN 03061380) has decreased over the period 1997–2010 for all producers, as indicated in Table 8. Argentina and China have been able to increase their market share dramatically over this period whilst the share of Vietnam halved over the same period and Bangladesh managed to maintain but not substantially increase its share.

As can be seen from Table 8, the graduates of frozen shrimps and prawns of the genus 'penaeus' (CN 03061350) are not the largest suppliers to the EU market, nor are they the highest-value suppliers in terms of product unit values. The country with the largest market share is Ecuador which also has the lowest unit value as a percentage of the graduating countries. In comparison, Madagascar, an LDC supplier has a high unit value compared to the other graduating countries, but a low market share; Bangladesh is to some extent at the mid-point, with a market share of almost 10% and a unit value which is roughly comparable with the graduates'. Argentina is a major supplier within this market, after Ecuador, and has managed to increase its market share (its unit value has remained stable) quite substantially since 1997, whilst Ecuador's has declined.

Table 8: Market share and unit values, frozen shrimp

Main suppliers ^a	Tariff		Average EU imports from Extra-EU, 2008–10 (€ mn)	Share of EU market	3-yr avg. UV 2008–10 (€/kg)	Unit value as a percentage of (product) graduate's unit value ^c
	Current	2014 ^b				
03061350, frozen shrimps of the genus 'penaeus', whether in shell or not, incl. shrimps in shell, cooked by steaming or by boiling in water.						
All suppliers			1,452.2		4.9	91.3%
Ecuador	3.6%		290.7	20.0%	4.2	78.6%
Argentina	4.2%	12%	155.4	10.7%	5.7	105.7%
India	4.2%		152.4	10.5%	4.9	91.6%
Thailand	4.2%		128.8	8.9%	4.7	87.8%
Bangladesh	0		119.3	8.2%	5.3	97.5%
Vietnam	4.2%	12%	115.1	7.9%	5.4	100.0%
Madagascar	0		74.3	5.1%	8.4	155.4%
China	4.2%	12%	28.4	2.0%	4.9	91.8%
03061380, frozen shrimps and prawns, whether in shell or not, incl. shrimps and prawns in shell, cooked by steaming or by boiling in water (excl. 'pandalidae', 'crangon', deepwater rose shrimps 'parapenaeus longirostris' and shrimps of the genus 'penaeus').						
All suppliers			494.5		4.7	107.7%
Argentina	4.2%	12%	117.8	23.8%	6.1	139.6%
India	4.2%		88.3	17.8%	4.0	91.6%
China	4.2%	12%	84.2	17.0%	2.9	67.7%
Bangladesh	0		57.4	11.6%	6.8	157.5%
Vietnam	4.2%	12%	13.9	2.8%	4.3	100.0%

Notes:

- (a) All suppliers with a 5% or more share of the Extra-EU market, plus product graduates for which the item has been identified as 'key' (regardless of market share). Shaded rows denote graduates.
- (b) As current unless indicated otherwise.
- (c) Where more than one country is graduated under the 17.5% market share criterion, this percentage is of the highest of their respective unit values.

This is also the case in the market for frozen shrimps and prawns, whether in shell or not (CN 03061380). In this case Bangladesh has a unit value around twice as high as the other graduates and a market share of around 10%, but so too does the country with the largest market share – Argentina – which will be graduated out by 2014. China has the lowest unit value for this product by far, but a fairly low market share. Although graduation will increase the relative price of Chinese frozen shrimps and prawns compared to the other suppliers, even with this increase it is likely to remain one of the lowest-cost suppliers, along with India, a non-graduate.

Shrimp products, prepared or preserved: market share and unit value analysis

In the case of shrimp products, prepared or preserved (CN 16052091), Thailand – the only graduate – has the highest unit value compared to all other producers (Table 9), which has increased over time. This increase has however, been accompanied by reductions in market share. The other non-graduate suppliers to this market have managed to increase their market shares relative to Thailand, and in the case of Vietnam and to a lesser extent Indonesia, these gains have been accompanied by increases in product unit values. These results suggest that Thailand could be competitively challenged in this market. Despite this however, it still has a market share of over 40% for this product.

Table 9: Market share and unit values, prepared shrimp

Main suppliers ^a	Tariff		Average EU imports from Extra-EU, 2008–10 (€ mn)	Share of EU market	3-yr avg. UV 2008–10 (€/kg)	Unit value as a percentage of (product) graduate's unit value ^c
	Current	2014 ^b				
16052091, Shrimps and prawns, prepared or preserved, in immediate packings of a net content of ≤ 2 kg (excl. shrimps and prawns in airtight containers)						
All suppliers			145.7		5.3	90.8%
Thailand	7%	20%	60.6	41.6%	5.9	100.0%
Vietnam	7%		23.7	16.3%	5.0	85.2%
Indonesia	7%		15.1	10.4%	5.1	86.2%
India	7%		7.9	5.4%	3.2	54.9%

Notes:

- (a) All suppliers with a 5% or more share of the Extra-EU market, plus product graduates for which the item has been identified as 'key' (regardless of market share). Shaded rows denote graduates.
- (b) As current unless indicated otherwise.
- (c) Where more than one country is graduated under the 17.5% market share criterion, this percentage is of the highest of their respective unit values.

These results suggest that prices matter less in the market for prepared or preserved shrimp products (CN 16052091) than the market for frozen shrimp (CN 03061350 and CN 03061380). This result is to be expected and is common across other types of agricultural goods, where chilled is the premium product compared to frozen items. In the case of prepared shrimp (CN 16052091) the presence of barriers to entry within this market in the form of processing capabilities, may have enabled it to maintain a position of market leader and price setter, rather than taker, as appears to be the case amongst the other suppliers. But this position appears to be increasingly challenged. Overall, the results suggest that the price elasticity of demand for this product could be greater than one, but not substantially more than this.

There appear to be differences of price sensitivity even within the overall category of frozen shrimp. The degree of price sensitivity for frozen shrimp of the genus 'penaeus' (CN 03061350) appears to be higher than for the more general item of 'frozen shrimps and prawns, whether in shell or not' (CN 03061380). However, in both cases we expect price elasticities of demand to be greater than one. Given that there are three graduate countries

included within each of the two frozen product categories, we expect the increase in tariffs to result in shake-ups in supply chains, which could potentially benefit the non-graduate countries to a larger extent than indicated by the unit elasticity calculations.

3.4 The leather GVC

It is generally recognised that the leather industry has gone through substantial changes in recent years because of the entry of new actors such as China. As discussed in Lopez (2008) with reference to Frenkel (2001), the new shape of the world leather market is less one of integrated enterprises and more one of globally dispersed supply chains across countries and regions. These shifts have resulted in a tendency for concentration either on upstream activities, such as the production of cattle and the subsequent export of fresh leather (e.g. Latin America), or the import of raw materials and export of finished leather goods, such as footwear, based on low labour costs (e.g. China, Vietnam and Indonesia).⁴⁰

Although there has been an increasing substitution of leather for synthetic products, the industry is generally constrained by the availability of raw material (fresh leather), which is in turn dependent on growth of the livestock industry more generally: animal population, weight per hide and skin recovered and so on (most growth of these industries being in developing countries).

The leather production-consumption chain has three processing stages each requiring different combinations of material inputs, labour and capital. The first stage is the recovery of raw materials, which has direct links with animal production activities: hides and skins are recovered from dairy, draught animals or animals from slaughter houses. Leather tanning and finishing is the second stage and involves relatively capital-intensive operations while the third stage, the production of leather products, is a more labour-intensive activity (see Appendix Figure 3).⁴¹

Increasingly these processes have become fragmented across countries, with leather producers in Latin America focusing on the first stage, and countries such as China entering into the second and increasingly third stage, importing the raw material required from Latin America (similar to other high-end producers of leather, including Italy, within the EU market). Even without changes in graduation thresholds in the EU market, Latin American producers of leather face competitive challenges from producers such as China resigning them to the more upstream stages of leather production compared to the higher value downstream activities. This is also reportedly the case for other leather producers in South Asia (Singh, 2007; Tewari and Pillai, 2005), as well as in Africa (Grote and Stamm, 2007). Bangladesh is the only major LDC supplier of leather to the EU market. India is a major supplier of leather to the EU market, but overall Latin American producers dominate flows.

Because leather products have multiple uses there is limited information on the overall governance structure of this value chain. However, the literature converges in relation to the importance of standards. Quality control begins with the selection of particular breeds for leather produce and branding; once skins and hides reach tanneries, an industrial process starts, where the exact measurement and control of physical and chemical parameters is of high relevance for quality assurance.⁴² The introduction of more stringent regulations within the European market during the 1990s has been posited as leading to a shake-up with the industry. Tewari and Pillai (2005) present a detailed case study of the how the changes introduced affected producers in India and of the measures adopted by the government in

⁴⁰ China more than doubled its imports of tanned leather between 1995 and 2006. This is related to the development of the footwear, garments and other leather industries in that country and the increasing demand for raw materials for these manufactures (Lopez, 2008).

⁴¹ De Buckle (2001).

⁴² See Grote and Stamm (2007), who discuss how the government and donor agencies created specialised testing facilities in different parts of the country to test leather and support producers in maintaining market access through their links with buyers in European markets.

order to help tanneries adapt. This included the introduction of an eco-labelling scheme for finished leather in 2000.⁴³

In response to these developments, the general trend has been one in which the largest tanneries in developing countries have established stronger contractual linkages with buyers, including through vertical ownership. Hence it is fair to say that the overarching governance structure of the leather GVC has become increasingly hierarchical over time. These tighter linkages have better enabled the provision of training and knowledge transfer in order for subcontractors in developing countries to comply with new environmental standards and secure a stable supplier position. Even this being the case however, the removal of countries such as India from the EU's GSP could lead to further shake-ups in supply chains.

Leather products, grains split and parchment-dressed: market share and unit value analysis

Bangladesh is the only major LDC supplier of leather, inc. parchment dressed (CN 41079910), and has a fairly high market share of this product within the EU market compared to all other major suppliers (Table 10). However, over the period 2002–10 (for which data are available) both its unit value and market share declined. Norway, Turkey and Pakistan all supply the highest value parchment leather to the EU market; the graduates of this product are the lowest cost suppliers.

Although graduation may increase prices, even taking this into account producers such as Russia and Brazil may still remain the lowest costs suppliers. But depending on degree of price sensitivity, this could still potentially be of some assistance to producers such as Bangladesh which appears to be competitively challenged in this market.

Pakistan is the only major supplier of grain split leather (CN 41079210) to the EU market that will not be graduated. It is also the highest unit value supplier of this product to the EU and has maintained its market share over the period analysed. Given the relatively low market share of Pakistan in the EU market, these results suggest that Pakistan supplies a niche market. Russia has experienced the fastest growth in market share between 2002 and 2010 and is the lowest cost producer, with a low unit value relative to the other producers. Brazil is the major supplier to the EU market, with a market share of just over 30%, but is not the lowest cost supplier to the EU (and its unit value has remained fairly stable over time). These results suggest a fairly low potential degree of substitution between the graduates of this product category compared to the non-graduate Pakistan.

In the case of grain splits leather (CN 41071291) Brazil is the dominant supplier, supplying almost 60% of the EU market for grain splits leather 'incl. parchment-dressed leather'. These results, coupled with the review of the relevant GVC literature suggests that a trade shift towards non-graduates including major LDC suppliers is most likely in the case of leather inc. parchment-dressed leather (CN 41079910), but less likely in the other cases. However, in all cases, we expect the price elasticity of demand to be greater than one.

⁴³ Ibid.

Table 10: Market share and unit values, grains split and parchment leather

Main suppliers ^a	Tariff <i>Current</i>	2014 ^b	Average EU imports from Extra-EU, 2008–10 (€ mn)	Share of EU market	3-yr avg. UV 2008–10 (€/kg)	Unit value as a percentage of (product) graduate's unit value ^c
41071291, Grain splits leather 'incl. parchment-dressed leather', of the whole hides and skins of bovine 'incl. buffalo' animals, further prepared after tanning or crusting, without hair on (excl. of bovine 'incl. buffalo' animals with a surface area of ≤ 2,6 m ² '28 square feet', chamois leather, patent leather and patent laminated leather, and metallised leather)						
All suppliers			312.8		10.7	138.8%
Brazil	2%	5.5%	182.1	58.2%	10.3	132.7%
India	2%	5.5%	36.6	11.7%	7.7	100.0%
Argentina	2%	5.5%	20.1	6.4%	11.4	148.0%
Uruguay	2%	5.5%	18.8	6.0%	17.8	230.5%
41079210, Grain splits leather 'incl. parchment-dressed leather', of the portions, strips or sheets of hides and skins of bovine 'incl. buffalo' animals, further prepared after tanning or crusting, without hair on (excl. chamois leather, patent leather and patent laminated leather, and metallised leather)						
All suppliers			144.9		13.5	105.6%
Brazil	2%	5.5%	35.9	24.8%	11.8	92.5%
Russian Fed.	2%	5.5%	31.1	21.4%	11.1	86.8%
India	2%	5.5%	17.0	11.7%	12.8	100.0%
Argentina	2%	5.5%	8.5	5.8%	15.3	119.8%
Pakistan	2%		7.8	5.4%	22.0	172.4%
Uruguay	2%	5.5%	7.5	5.2%	21.7	170.1%
41079910, Leather 'incl. parchment-dressed leather' of the portions, strips or sheets of hides and skins of bovine 'incl. buffalo' animals, further prepared after tanning or crusting, without hair on (excl. unsplit full grains leather, grain splits leather, chamois leather, patent leather and patent laminated leather, and metallised leather)						
All suppliers			66.7		14.8	105.4%
Bangladesh	0		10.2	15.3%	16.8	119.7%
India	3%	6.5%	9.9	14.8%	14.0	100.0%
Brazil	3%	6.5%	9.3	14.0%	12.6	89.8%
Norway	0		6.3	9.5%	23.3	166.4%
Pakistan	3%		5.9	8.8%	18.5	132.0%
Turkey	0		5.0	7.6%	21.5	153.3%
Russian Fed.	3%	6.5%	4.7	7.0%	7.4	52.5%
Egypt	0		4.0	6.0%	12.8	91.1%

Notes:

- (a) All suppliers with a 5% or more share of the Extra-EU market, plus product graduates for which the item has been identified as 'key' (regardless of market share). Shaded rows denote graduates.
- (b) As current unless indicated otherwise.
- (c) Where more than one country is graduated under the 17.5% market share criterion, this percentage is of the highest of their respective unit values.

3.5 Saltwater fish, tuna, octopus: what does the available GVC literature suggest?

As with the shrimp industry, developing countries well endowed with coastal (and inland) fish resources have shifted towards export-oriented strategies. The implicit understanding has been that the revenues generated through these exports would then be 're-injected' into the national economy, therefore compensating for the direct loss of animal protein in the first instance.⁴⁴ The available evidence on the extent to which these objectives have actually been met through integrating production within globalised supply networks is rather limited.

GVC studies on the products of interest in this case – saltwater fish, tuna and octopus – are particularly limited. Where studies are available, whether or not they adopt the GVC framework, they tend to emphasise the importance of non-tariff barriers to this market which have led to structural changes within supply chains and include factors related to European integration and the EU Common Fisheries Policies. We discuss some of these findings below and try to draw out some of the implications which may arise from changing graduation thresholds.

Saltwater fish

The production and consumption of saltwater fish has historically been located within Spanish and Norwegian waters. Until the mid 1990s, countries such as Norway, and Iceland were the major suppliers to the Spanish market, the largest within the EU. But the relative importance of these producers has declined as markets have shifted towards more variety and flexibility, sold through large retailers and supermarkets as opposed to traditional fish markets.

The operation of the EU's Common Fisheries Policy (CFP) for Spain during the 1990s meant its domestic supply became insufficient to meet total demand (Gallart-Jornet et al. 2005), because of a reduction in fishing quotas. This meant an increasing reliance on imports, sourced from a wider range of partners. Icelandic firms have especially established themselves in such market networks. This has led to changes in traditional distribution systems (Lindkvist et al. 2008). Changes in both the actors supplying leading retailers and the methods by which they do so are not well documented, but the data suggests that new entrants such as China and Vietnam have only recently emerged to become some of the leading supplier of saltwater fish in the EU market.

China is now the largest supplier of frozen fillets of saltwater fish (CN 03042999) to the EU market, with an almost 30% market share, followed by other graduates including Vietnam and Argentina which each have around a 10% share, as shown by Table 11. Chile has the lowest unit value for this good, whilst the only major LDC supplier, Senegal, has the highest.⁴⁵ That the lowest cost producer of saltwater fish – Chile – is not the major supplier of this product to the EU market suggests that other aspects of production, beyond price, are important determinants of success in this market. Despite this, the review of available GVC analysis suggests that the increase in tariffs on the three major suppliers to this market could result in a trade shift towards the other non-graduate suppliers, and that price elasticities of demand could be greater than one in this market.

⁴⁴ As discussed in detail by Béné et al. (2010) this shift in perspective has been underpinned by the seminal work of Sen (1981) and movement away from the concept of food security being about 'self-sufficiency' towards that of 'self-reliance'. See also Stevens et al. (2003).

⁴⁵ Because of data limitations it is not possible to discuss trends in detail.

Table 11: Market share and unit values, saltwater fish

Main suppliers ^a	Tariff		Average EU imports from Extra-EU, 2008–10 (€ mn)	Share of EU market	3-yr avg. UV 2008–10 (€/kg)	Unit value as a percentage of (product) graduate's unit value ^c
	Current	2014 ^b				
03042999, Frozen fillets of saltwater fish (excl. swordfish, toothfish, cod, fish of the species boreogadus saida, coalfish, haddock, redfish, whiting, ling, tuna, fish of the species euthynnus, mackerel, fish of the species orcynopsis unicolor, hake, sharks, plaice, flounder, herring, megrim, monkfish, alaska pollack or blue grenadier)						
All suppliers			225.0		3.3	101.1%
China	7.9%	15%	63.9	28.4%	2.9	89.8%
Vietnam	7.9%	15%	22.3	9.9%	3.2	100.0%
Argentina	7.9%	15%	20.4	9.1%	2.3	71.9%
Chile	0 or 1.9%		16.8	7.4%	2.1	65.4%
Iceland	0		15.5	6.9%	5.3	165.0%
Greenland	0		14.8	6.6%	4.4	135.1%
Senegal	0		11.3	5.0%	4.2	131.0%

Notes:

(a) All suppliers with a 5% or more share of the Extra-EU market, plus product graduates for which the item has been identified as 'key' (regardless of market share). Shaded rows denote graduates.

(b) As current unless indicated otherwise.

(c) Where more than one country is graduated under the 17.5% market share criterion, this percentage is of the highest of their respective unit values.

Tuna

Jiménez-Toribio et al. (2010) argue that the EU market for tuna appears to be segmented between the Northern countries consuming low-priced canned skipjack tuna from Asia (mainly Thailand) and the Southern countries (Italy, Spain) importing and processing yellowfin-based products and selling them at higher prices. Despite this segmentation, the market for tropical tuna has been found to be globally integrated through the system of prices, at least for the cannery-grade skipjack tuna (Jeon et al., 2007).⁴⁶

One of the major shifts that has occurred beginning in the 1990s has been the relocation of tuna factories from developed countries to areas closer to raw materials. This move has been motivated by the need to reduce labour and trans-shipment costs. Thailand has recently emerged as one of the top producers of loins, because of newly developed canning materials (Miyake et al., 2010). In general, the price of tuna per unit weight is far higher than for canned materials, but since the 1960s, the production of, and demand and market for, canned tuna has increased rapidly (Box 8).

Some segments of the tuna GVC have therefore become increasingly concentrated in recent years as economies of scale in the canning segments of the value chain have been sought and consolidated.⁴⁷ In the EU for example, it has been estimated that five leading companies account for around 50% of the total market share, and the ten leading companies hold 72% (ibid.).

⁴⁶ In this comprehensive study covering all major tuna markets throughout the world, it has been clearly demonstrated that all the six skipjack markets included in the study (Japan, Thailand, American Samoa, Americas, Côte d'Ivoire and Spain) were linked together in the long run and therefore form a single market, with prices moving jointly in the long run.

⁴⁷ The canning industry requires a large capital investment in the form of purse seiners fishing vessels (particular types of boats and netting required for catching tuna).

Box 8: The tuna loin value chain⁴⁸

Around 80% of the labour cost for producing a can of tuna is incurred in cooking, cleaning and loining the fish. Trans-shipment costs are also reduced when loins are transported instead of whole fish, as loins represent only around 60% of round weight and can be shipped in containers instead of bulk reefers. Several canneries in the EU and Japan import frozen loins, defrost them and pack them directly into cans. As a result, there is a booming market in the EU for tuna loins. In France and Italy, the proportion of round frozen tuna imported by processors has been reduced in recent years to zero. Tuna loins (falling under EU CN codes 16041412, 16041416, 16041931) imported as canning materials are classified separately from tuna fillets for human consumption (classified under HS codes 030410 and 030420).

Other suppliers that have recently emerged as major suppliers of tuna to the EU market include the Seychelles and Mauritius. These producers have a comparative advantage in lower labour costs as well as accessibility to raw materials. Despite this, some argue that these advantages are increasingly being eroded by the mobility of capital, in addition to the fact that direct labour costs account for only around 7–8% of total tuna canning costs, compared with 60% of net fishing costs (Campling and Doherty, 2007). Hence, other locational advantages becoming increasingly important such as port facilities for trans-shipment are, tax incentives for production undertaken within export processing zones, and preferential trade agreements.⁴⁹ This suggests that changes in the graduation thresholds of the EU's GSP could have a fairly substantial impact on existing competitive advantages.

There have been reports that European canneries face problems in securing a sufficient supply of duty-free tuna loins from African, Caribbean and Pacific (ACP) countries and beneficiaries of the EU's GSP+ scheme.⁵⁰ But other aspects of EU policy relevant to the organisational structure of the tuna industry also include:⁵¹

- the compensatory allowance for tuna which guarantees a minimum price to the fishing companies supplying the European based canning industry regardless of how low international prices fall;
- the common external tariff on canned tuna which reduces the price competitiveness of imported processed tuna; and
- rules of origin, which facilitate the re-importation of canned tuna processed by subsidiary companies of the European firms located in Africa, Latin America and Pacific Island countries, and from local companies that use tuna caught by EU vessels.

In terms of market share analysis, there is one dominant supplier to the EU market for tuna fillets (CN 16041416), Ecuador, which is also a non-graduate. The graduate of this product category, Thailand, has just over a 10% market share and the lowest product unit value, followed by Ecuador (see Table 12).⁵² These results suggest that prices matter in this market and that the graduation of Thailand could result in a trade shift towards other producers. This also appears to be the case for the market in prepared or preserved tunas and skipjack (CN 16041418), where Ecuador is the largest supplier, followed closely by the Seychelles and Thailand. In this product category, Thailand is the only graduate whose relative price will increase compared to others, such as Côte d'Ivoire, Ghana and Seychelles.

⁴⁸ See Miyake et al. (2010).

⁴⁹ See Campling (2008).

⁵⁰ Ibid.

⁵¹ It is beyond the scope of this report to discuss these aspects in detail. For further information, see Miyake et al. (2010) who also makes reference to Mongruel (2002).

⁵² Ecuador would be graduated were it not a GSP+ beneficiary (and therefore no longer subject to graduation). Its share of the GSP section in question is 25.2%, compared with Thailand's 29.4%.

Table 12: Market share and unit values, prepared tuna and fillets

Main suppliers ^a	Tariff <i>Current</i>	2014 ^b	Average EU imports from Extra-EU, 2008–10 (€ mn)	Share of EU market	3-yr avg. UV 2008–10 (€/kg)	Unit value as a percentage of (product) graduate's unit value ^c
16041416, fillets known as 'loins' of tunas or skipjack, prepared or preserved (excl. such products in vegetable oil)						
All suppliers			381.7		3.7	111.2%
Ecuador	0		133.6	35.0%	3.5	104.3%
El Salvador	0		45.7	12.0%	4.2	124.8%
Mauritius	0		44.4	11.6%	4.0	120.3%
Thailand	20.5%	24%	41.5	10.9%	3.3	100.0%
Guatemala	0		19.5	5.1%	3.8	114.6%
16041418, prepared or preserved tunas and skipjack (excl. minced, fillets known as 'loins' and such products in vegetable oil)						
All suppliers			625.2		2.9	104.9%
Ecuador	0		99.1	15.8%	2.8	103.3%
Seychelles	0		96.5	15.4%	3.5	127.5%
Thailand	20.5%	24%	91.9	14.7%	2.7	100.0%
Mauritius	0		86.6	13.9%	3.1	113.5%
Ghana	0		60.9	9.7%	3.1	114.7%
Philippines	20.5%		59.5	9.5%	2.2	82.0%
Côte d'Ivoire	0		52.7	8.4%	2.9	107.6%

Notes:

(a) All suppliers with a 5% or more share of the Extra-EU market, plus product graduates for which the item has been identified as 'key' (regardless of market share). Shaded rows denote graduates.

(b) As current unless indicated otherwise.

(c) Where more than one country is graduated under the 17.5% market share criterion, this percentage is of the highest of their respective unit values.

A review of existing GVC literature suggests that price elasticities of demand could be greater than one for loins and prepared or preserved tuna. Hence, changes in relative prices because of the graduation of Thailand could potentially benefit the other non-graduate suppliers of tuna (CN 16041416 and CN 16041418). However, it is important to note that no single LIC or LDC country features as a *major* supplier of these products. Instead, LDCs as a *group* (comprising many relatively minor suppliers) could potentially benefit from the changes in graduation thresholds to a greater extent than assumed in unit elasticity calculations.

Octopus

There is an extremely limited literature on the octopus GVC. Senegal appears to be the most well documented country case study and it also has the third largest octopus catch in Africa, after Mauritania and Morocco. In a recent GVC study on octopus from Senegal it is argued that there is a general perception that the resource is being overfished (Mitchell and Coles, 2011). The largely open-access nature of artisanal fisheries as well as fishing agreements signed with foreign fleets (including licences granted in return for budget contributions) have been put forward as key reasons for the over-exploitation of Senegal's coastal resources (Ndiaye et al. 2008). Because of these concerns efforts have been made in Senegal to integrate sustainability concerns within certification systems developed for octopus. However, at

present, private voluntary schemes such as the Marine Stewardship Council – one of the largest certification bodies for fisheries – do not yet include octopus.

Octopus is a high-value global product. There is some evidence to suggest that octopus caught by traditional means is higher quality and able to command a higher price. In Mauritania, for example, octopus caught using traditional Mauritanian fishing vessels sells for US\$200 more per tonne than that caught by refrigerated trawlers.⁵³

Other major suppliers of octopus to the EU market have in the past imposed bans on exports due to concerns of the sustainability of production: in 2004, Morocco closed its octopus fisheries for several months precisely for this reason. It was around this time that other producers, including in China emerged as formidable competitor in the EU market.

In the case of frozen octopus (CN 03075910) supplied to the EU market, one of the graduates, Vietnam has a unit value less than half of that of the other lowest cost supplier, Senegal, but a much lower market share. The dominant supplier of frozen octopus to the EU market – Morocco – has the highest product unit value, which has increased over time. The data presented in Table 13, in addition to the review of the available GVC literature on octopus, suggest that price is less of an important determinant of success in this market, and that other quality attributes as well as non-tariff barriers related to fisheries access matter more.⁵⁴ We therefore expect the price elasticity of demand for this product to be less than one, and possibly inelastic.

Table 13: Market share and unit values, octopus

Main suppliers ^a	Tariff		Average EU imports from Extra-EU, 2008–10 (€ mn)	Share of EU market	3-yr avg. UV 2008–10 (€/kg)	Unit value as a percentage of (product) graduate's unit value ^c
	Current	2014 ^b				
03075910, Frozen octopus 'octopus spp.', with or without shell						
All suppliers			380.3		4.1	96.9%
Morocco	0		186.8	49.1%	5.3	124.9%
Mauritania	0		46.4	12.2%	4.7	112.6%
Mexico	0		27.3	7.2%	3.7	87.3%
Senegal	0		23.2	6.1%	4.2	99.6%
China	2.8%	8%	13.9	3.6%	4.2	100.0%
Vietnam	2.8%	8%	11.6	3.0%	1.7	41.6%

Notes:

- (a) All suppliers with a 5% or more share of the Extra-EU market, plus product graduates for which the item has been identified as 'key' (regardless of market share). Shaded rows denote graduates.
- (b) As current unless indicated otherwise.
- (c) Where more than one country is graduated under the 17.5% market share criterion, this percentage is of the highest of their respective unit values

⁵³ Reaching an average price of €4.5 per kg compared to those caught using industrial means which sell at under €2 per kg (Gorez, 2008).

⁵⁴ This is also the conclusion reached by Kazmierczak et al. (1997).

3.6 The unshelled beans GVC

Preferential market access in the EU has historically been an important determinant of the establishment of the horticultural industry in developing countries. Non-traditional exports, such as horticulture, are considered more dynamic than other types of traditional commodities and have formulated the basis of export diversification strategies for many countries in sub-Saharan Africa (Humphrey, 2003; Gibbon, 2005). The growth of the horticultural industry in Kenya is regarded as one of the major export success stories of sub-Saharan Africa in recent years (Jenkins, 2005).

Overall, the UK–Africa horticulture value chain exhibits several characteristics of a ‘buyer-driven commodity chain’ in which powerful lead firms (supermarkets) govern supply networks that span several African countries, and define not only what is to be produced but also how and under what conditions (Dolan and Humphrey, 2000). This transformation has been driven largely by supermarket consolidation within the UK, and other European markets, which has meant that arms-length and market-based relations between firms have been replaced by more hierarchical structures, the drivers of which are large retailers. It has meant the replacement of wholesale markets and flexible relations between firms with more durable informational intensive relationships, related to how products should be grown, harvested, transported, processed and stored with resultant impacts on the structure of production (Dolan et al., 1999; Dolan and Humphrey, 2000; Humphrey, 2003; Jenkins, 2005).

The horticultural product on the shortlist is unshelled beans which are prepared or preserved, i.e. there has been some processing requiring a different type of capital investment than needed for ‘just-in-time’ delivery of fresh green beans, or cut flowers. The UK-Kenya horticultural value chain is fairly well documented for fresh green beans and cut flowers but not for processed unshelled beans.

Despite this, a review of the existing GVC literature on horticultural exports from other major suppliers to the EU market suggests some similarities across countries related to the increasing concentration of production and tightening up of the contractual relations between producers and exporters (with some vertical integration apparent). But it also shows some differentiation across producers related to the products exported.

China has recently emerged as a formidable producer and exporter of horticultural goods, almost doubling the value of these exports over the last decade, and features as a major supplier to the EU market. The expansion of the labour-intensive horticultural sector during the 1990s was driven by the need to take advantage of China’s plentiful supply of rural labour. This process has been facilitated by government investments in greenhouse construction, demonstration farms and extension services, and private investment – both domestic and international.⁵⁵ Generally, however there is a limited available literature on the types of international firms involved in China, for example, whether or not these include European retailers.

Overall this lack of information limits the ability to generalise on the extent to which changes in graduation thresholds might affect sourcing strategies from countries such as China in the future. However, since it has been pointed out by Henson (2008) that an increase in Chinese exports of green beans is likely to reduce world market prices with adverse effects on the export revenues of other developing countries, this would suggest the converse may also be true if China is graduated from this product category, should this result in an increase in prices, which subsequently reduces its exports.

As indicated in Table 14, there is a wide range of product unit values for unshelled beans – with China being the lowest cost producer to the EU market and Madagascar the highest, by far. Although China has the lowest unit value across all of the major suppliers to the EU market, it has seen its market share within the EU decline over time, whilst that of all other

⁵⁵ Rae et al. (2006).

major suppliers – notably Madagascar and Kenya – has increased. Because of the relative price changes as a result of graduation, China's market share within the EU could decline further.

The increase in relative prices which may result from the increase in tariffs on China due to graduation could in this case result in a trade shift towards non-graduates. But given the extreme variation in product unit values across producers, it may be the case that other attributes such as quality also matter in this market. The review of the GVC literature for this product suggests that these types of horticultural products tend to be rather more luxury goods. But as previously mentioned most of this literature refers to fresh rather than prepared and preserved produce which means it is difficult to draw definitive conclusions, including related to the price elasticity of demand for this product.

Table 14: Market share and unit values, unshelled beans

Main suppliers ^a	Tariff		Average EU imports from Extra-EU, 2008–10 (€ mn)	Share of EU market	3-yr avg. UV 2008–10 (€/kg)	Unit value as a percentage of (product) graduate's unit value ^c
	Current	2014 ^b				
20055900, unshelled beans 'vigna spp., phaseolus spp.', prepared or preserved otherwise than by vinegar or acetic acid (excl. frozen)						
All suppliers			50.2		1.3	146.1%
Kenya	0		26.1	52.1%	1.3	147.8%
China	15.7%	19.2%	9.4	18.7%	0.9	100.0%
Madagascar	0		6.7	13.4%	2.2	252.2%
Cameroon	0		5.8	11.6%	1.7	193.7%

Notes:

- (a) All suppliers with a 5% or more share of the Extra-EU market, plus product graduates for which the item has been identified as 'key' (regardless of market share). Shaded rows denote graduates.
- (b) As current unless indicated otherwise.
- (c) Where more than one country is graduated under the 17.5% market share criterion, this percentage is of the highest of their respective unit values.

3.7 Estimating the trade effects of changes in graduation thresholds

The literature on empirical estimates of trade elasticities, as opposed to those derived from econometrics, suggests that the magnitude of these estimates can vary widely. In some cases the signs reported (positive or negative) can be contrary to theory. In such cases, doubt can be thrown on the whole procedure. The model and approach we used in order to estimate price elasticities of demand is summarised in Appendix Box 1.

Our estimations, as anticipated, produced some results which ran contrary to our expectations. Moreover, because the range of own price elasticities of demand can be large – from negative to positive infinity – high values are not uncommon and will result in unreasonable results when applied within the context of this study. In order to avoid these problems, in the case of those products for which we have not been able to produce reasonable estimates of industry price elasticities of demand we have instead referred to the estimates derived from other secondary sources (see Appendix Table 1).

Of the 11 items on the shortlist, only in the case of octopus (CN 03075910) does the secondary literature on own price elasticities suggest that demand is rather inelastic. This suggests that the price increases which result from changes in graduation are unlikely to affect the quantity demanded of frozen octopus, and hence there is no change in market share and benefit for the non-graduates of this product. Since the graduates of frozen octopus are relatively minor suppliers to the EU market and we expect other factors apart from price to be

more important determinants of success in this market, it was decided to drop this item from the shortlist.

We have combined the results for the remaining ten items of our own estimations of industry price elasticities of demand and those derived from the secondary literature. In the following two tables, those items for which we had to use elasticities derived from secondary sources are indicated by pale blue shading. Table 15 shows the estimated losses for graduates, while Table 16 breaks down the potential gains. The results reaffirm once again that, even when the microscope is trained on products of most interest to poor countries, their level of potential export increase is dwarfed by those from other higher income suppliers to the EU market. By removing the requirement that countries supply at least 5% of imports we have been able to take account of any case where several poor-country suppliers each has a low market share but, when combined, they account for a significant share. These very small suppliers in each income/status category of Table 16 are labelled 'minor suppliers'.

Table 15: Potential losers (€ mn), estimated elasticities

CN8	Description	Avg. EU imports, 2008–10 (€ mn)		Potential losers (€ mn)							
		All Extra	LDCs	Argentina	Brazil	China	India	Russia	Thailand	Uruguay	Vietnam
03042999	frozen fillets of saltwater fish	225.00	14.04	-2.3		-7.1					-2.5
03061350	frozen shrimps of the genus 'penaeus', whether in shell or not	1,452.23	224.12	-32.6		-6.0					-24.1
03061380	frozen shrimps and prawns, whether in shell or not	494.46	90.50	-10.6		-7.6					-1.2
16041416	fillets known as 'loins' of tunas or skipjack, prepared or preserved	381.67	24.42						-1.8		
16041418	prepared or preserved tunas/skipjack	625.20	23.57						-4.0		
16052091	shrimps and prawns, prepared or preserved, in immediate packings of a net content of ≤ 2 kg	145.66	6.49						-1.5		
20055900	unshelled beans 'vigna spp., phaseolus spp.', prepared or preserved otherwise than by vinegar or acetic acid	50.15	6.72			-0.2					
41071291	grain splits leather 'incl. parchment-dressed leather', of the whole hides and skins of bovine 'incl. buffalo' animals, further prepared after tanning or crusting, without hair on	312.83	1.73	-2.5	-22.5		-4.5			-2.3	

CN8	Description	Avg. EU imports, 2008–10 (€ mn)		Potential losers (€ mn)							
		All Extra	LDCs	Argentina	Brazil	China	India	Russia	Thailand	Uruguay	Vietnam
41079210	grain splits leather 'incl. parchment-dressed leather', of the portions, strips or sheets of hides and skins of bovine 'incl. buffalo' animals, further prepared after tanning or crusting, without hair on	144.94	1.58	-0.4	-1.8		-0.9	-1.6		-0.4	
41079910	leather 'incl. parchment-dressed leather' of the portions, strips or sheets of hides and skins of bovine 'incl. buffalo' animals, further prepared after tanning or crusting, without hair on	66.66	10.20		-0.5		-0.6	-0.3			
Totals				-48.4	-24.9	-20.9	-6.0	-1.9	-7.3	-2.7	-27.9

Putting these results into context, the potential gains for LDCs from the changes in graduation thresholds are just 1% of EC revenue forgone in 2009.⁵⁶

From the ten items in Table 16, three were selected as the focus for the case studies. They are: one of the shrimp items (CN 03061350) which has the largest estimated LDC gains (and two significant LDC beneficiaries), one of the leather items (CN 41079910) which is the only one of the three to have estimated gains for a single LDC of over €0.1 mn, and beans (CN 20055900) to bring in a non-LDC LIC. The key statistics for these three are given in Table 17.

⁵⁶ The annual loss of customs revenue resulting from the application of the current GSP Regulation was estimated to be €2.97 billion corresponding to a net amount of €2.23 billion after deduction of Member States' collection costs. Under the proposed regulation the annual loss has been estimated at €1.4 billion net.

Table 16: Potential beneficiaries (€mn), estimated elasticities

CN8	03042999	03061350	03061380	16041416	16041418	16052091	20055900	41071291	41079210	41079910
Description	Frozen saltwater fish fillets	Frozen shrimps	Frozen shrimps/prawns	Prep./ pres. tuna/skip-jack loins	Prep./pres. tuna/skipjack	Prepared shrimps/prawns	Prep./pres. unshelled beans	Grain splits leather	Grain splits leather	Leather
Bangladesh		6.5	4.0							0.3
Madagascar		4.0					0.0			
Senegal	1.1									
Minor LDC suppliers	0.3	1.7	2.3	0.1	0.2	0.1	0.0	1.0	0.2	0.0
Total LDCs	1.4	12.2	6.3	0.1	0.2	0.1	0.0	1.0	0.2	0.3
Kenya							0.1			
Minor non-LDC LIC suppliers	0.0	0.0	0.0	0.1	0.0	-	0.0	0.2	0.0	0.0
Total non-LDC LICs	0.0	0.0	0.0	0.1	0.0	-	0.1	0.2	0.0	0.0
India		8.3	6.1			0.1				
Cameroon							0.0			
Ghana					0.5					
Philippines					0.4					
Côte d'Ivoire					0.4					
Pakistan									0.9	0.2
Guatemala				0.1						
Egypt										0.1
El Salvador				0.2						
Vietnam						0.4				
Indonesia						0.3				
Minor non-LDC LMIC suppliers	1.1	9.5	3.0	0.1	0.3	0.2	0.0	6.1	1.5	0.1
Total non-LDC LMICs	1.1	17.7	9.1	0.5	1.6	1.0	0.0	6.1	2.4	0.4
Chile	1.7									
Ecuador		15.8		0.7	0.7					

CN8	03042999	03061350	03061380	16041416	16041418	16052091	20055900	41071291	41079210	41079910
Description	Frozen saltwater fish fillets	Frozen shrimps	Frozen shrimps/prawns	Prep./ pres. tuna/skip-jack loins	Prep./pres. tuna/skipjack	Prepared shrimps/prawns	Prep./pres. unshelled beans	Grain splits leather	Grain splits leather	Leather
Thailand		7.0								
Turkey										0.2
Seychelles					0.7					
Mauritius				0.2	0.7					
Minor non-LDC UMIC suppliers	3.4	9.1	3.8	0.2	0.1	0.2	0.0	8.1	1.7	0.2
Total non-LDC UMICs	5.1	31.9	3.8	1.1	2.2	0.2	0.0	8.1	1.7	0.3
Major HIC suppliers	3.1									0.2
Minor non-LDC HICs	1.1	0.8	0.2	0.0	0.0	0.1	0.0	16.3	0.9	0.2
Total non-LDC HICs	4.2	0.8	0.2	0.0	0.0	0.1	0.0	16.3	0.9	0.4
Totals	11.8	62.6	19.4	1.8	4.0	1.5	0.2	31.8	5.1	14

Table 17: The selected case studies

Product	Losses: graduates (€ mn) ^a			Gains: major non-graduate suppliers (€ mn)	
	<i>Total</i>	<i>By graduate</i>			
03061350	-62.65	Argentina	-32.57	Ecuador	15.79
Frozen shrimp		Vietnam	-24.12	India	8.28
		China	-5.95	Thailand	6.99
				Bangladesh	6.48
				Madagascar	4.03
41079910	-1.38	India	-0.57	Bangladesh	0.32
Leather		Brazil	-0.54	Norway	0.20
		Russia	-0.27	Pakistan	0.19
				Turkey	0.16
				Egypt	0.13
20055900	-0.20	China	-0.20	Kenya	0.13
Unshelled beans				Madagascar	0.03
				Cameroon	0.03

Note:

(a) Using estimated price elasticities of demand.

4 The potential effects of trade shocks

4.1 Trade, growth and poverty

This chapter explores the possible distributional effects of the trade flow changes described in the previous Chapter. It looks at the effects in graduates as well as non-graduates. Section 1 outlines a conceptual framework for understanding the links between trade, growth and poverty which is followed in the next section by a review of the experience on the distributional effects of previous macro shocks. Naturally, the shocks that have been most studied are large ones – with absolute effects much larger than will be caused by the GSP change. But, whilst the scale of the changes surveyed in this chapter will be much larger than those described in the case studies in the next chapter, the pathways along which change travels and the way individuals and communities are affected will be similar. The ‘big shocks’ help us to understand the way in which the ‘small shocks’ will be felt and the types of effect they may have on poverty.

A contradictory literature on trade, growth and poverty

There is a significant body of literature examining the relationship between trade, growth and poverty.⁵⁷ The weight of evidence suggests that greater trade openness is an important element in explaining growth, and has been a central component of successful development. Few countries have grown over the long term without experiencing a large expansion in trade – the fastest-growing countries have expanded their shares of the global market for goods. In addition, most developing countries with rapid poverty reduction have sustained high economic growth.

There is less clarity, however, on how trade liberalisation, growth and poverty interact. Some evidence suggests that trade openness triggers growth, and we know that growth is a central driver of poverty reduction. This finding is supported by several cross-country studies,⁵⁸ although the evidence has been challenged on both methodological⁵⁹ and empirical⁶⁰ grounds. Further, there is evidence to suggest that economic integration into the world economy can be the *result* of successful and inclusive growth and development, rather than a *prerequisite* for it.⁶¹ In addition, even when countries have better access to international markets (e.g. through tariff reductions or changes in GSP preferences) behind the border constraints may prevent the country from fully capturing the benefits.

Even when there appears to be a strong relationship at an aggregate level between trade openness and growth, trade policy change will create ‘winners’ and ‘losers’: it will benefit some while in the short term adversely affecting others. This can limit the poverty reduction impact of any change and may further entrench existing inequalities.

Preconditions for positive linkages between trade and poverty

Booth and Kweka (2004) argue that there are three preconditions for positive linkages between trade and poverty. These are that:

- 1 international opportunities for trade exists, and these are adequately transmitted to producers and traders by price signals and other processes under the control of policy makers in the country;
- 2 internal barriers to production and exchange of tradables are of moderate scale, so there is reasonably wide distribution of the factors of production, there are minimal physical

⁵⁷ Seminal works include Berg and Krueger, 2003; Dollar and Kraay, 2004; Hertel and Reimer, 2005; Hoekman and Olarreaga, 2007; Hoekman et al., 2001; McCulloch et al., 2001; Ravallion, 2005; Winters et al., 2004.

⁵⁸ These include Berg and Krueger, 2003; Dollar, 1992; Dollar and Kray, 2004; Durnan et al., 2008; Edwards, 1998; Sachs and Warner, 1995.

⁵⁹ For example, Lübkjer et al., 2002.

⁶⁰ For example, Rodriguez and Rodrik, 1999; Rodrik, 2000; 2001; 2007.

⁶¹ For example Chang, 2007; Rodriguez and Rodrik, 1999; Rodrik, 2007.

and administrative blockages to trade and business, and intermediate markets are competitive resulting in limited trading margins and profitable production (including output, input and credit markets);

- 3 poor people are able to participate in production of tradable goods or services (or share indirectly in the economic benefits from tradables' production), given the production structure of the country, and the kinds of commodities are tradable under prevailing conditions.

In the context of the GSP, the first two preconditions outlined above relate to a potential beneficiary country's **ability to take advantage of the increased export space** resulting from the graduation of competitors. The third precondition relates to the ability of **poor people to engage with and benefit from the increased export space**. The analysis of Chapter 3 has identified cases where there appears to be a strong presumption that these preconditions exist, but it is such an important issue that it is considered in each of the cases studies in relation to the GSP changes.

A country's ability to take advantage of increased export space relates to the export competitiveness of the sector and product in question. The World Bank (2011a) proposes that there are three pillars of export competitiveness:

- 1 the incentive framework;
- 2 services and inputs; and
- 3 overcoming market and government failures.

These pillars are outlined in Box 9.

Box 9: Pillars of export competitiveness

Incentive framework: A fundamental requirement for export competitiveness is a sound incentive framework, which ensures that domestic resources are channelled to areas where they have the best comparative advantage. Such an incentive framework should ensure that land, labour, capital and technology are moving to: (a) sectors in which the country has a long-term capacity to compete, (b) to the most productive firms within sectors. Conventionally, the policy biases against exports have been estimated through tariff rates and quantitative restrictions. Added to these are the trade-restrictiveness imposed by presence of import-export monopolies and various administrative restraints. The real exchange rate is also relevant, as misalignment can be detrimental to export growth. Business taxes on investment also affect export orientation through its impact on investment decisions. Marginal effective tax rate (METR) on capital is a summary measure of the effective rate of tax imposed on the rate of return generated. The tax regime can impose biases against labour-intensive investments and against the small and medium enterprises.

Services and inputs: It is critical that firms have access to efficiently-produced backbone services and inputs. Countries where firms have to pay more than their competitors for energy, telecommunications, customs services, transport, logistics, and business registration and operations, will find it hard to compete in the global markets. Export performance depends also on institutional quality such as access to well developed communication infrastructure, business environment for enforcement of contracts, and overall economic freedom. Other critical services are those related to education and training that are necessary to ensure supply of the type of labour required by the more productive expanding sectors in the economy and to foster a process by which value is increasingly added to the products and services produced in the country.

Overcoming government and market failures: A range of market and government failures that tend to afflict countries as they seek to expand exports and growth. In many cases these constraints to competitiveness require specific interventions and institutions. These are likely to include export and investment promotion agencies, standards bodies, agencies to support innovation and clustering. In mitigating government failures and weak capacity for policy formulation and implementation effective mechanisms can be to establish an empowered and dedicated trade and competitiveness policy unit within government, export processing zones and duty refund schemes. It is important that these initiatives are brought together within a strategy for competitiveness rather than as a series of *ad hoc* interventions. In isolation these agencies tend to be rather weak and ineffective.

Source: World Bank (2011a).

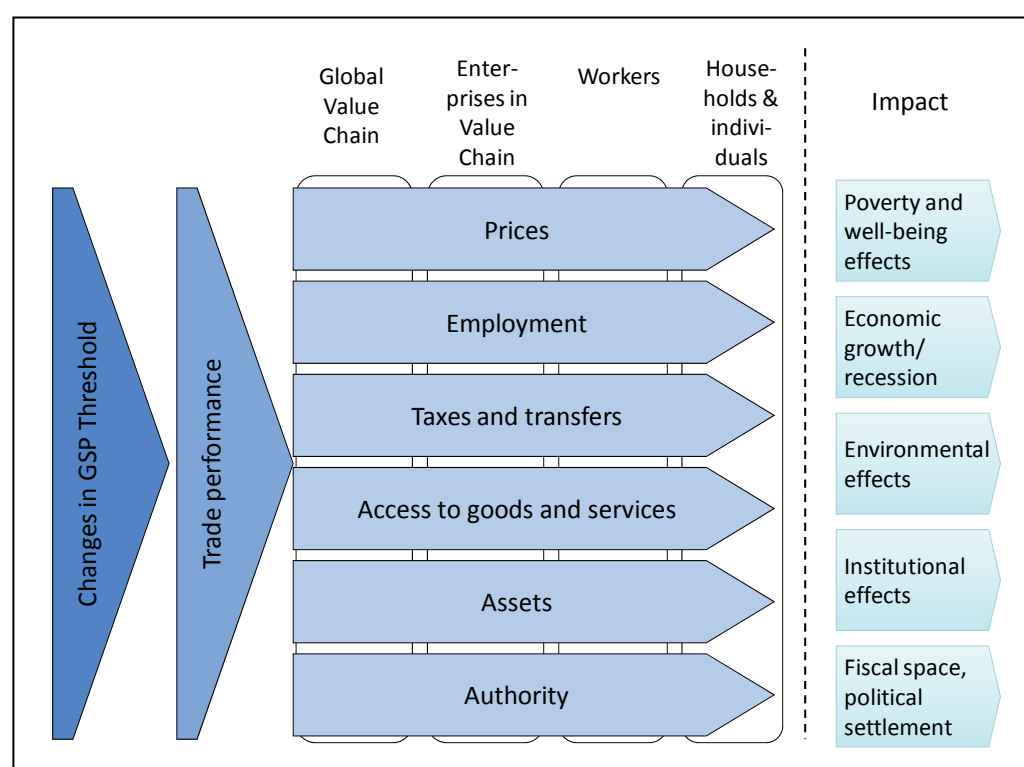
4.2 The six pathways between trade changes and poverty effects

To understand if poor households are able to participate in and benefit from increased export space we need to identify how changes in trade policy will transmit through the economy to the household. This can be mapped by developing a thorough understanding of the structure of the society and the economy in which the changes will take place, followed by an analysis of the transmission channels by which change will flow through that society and economy. Primary channels are those directly activated by the change in trade (e.g. international demand for product x increases). Secondary channels are activated as a result of behavioural changes (e.g. greater demand leads to increased economic activity (employment) and an enlarged revenue base for government (taxes)).

The OECD (2007) identifies six main transmission channels (Figure 3).

- **Prices:** Changes in consumption and production prices, wages, salaries and interest rates.
- **Employment:** All aspects of formal and informal employment, including self-employment and employment in household enterprises. Other aspects include security, status and workloads and gender issues.
- **Taxes and transfers:** Public and private transfers and taxation, including targeted transfers, subsidies, taxes, levies, remittances, etc.
- **Access to goods and services:** People's access to public and private goods and services; may involve removal of barriers or improving the quality of goods and services available.
- **Authority:** Issues related to formal and informal institutions, organisations, relationships and power structures; include entitlements, obligations, incentives and sanctions. This also examines the effect on people of changing political, legal, social or cultural factors.
- **Assets:** Access to, or control of, assets, including physical, natural, human, social and financial assets.

Figure 3: Conceptual framework: the transmission of the effects of changes in trade



Prices: This channel primarily relates to the prices of goods and services (Lustig and Walton, 2009; McCulloch et al., 2001). The extent to which changes in the price of goods and services affect households will depend on a range of factors, including the integration of markets over time and space, the world price, exchange rates, domestic taxes, transportation and storage costs and, where they exist, centralised marketing boards or cooperatives.

The direct impact of price changes on poverty depends on whether poor households are net consumers or net producers of the good or service. A decrease in price will benefit net consumers and harm net producers. An increase in price will benefit net producers and harm net consumers (Turner et al., 2008). Price variability may also be a product of trade openness and liberalisation. The increased exposure of domestic markets to international price fluctuations, and the elimination of institutions or domestic markets that smooth domestic prices, will mean that producers and consumers will be more vulnerable to international price fluctuations (Winters et al., 2004). This will affect poor households, and they will respond by taking action to reduce risk exposure. For example, increased vulnerability to price fluctuations may lead poor farmers to diversify, at times to suboptimal crops, to reduce risk (Bird and Vandemoortele, 2009).

Employment: Changes in trade can affect enterprise profits and both wages and employment. For example, better access to international markets may increase production and the demand for unskilled and semi-skilled labour, tightening the labour market and driving up wages (Turner et al., 2008). Equally, negative trade shocks that lead to reduced demand for a country's products can lead to a loss of trade volume and value, reduced enterprise profit and a squeeze on both wages and employment. Increases and decreases can be felt directly in the value chain of a particular product and also more widely in the economy through backward and forward linkages and second round effects.

Taxes and transfers: Changes in the volume and value of trade can increase or decrease government revenues. The degree to which changes in trade impact on government revenue depends on the extent to which a value chain is within the formal sector, the efficiency of tax administration and the tax regime. However, it is important to note here that while trade reforms can affect government revenue, they do so less adversely and less frequently than popularly imagined. This is largely because trade volumes and collection rates tend to increase as tariff exemptions are removed or tariffs fall. Further, the extent to which increases, or decreases, in government revenue derived from trade affect poor people is ultimately a political decision (Winters et al., 2004), but there is certainly potential for revenue derived from increased exports to contribute to government spending on economic and social infrastructure.

Private transfers are an important mechanism by which extended families and social networks smooth income and consumption. These traditional safety nets can, for instance, enable migrant workers to support families who have remained behind or can allow family members who have more income to support those who have less (for instance older parents). They can be in the form of regular payments or irregular transfers to pay for lumpy investments like school fees or a new tin roof. When workers lose their jobs or their incomes falls they may find it impossible to maintain the regularity or level of payments that they have previously made, with negative consequences for recipients and for the social standing (and social capital) of the provider.

Access to goods and services: Volatility in tax revenue can impact on governments' ability to plan, particularly where they do not have reserves or an ability or willingness to borrow to smooth government budgets. Where tax revenue takes a downturn, this can also have negative consequences for government budgets which may affect public service provision and any social transfers. These can have both short and long-term consequences. For example: a failure to maintain a road may mean that it gets to the point where it has to be completely reconstructed (at greater cost) than simply mended; a dip in education spending may contribute to children receiving an inadequate education, with implications for their life-long earnings and (if sufficiently widespread) the ability of the country to grow and develop. Equally, increases in tax revenue and a smoothing of tax take can increase government's

ability to plan and their room for manoeuvre – with potential consequences for improved service provision and levels of investment.

Authority: This channel relates to formal and informal institutions, organisations, relationships and power structures. It covers the entitlements, obligations, incentives and sanctions that individuals, groups and institutions face and includes, for example, laws governing land rights, civil service codes of conduct and behavioural norms in specific population groups. This channel examines the effects on people of changes in political, legal, social or cultural factors. Changes transmitted through this channel can be felt in terms of changes in levels of empowerment, equity and inclusion. It also has implications for changes in the behaviour of economic agents, with consequences for growth and distribution (OECD, 2007).

Assets: Building a strong asset base is strongly correlated with poverty exits. Locked together with capabilities, assets can enable individuals and households to diversify, invest, move up the value chain and improve their level of well-being. Assets also serve a powerful protective function in the case of a shock (e.g. loss of employment, drop in wages) whether it is an economic or livelihood shock felt by many or a household-level shock (e.g. death of a breadwinner).

This analytical set of pathways establishes the 'headings' and detailed questions required to understand and assess the potential poverty impacts of changing the GSP graduation threshold (Table 18). For both graduating and potential beneficiary countries, we need to understand:

- 1 where the product fits within the economy;
- 2 how this will be transmitted to households.

For the graduates we need additionally to know the impact that the loss of GSP preferences will have and, on the other side of the coin, for beneficiaries we need to know if and how the country will be able to exploit the expanded export space. For all the questions, the product that is graduating should be the entry point for the analysis.

Table 18: Factors to consider in an assessment of poverty impact of changing GSP thresholds

Graduating country
Where does product x fit within the economy?
<ul style="list-style-type: none"> Where do the product, and its sector, fit within the economy (proportion of GDP, proportion of exports, proportion of employment, type of employment)? Which groups are involved in the production of the product (as investors, business owners, producers, consumers, workers)? What is the socio-economic composition (e.g. gender, income group, ethnic group) of these different groups? Where is the product produced (geographic location, nature of the location (i.e. production hub, lagging region))?
What will be the impact of the loss of GSP preferences in product x?
<ul style="list-style-type: none"> Changes in export revenue? Changes in share of GDP derived from key sector Number of enterprises in key sector (losses?) Changes in employment in key sector? Changes in income in key sector? Changes in asset holding by households (differentiated by sub-sector and income group)? Impacts on up- and down-stream sectors?
How will the loss of GSP preferences as result of graduation in product x be transmitted to households?
<p>Prices:</p> <ul style="list-style-type: none"> Will prices increase or decrease? Who are the different groups that will be affected? How will they be affected? E.g. as net producers, net consumers? What are the plausible poverty impacts?

Employment:

- Will employment increase or decrease?
- Who are the different groups that will be affected? E.g. business owners, producers, workers (informal and formal)?
- How will they be affected? i.e. Decreased profits, wages, employment?
- What are the plausible poverty impacts?

Taxes and transfers:

- Will government tax take increase or decrease?
- Will tax take be volatile?
- How will changes affect public investment and service provision?
- How will changes in public investment and service provision affect different social and economic groups?
- Will private transfers increase or decrease?
- How will changes in the size and frequency of private transfers affect recipients (poverty/ well-being) and providers (social capital, status)?

Access to goods and services:

- Will investment and the availability of goods and services increase or decrease?
- Who are the different groups that will be affected?
- In what way will they be affected?
- What are the plausible poverty impacts? (differentiated by ethno-linguistic group, wealth group, gender)

Authority:

- Will the performance of formal and informal institutions change as a result of changes in trade?
- If so, in what way?
- How will any changes affect different social and economic groups (e.g. ethno-linguistic groups, wealth groups, women and men)?

Assets:

- Will people's ability to access/ control assets increase or decrease?
- What implications will this have for poverty, vulnerability and well-being (differentiated by ethno-linguistic group, wealth group, gender)?

Beneficiary country

Where does product x fit within the economy?

- Where do the product, and its sector, fit within the economy (proportion of GDP, proportion of exports proportion of employment, type of employment)?
- Who is involved with the product (investors, business owners, producers, consumers, workers)? What is the socio-economic composition (e.g. gender, income group, ethnic group) of these different groups?
- Where is the product produced (geographic location, nature of the location (i.e. production hub, lagging region)?

How will the country exploit expanded export space resulting from changing GSP preferences in product x?

Incentive framework

- Does the existing incentive framework enable producers to respond to expanded export space? i.e. favourable tax framework, streamlined administrative processes?

Services and inputs

- Are services and inputs such as energy, telecommunications, customs services, transport, logistics, and business registration and operations competitive enough to enable expanded market space to be exploited?
- Is institutional quality sufficient?
- Are education and training services sufficient to ensure supply of the type of labour required?

Overcoming government and market failures

- Do export and investment promotion agencies, standards bodies, agencies to support innovation and clustering exist and can they support the exploitation of expanded market space?
- Does the sector have a competitiveness strategy, and dedicated resources to support the strategy, to support an efficient and coordinated response to expanded export space?

How will gains from expanded export space in product x be transmitted to households?

Prices:

- Will prices increase or decrease?
- Who are the different groups that will be affected?
- How will they be affected? E.g. as net producers, net consumers?
- What are the plausible poverty impacts?

Employment:

- Will employment increase or decrease?
- Who are the different groups that will be affected? E.g. business owners, producers, workers (informal and formal)?
- How will they be affected? i.e. Decreased profits, wages, employment?
- What are the plausible poverty impacts?

Taxes and transfers:

- Will government tax take increase or decrease?
- Will tax take be volatile?
- How will changes affect public investment and service provision?
- How will changes in public investment and service provision affect different social and economic groups?
- Will private transfers increase or decrease?
- How will changes in the size and frequency of private transfers affect recipients (poverty/ well-being) and providers (social capital, status)?

Access to goods and services:

- Will investment and the availability of goods and services increase or decrease?
- Who are the different groups that will be affected?
- In what way will they be affected?
- What are the plausible poverty impacts? (differentiated by ethno-linguistic group, wealth group, gender)

Authority:

- Will the performance of formal and informal institutions change as a result of changes in trade?
- If so, in what way?
- How will any changes affect different social and economic groups (e.g. ethno-linguistic groups, wealth groups, women and men)

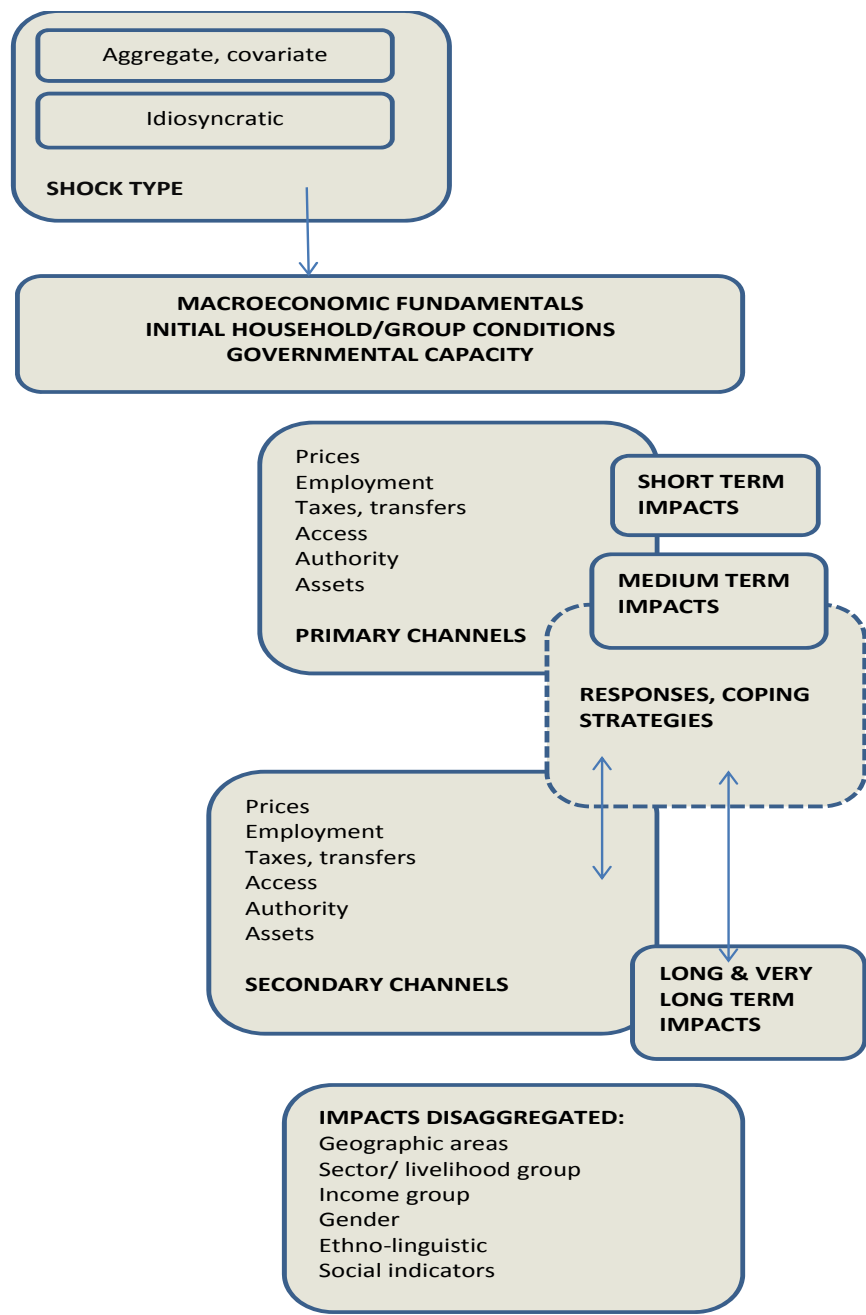
Assets:

- Will people's ability to access/ control assets increase or decrease?
- What implications will this have for poverty, vulnerability and well-being (differentiated by ethno-linguistic group, wealth group, gender)

4.3 The distributional impacts of macro shocks

The distributional impact of a shock will depend upon: its nature, the specific transmission mechanisms, the capacity of different groups to cope (which in turn depend upon current levels of poverty and vulnerability including 'initial conditions' of different categories of households), plus the structure and resilience of the economy (including economic fundamentals), and governmental or policy response capacity (Figure 4).

Figure 4: How a shock will feed through to affect poverty



Factors affecting the impact of shocks

Shocks can be idiosyncratic (experienced by an enterprise, individual or household) or covariate (experienced by many enterprises in a sector or area or many households in a community or country) (Lustig, 2000).⁶² Examples of idiosyncratic shocks include sudden unemployment, illness or the death of a breadwinner, while examples of covariate shocks include drought, conflict and macroeconomic crisis. Idiosyncratic shocks can be insured against to a certain degree through reciprocal (and other) arrangements within a kinship network or community, but this is more difficult in the case of more widespread or covariate shocks (Bird

⁶² Idiosyncratic shocks are uncorrelated across individuals in a group, or across sub-groups (Mendoza, 2009). Mendoza (2009) and others further classify shocks as having low frequency with severe welfare effects (catastrophic) and high frequency with low welfare effects (non-catastrophic).

and Higgins, 2011). Macroeconomic crises, for instance, are poorly dealt with by self-insurance, informal insurance or market based smoothening (credit) (Skoufias, 2003).⁶³

Shocks may be sequenced or compounded, where enterprises, individuals or households experience one unrelated negative event after another (sequenced shocks) or where a negative event triggers a series of bad things to happen (compound shocks) and covariant shocks may overlay 'conventional' life-cycle, livelihood and other idiosyncratic shocks (Bird et al., 2011).

Individuals and households respond to shocks by drawing down sequentially on their assets to develop coping strategies. They make decisions relating to investments, consumption, work and leisure, selecting the best possible mix of livelihood options that will maintain current and future well-being for themselves and their households (Bird and Prowse, 2009). People have been shown to adopt coping strategies in a predictable sequence to trade-off short-term consumption needs against longer-term economic viability. Those with limited long-run costs tend to be adopted first. Once households and individuals have exhausted their less damaging options, they tend to progress to forms of adverse coping and then to survival strategies.

A household's initial conditions (household assets and characteristics including dependency ratios, educational status of household members, their social networks and capabilities and agency) influence its vulnerability to shocks and the forms of coping open to it (Bird and Higgins, 2011). A lack of assets, both private and collective, drives poor people into deeper and more intractable poverty after a shock and the level of landholdings and education of the household head influence the impact that a shock has on household consumption levels. Those with few material, financial, natural or social assets are vulnerable to relatively minor shocks, especially if sequenced closely together or unpredictable. Without assets to form the basis of effective coping strategies and resilience,⁶⁴ people can experience catastrophic declines into persistent poverty and, more to the point, face increased morbidity and reduced life expectancy. Poor people without reserves may progress through forms of coping from preferred modes of adaptive behaviour through to sustainable coping and eventually to adverse coping which may support short-term survival while undermining wellbeing in the medium to long term. In addition, some shocks may themselves erode household's ability to cope and covariate shocks may see incomes (including those from informal arrangements) and the value of assets held by poor people fall, making them less effective components a coping strategy (Skoufias, 2003).

Education contributes to a person's capabilities and can serve a protective function in the face of shocks. For example, Quisumbing (2008) shows that schooling provides important protection against chronic poverty in the context of a modernising Bangladeshi economy where non-farm enterprises have become more important. Research by Bird et al. (2010) explores the role that education plays in supporting resilience during conflict. Education is found to be a 'portable' asset that serves a protective function, helping people stay out of poverty during conflict and supporting post-conflict recovery. This suggests that the impact of livelihood changes as a result of changes to the GSP will have a differentiated effect, with the least educated less able to escape any negative consequences.

The resilience of enterprises, individuals and households is strongly influenced by their asset holdings and capabilities.⁶⁵ Those with more assets and capabilities have greater levels of

⁶³ For example, if aggregate demand and employment falls as a result of a shock, membership of an occupational association will be of little help where the majority of members are from the same sub-sector and also negatively affected. For more, particularly on covariate shocks, see (Skoufias, 2003).

⁶⁴ The degree of resilience an individual commands, defined as 'the manifestation of positive adaptation despite significant life adversity' (Luthar, 2003: xxix), will also influence the impact of the shock on well-being. It will determine an individual or household's ability to 'bounce back' from a single shock, measured by bringing income and consumption back to pre-shock levels in a given time period.

⁶⁵ We assume here that the resilience of enterprises, sectors and sub-sectors follows similar patterns and is determined by similar factors (asset holdings, capabilities, selection of coping strategies) as that of individuals and households.

resilience, limiting the need for the adoption of adverse coping strategies (Bird and Higgins, 2011) and thus the long-term damage inflicted by specific shocks.

Adverse coping can entail the liquidation of crucial productive assets, the reduction of consumption in ways that have potentially irreversible welfare effects (eating smaller amounts of less nutritious food, avoiding essential medical expenditures, withdrawing children from school) or the adoption of behaviour that undermines trust and social standing (theft and begging, engagement in commercial sex work, abandoning children with their grandparents) (Bird and Prowse, 2008). It can see households and individuals reach and pass crucial 'tipping points' as they liquidate productive assets, over-exploit social and political capital and reduce food security and investments in human capital to the point that individual and household capitals and capabilities become so low that recovery to previous levels of well-being are likely to be slow and difficult or even impossible (Bird et al., 2011). Better endowed households are likely to be more resilient and more able to avoid adverse coping and so maintain food security and continue to invest in health and education (Bird and Higgins, 2011), suggesting that, for them, the impact of the shock will be relatively short-lived.

Even a transitory shock can result in declines in consumption and well-being that can have a catastrophic impact. This is particularly true where the effect is on children at a crucial point in their life course, as the negative impacts of the shock can generate 'irreversibilities', or damage that cannot be reversed (Bird and Higgins, 2011). These can range from stunting and wasting from poor nutrition through to lost years of schooling. The erosion of assets through adverse forms of coping is also important as it can lead to downward mobility and, once a certain threshold has been reached, with poverty traps, risk aversion, vulnerability and a future inability to cope with shocks and contingencies (Bird, 2007). It can also be linked to the breakdown of the family unit and can limit the future wealth of the younger generation by eroding inheritable assets (Bird and Higgins, 2011). Households with less land or fewer assets also tend to have more working children. Large systemic macroeconomic crises may generate short or medium term shocks and may also have long-run damaging implications because, by undermining government fiscal reserves,⁶⁶ they trigger a reduction in public service provision and capital investment while simultaneously eroding the asset holdings and investments (human capital and other) of affected households, pushing households into poverty and creating the conditions for that poverty to become chronic and intergenerational and also having negative consequences for national growth and development over the long term.

4.4 Lessons from previous big macro shocks

The pathways through which macro shocks with a trade element impact on the poor can be observed from the large shocks of recent years. This section reviews the experience of three of them. Obviously, the absolute scale of the GSP changes will be tiny by comparison, but there is no reason to suppose that they will be transmitted in a different way. Hence, analysis of the more visible (because vastly bigger) major global shocks establishes the questions that need to be asked to identify the potential effects of the GSP changes.

The East Asian Financial Crisis, 1997-8

Although frequently described as a 'financial sector' crisis, the East Asian economic crisis had a trade element. Structural imbalances were present in many affected countries by the late 1990s with Malaysia, Thailand and Indonesia, for example, running current account deficits in the range of 4 to 5% of GDP. When the crisis came it led to a contraction in real GDP growth in all countries in the region (by 13.7% in Indonesia, 9.4% in Thailand, 6.7% in Malaysia, 5.8% in Korea, and 0.5% in Philippines) (World Development Indicators, as cited in Table 2 of Bhushan and Blouin, 2009). This initial impact triggered negative economic growth or a contraction of the economy and a spate of public and private sector bankruptcies followed.

⁶⁶ During such macroeconomic crises, fiscal costs commonly rise either as a result of government intervention to stem the effects of the crisis or due to declining tax revenue. Added pressure can accumulate via international channels (if, for instance, external borrowing requirements increase, or debt has to be restructured), and if liquidity conditions tighten (Mendoza, 2009).

Real wages collapsed (in Korea by 10%, in Thailand by 6%, in Malaysia by 10% and in the Philippines by 2%) (World Bank, 1999), inflation rose⁶⁷ (World Bank, 1999) and unemployment rose,⁶⁸ with official figures masking an increase in vulnerable employment. Where wage flexibility was higher, for instance in Indonesia, rise in unemployment was less severe but the drop in real wages was high (34 per cent in Indonesia) and was coupled with a significant shift to underemployment and informal employment (Gough, 2001: 183).

The crisis occurred against a background of significant East Asian success in poverty reduction and by the mid 1990s–2000s the percentage of population living on less than US\$1/day had fallen to less than 2% for Korea, Malaysia and Thailand and stood at around 14.8% for Philippines and 7.5% for Indonesia (UNDP, 2007/08 in Bhushan and Blouin, 2009). This was accompanied by progress in all aspects of human development (as tracked by the Human Development Index – HDI) (ibid.) and life expectancy rose significantly across the region between 1970–5 and 2000–05.⁶⁹ Even so, the large though short-lived macro-economic shock led to significant long-term impacts.

One contributory factor was the combined effect of relatively low expenditures on social protection⁷⁰ and a high degree of openness to foreign capital (especially in high employment-growth sectors like manufacturing and construction) (Bhushan and Blouin, 2009). Another was that despite the rapid growth a high proportion of non-poor households were still living very close to the poverty line. Real household incomes fell due to contraction of wages and as a result household final consumption expenditure contracted (by 6.2% in Indonesia, 10.2% in Malaysia and 11.5% in Thailand) (Hopkins, 2006) propelling many into poverty,⁷¹ with negative consequences for their nutrition, housing and health (Bhushan and Blouin, 2009). At the same time, tax revenues declined in the region, leading to governments to scale back on social programmes and both health and education expenditure was cut. Together with household coping strategies (increasing their consumption of nutritionally inferior food, delaying seeking care when sick) this was reflected in sharp declines in health indicators. There was also a decline in school retention rates. Health, nutritional intake and education are among the main channels for macro shocks to generate intergeneration consequences, particularly when children and young people are affected (Mendoza, 2009).

Following the crisis, evidence suggests that there was an increase of 10–15% of the number of street children in Thailand, while in South Korea one in seven women – including girls – was involved in sex work (Harper et al., 2009). Female employment rose in Indonesia and the Philippines as male unemployment increased during the crisis, with evidence from the Philippines showing that young women were joining the work force instead of entering high school (Sabarwal et al., 2011). The rise in female employment and concomitant rise in male unemployment during the crisis represented a reversal of the growth in the second half of the 1980s that favoured male employment over female (Lim, 2000). The increase in women's employment could have detrimental impacts on the women, as they retained drudgery intensive home-based work, and on their children, particularly where alternative forms of good quality affordable child care were unavailable).

⁶⁷ Inflation rose by nearly 7% in Korea, 7% in Thailand, 82% in Indonesia, 5.5% in Malaysia and 10% in Philippines, as measured by the CPI increased)

⁶⁸ Unemployment rose in 1998 in Korea from 2.1% to 8.7%; in Thailand from 0.9% to 5.4%; in Indonesia 5.1% to 7.0%; in Malaysia from 2.6 to 3.9% and Philippines from 7.7 to 11.8% (Gough, 2001: 183).

⁶⁹ Korea from 62.6 years to 77 years; in Malaysia from 63 to 73 years; Thailand 60 to 68 years; Philippines 58 to 70 years; Indonesia 49 to 68 years. Infant mortality (per 1,000) improved from 43 to 5 for Korea, 46 to 10 for Malaysia, 74 to 18 for Thailand, 56 to 25 for Philippines, and 104 to 28 for Indonesia (Human Development Report Statistical Database, 2007/08 as cited in Table 1 of Bhushan and Blouin, 2009).

⁷⁰ In 1990, East Asia spent on average 1% of total government expenditure on social protection and welfare, compared to 12.7% in Organisation for Economic Co-operation and Development (OECD) countries, 3.6% in Latin America and 2.2% in South Asia (World Bank, 1999:7). The openness of these economies is a further striking feature. In 1997, the value of trade as a percentage of gross domestic product (GDP) was 90% in Malaysia, 45% in Korea, and 30% in the Philippines and Thailand. The ratio of foreign direct investment (FDI) to GDP in the same year was 290% in Malaysia, 117% in Korea, 102% in Thailand, 69% in Indonesia and 55% in the Philippines (World Bank, 1999:12).

⁷¹ Poverty increased by 10% in Korea, 1.6% in Thailand, 8.8% in Indonesia and 3% in Malaysia (based on movements across national poverty lines). For comparison, headcount poverty percentage point change for Indonesia was about 7.6 points (1996–98); for Korea 4.7 points; for Malaysia 2.2 points; and Thailand 3.1 points (Mendoza, 2009).

In Vietnam, many workers entered the informal sector during the crisis in an attempt to compensate for a reduction in earnings. The informal sector provided limited earning potential, however, as it was marred by low productivity (Dat, 2002). The crisis was felt in the informal sector mainly in the form of lower wages rather than open unemployment (Knowles et al., 1999).

Latin American macro-economic crises

The Latin American debt crisis occurred in the early 1980s (starting in the 1970s for some countries), when Latin American countries became unable to repay international loans, borrowed largely during the 1960s and 1970s to finance infrastructure programmes and industrialisation. As a result of the crisis, incomes dropped, growth stagnated and unemployment rose and inflation limited household purchasing power. Linked with this, there were over 40 episodes of macroeconomic instability in Latin America where GDP fell by 4% or more between 1980 and 1998. This section outlines what the implications of this instability have been.

With the exception of wars, macroeconomic crises have been the most important driver of large increases in **income poverty** in the region (Lustig, 2000). Poverty in Latin America rose from 41% to 46% between 1980 and 1990, and from 14% to 22% for those living in extreme poverty (Teichman, 2001). They were also often accompanied by rising **income inequality**⁷² and subsequent growth has not tended to act as an equaliser. In addition, the austerity measures adopted by governments in response to crises have tended to curb social transfers and deepen poverty. The Latin American debt crisis reveals a female 'added-worker' effect. Women's participation in the labour force increased in Lima, Peru during the crisis in the early 1980s, as it did in Chile during the 1974–5 crisis, in Costa Rica in 1982, and in Mexico during the Peso Crisis. In Argentina during the mid-1990s, women's labour force participation was also countercyclical (Sabarwal et al., 2011). Again, these examples could put pressure on women and undermine the quality of child care.

Looking at the impact of the debt crisis on various Latin American countries, we see a range of impacts on wealth and well-being (Box 10). As a result of nutritional deficiencies, infant and preschool mortality in Latin America rose in the 1980s, a reversal of the previous decade (Lustig, 2010). After the crisis, although **infant mortality rates** continued to fall, they fell at a slower rate post-crisis and other **health** indicators, more sensitive to consumption or income downturns, worsened (Chile, Mexico, Argentina, Venezuela) (Behrman et al., 1999). **Education** (school attendance and literacy) was negatively affected in Mexico after 1982 (Lustig, 2010). More widely across the region, improvements in education slowed as did average increases in years of schooling. More specifically, improvements in schooling attainment declined for cohorts born between 1960 and 1970 (those who entered the school system between 1975 and 1986), which roughly coincides with the debt crisis (Behrman et al., 1999).⁷³

⁷² Inequality rose at crisis onset in 5 out of 8 episodes, while it was higher after the onset of crisis in 15 out of 20 episodes (Lustig, 2000).

⁷³ Children are often withdrawn from school as a form of household coping following a shock and this may explain the reduced improvements in education performance.

Box 10: Country-specific impact of the Latin American debt crisis

Argentina (1995): The crisis in Argentina resulted in recession, a drop in wages and consumption, increased poverty and inequality. Specifically, GDP *per capita* fell by 4.2% and private *per capita* consumption fell by 6.4%. Inequality increased (urban Gini rose from 0.36 in 1994 to 0.38 in 1996). Urban unemployment grew (from 11.5% to 17.5% during 1994–5) and average real wages fell (by 1.1% in 1995). Not surprisingly, poverty grew ('moderate' poverty increased from 16.9% in 1993 to 24.8% in 1995) and food security worsened (*per capita* daily protein intake declined sharply in 1995, although it increased again in 1996). Primary education enrolment growth also declined, from 2.2% in 1993 to 0.8% in 1996 (Lustig, 2010). However, social spending rose, both as a share of total expenditure and GDP, as did education and health spending (by very small amounts 0.3% to 0.1% GDP).

Dominican Republic (1990): A similar picture emerges in the Dominican Republic, where GDP *per capita* fell by 7.6% and urban real wages declined (by 3% in 1991). Private *per capita* consumption fell by 13.9% as poverty and inequality increased, with the poverty headcount increasing from 36% (1989) to 40% (1992). Social spending overall, as share of total expenditure and GDP both fell sharply. Spending on health and education contracted (about 0.2% and 0.1% GDP). Food security declined with *per capita* protein intake contracting sharply during the crisis year but bouncing back the following year. The picture was worse for children and the number of infants suffering from chronic malnutrition increased sharply over the 5 year period around the crisis. Primarily school enrolment also declined.

Jamaica (1985): In Jamaica, GDP *per capita* fell by 6.2% (1985) and poverty increased. Interestingly the unemployment rate fell and primary school enrolment rose slightly although spending on education declined dramatically, as did spending on health (though less so). Daily per cap intake of protein again declined and then increased again rapidly in the post crisis year.

Mexico (1982) and (1995): In Mexico *per capita* GDP contracted 6.3% and private *per capita* consumption fell by 7.4% (1983). In 1995, GDP *per capita* fell by 8.1% and *per capita* consumption fell by 11.5%. Real wages fell in the 1980s crisis by between 36% and 46%, depending on the sector and unemployment rose by 2.1% points. Both moderate poverty and extreme poverty rose following the crisis in the 1980s. Inequality increased and between 1984 and 1989 the national Gini rose from 0.43 to 0.47. Real wages contracted again in 1995, this time by 13.1%. Unemployment increased by 2.6% and extreme poverty increased dramatically. Infant mortality continued to decline but at slower pace in 1980s around the crisis. Infant mortality from anaemia increased in the 1990s crisis. School enrolment rates fell in the 1990s crisis – growth in primary enrolment fell from 0.44% in 1994 to 0.09% in 1995 (Lustig, 2010) – and continuing in school declined in the 1980s, while dropout rates in rural areas rose substantially.

Venezuela (1994): GDP *per capita* contracted by 4.6% and private per cap consumption by 8.3% (1994). Income Gini rose from 0.45 to 0.50 between 1992 and 1994. Moderate and extreme poverty both rose (extreme poverty quite substantially). Real wages fell by as much as 15.7% in the crisis year and continued to fall even the following year. Unemployment rose. Social expenditure as share in GDP fell, but education spending rose. Primary enrolment rates nevertheless declined. Food security worsened with *per capita* daily protein intake contracting sharply

Other LAC: Brazil 1% poverty headcount increase (1989–90); Peru in 1980s infant mortality increased 2.5% during crisis; in **Mexico** in the 1990s the mortality of children and older people increased above expected levels. In response to the peso crisis in **Mexico**, households reduced spending on semi-durables in order to maintain basic food level. Non-essentials like clothing, glassware, bedding and entertainment were cut in order to dedicate a higher share of the budget to food. This may simply have been coping behaviour but may also have represented a more permanent shift to a new equilibrium level as householders may have perceived the downturn as a 'the new normal' and a permanent phenomena (McKenzie, 2006). Evidence suggests that coping strategies in Mexico tend to involve reducing consumption of goods that represents longer-run investment in human capital. This makes them more vulnerable in the future.

Mexico (2010): GDP contracted by 7% in 2009 and the poverty rate rose by 4% between 2008 and 2010. Results from a simulation exercise show an increase in the poverty headcount and severity. Income shocks are greater for middle and lower income groups, with the poorest quintile seeing their (*per capita*) income fall by 8% compared to the fall of 5% experienced by other groups.

Source: Mendoza, 2009 (unless otherwise specified).

The Global Financial Crisis

The Global Financial Crisis began in 2008 as a liquidity shortfall in the US banking system and was linked to the collapse of the US housing bubble and the widespread exposure of banks to risks associated with sub-prime lending. The crisis damaged confidence in the global banking system and triggered a domino effect in the Iceland, Ireland, the UK and other European markets with a collapse in stock market values, house prices and bank confidence, the failure of many businesses and increased unemployment. A number of governments bailed out banks and activated fiscal stimulus programmes. Economies worldwide slowed, with many tipping into recession in 2008 as credit tightened and international trade declined. It is considered by many to be the worst financial crisis since the 1930s.

Comprehensive data on the effects of the crisis are not readily available, some evidence of the effects is beginning to emerge.⁷⁴ Evidence on several key transmission channels – taxes and transfers; prices; employment; and access to goods and services – reveal the effects of the financial crisis on poverty in developing countries.

Some developing economies that had been growing strongly saw significant slowdowns due to reduced trade, commodity prices, investment and remittances. For example, Cambodia was expected to grow at more than 10% in 2007 and fell to nearly zero in 2009; and Kenya saw its growth half from 7% in 2007 to around 3–4% in 2009. Falls in growth can be attributed to reduced trade, commodity prices, investment and remittances. The financial crisis has had a marked effect on **remittances**. In many LICs remittance flows grew significantly in the years leading up to 2008. Remittance flows around the world reached a record \$251 bn in 2007, but have fallen in many countries since with negative consequences for numbers of poor households (e.g. 230,000 more in Ghana) (te Velde, 2009; te Velde et al., 2010).

Volatility in **commodity prices** also affected developing countries. The price of oil nearly tripled from early 2007 to 2008, before plunging as the financial crisis began to take hold in late 2008.⁷⁵ Copper prices also peaked in 2008.⁷⁶ Other commodities also fell in value. As a result of the drop in the wholesale market price for cut flowers in the Netherlands, Ethiopia exported only 47% of the \$280 mn in cut flowers which had been projected for 2008–9. This meant that some producers were unable to meet debt obligations to the Development Bank of Ethiopia. Uganda experienced a drop in coffee export earnings with the 20% drop in global coffee prices between the third quarter of 2008 and that of 2009. The value of exports from Mozambique fell by 37% between January and September of 2009 compared to the same period the previous year, resulting mostly from the drop in aluminium prices. The fall in commodity prices was associated with a drop in the value of imports in some countries during the time of the financial crisis. In Bangladesh, for example, food imports began to fall in October 2008 and reached a low in June of 2009 (te Velde et al., 2010: 9–16).

The **employment effects** were particularly evident in the garment and mining sectors. In Bangladesh, 25,000–30,000 garment workers lost their jobs in the last eight months of 2009, while over one-third of garment workers in Cambodia lost their jobs from September 2009 and the first few months of 2010. The drop in prices of copper led to thousands of jobs being lost in the DRC; over 70% of mining jobs in Katanga province were lost between December 2008 and April 2009. Given that mining in DRC is largely undertaken by micro-enterprises and individual workers, drops in international mineral prices have drastic effects not only on the economy but on household welfare (te Velde et al., 2010: vii and 14).

An Inclusive Cities study has detailed the impact of the financial crisis on three sectors of employment in the informal economy. Waste pickers experienced a sharp drop in demand and

⁷⁴ Most literature on this topic was written in 2009 in the midst of the global financial crisis. As a result, this literature contains projections as opposed to actual post-crisis data. More analysis on the actual poverty impact of the global financial crisis is needed now that almost two years has passed since the outbreak of the crisis.

⁷⁵ Light Crude Oil. Historical Chart. Futures.tradingcharts.com. <http://futures.tradingcharts.com/chart/CO/M> (downloaded 17.08.11)

⁷⁶ Historical Copper Prices. Dow-futures.net. <http://dow-futures.net/commodity/historical-copper-prices-history.html> (downloaded 17.08.11)

selling prices, and were extremely sensitive to the effect of international prices on their sector. Home-based workers producing for export markets also suffered from a significant drop in orders, and those producing for domestic markets faced increased competition and the resulting necessity to lower prices to remain competitive. Street vendors also experienced increased competition, as this sector attracted large numbers of people looking to supplement income or compensate for lost jobs. Of respondents to the study, 60% identified women as the new entrants into the informal economy in response to the global financial crisis. The reason for the disproportionate number of women entering the informal sector is thought to be because women are concentrated in sectors particularly vulnerable to macro shocks, such as export manufacturing (Horn, 2009). In the Philippines, more than half of the 40,000 jobs lost by March 2009 as a result of the financial crisis were those in export processing zones, where 80% of the workforce are women. Likewise, in Sri Lanka and Cambodia, nearly 30,000 – mainly female – garment industry jobs were lost by that time (Emmett, 2009).

Regarding **access to goods and services**, the poorest households in Egypt, Sudan, and Yemen (upwards of 18% in this country) have removed children from school because of rising food prices that have led to the inability to pay school fees. Evidence from Egypt suggests that those children pulled from school are entering low-paying jobs, which presents the possibility for exploitation or abuse. In Jordan, dropout rates have not increased, but families have transferred their children from private schools to more affordable government-run schools (Jones et al., 2009).

Micro-simulations to study **poverty and distributional effects of the crisis**, undertaken by the World Bank, suggest that the crisis will be particularly troubling for those at the middle of the income distribution in Bangladesh, Mexico, and the Philippines, as well as those at the bottom on the income distribution in Mexico. As a result, the crisis is likely to lead to increased poverty in the three countries – by 1.2% in Bangladesh, 1.5% in the Philippines, and 4% in Mexico. However, the impact of the crisis is due to reduced income rather increased unemployment, translating into an increase in numbers of the working poor, who are largely concentrated in urban areas and are more skilled than many of the chronically poor (Habib et al., 2010). Similarly, an analysis of recent data, undertaken by the World Bank, reveals that the financial crisis has also had an impact on employment in middle-income countries. While the number of jobs continued to grow, incomes dropped through a reduction in working hours and a shift away from higher-paying industrial jobs (Khanna et al., 2010).

5 The case studies

The review of historical experience in Chapter 4 suggests that covariate shocks can have a profound impact on household income, household consumption (including food security) and investments in household goods and human capital. They can trigger increases in poverty and inequality which are hard to reverse and where the scale of the covariate shock is sufficient, they can also impact on fiscal balance and therefore investments in health, education and other forms of social spending. Combined, these effects can extend the impact of the shock beyond imposing short-run reductions in well-being and increase the risk that the impact will be long-lived, generating chronic and intergenerational poverty.

Whilst the absolute effects of the GSP changes will be much smaller, if they are concentrated on a small group of workers or a particular geographic location they could have significant relative effects on those affected. Not least important of the lessons from Chapter 4 is that households that have just clawed their way out of poverty and are above, but still near, the poverty line may be among those most adversely affected. It is important not to focus too narrowly on the very poorest when looking at effects (positive and negative) or else important medium term influences on poverty may be overlooked.

This chapter examines each of the products and countries identified in Chapter 3 as ones in which very-poor-country gains are particularly likely. Whilst the trade data analysis in Chapters 2 and 3 are at the most disaggregated product level (since this is the level at which tariffs are set), the Case Study analysis looks at the broader industries within which these specific items fall. This allows us to capture the broader potential effects of the GSP changes. In each case, the case study begins with an overview of the economy and society of the country concerned and then looks at the affected industry in detail.

5.1 Leather in India

India will be graduated out of all three leather items focused on in Chapter 3 but, in order to make the figures among the graduates and beneficiaries broadly comparable, only the costs to India of graduation on CN 41079910 (the item selected as a case study in Chapter 3) are used for the quantitative analysis.

The key points from the analysis below are set out in Box 11.

Box 11: Key points on the effect of graduating India out of leather

- Losses to Indian leather exports to the EU resulting from new GSP graduation have been estimated in Chapter 3 at €0.6 mn. This estimate would imply **a 5.8% decrease in EU imports of Indian leather and a less than 0.6% decrease in India's total exports of the HS 6-digit sub-head to which this item belongs.**
- Many **enterprises in the leather sector remain small** and may not be able to weather this change through borrowing.
- Given low margins, inelastic wages and high labour intensity, it is likely that **even the small predicted losses and changes in the profitability** of leather enterprises will be **passed swiftly on to workers through retrenchment**, with implications for poverty.
- We do know that employment opportunities in other industries have been drawing labour away from the leather sector, suggesting some workers have options and could cope with this shock. **The low caste workers (*chammars*) and women who work in high concentrations in the Indian leather sector may not have the job mobility enjoyed by others**, leaving them more vulnerable to the consequences of job losses.
- Balancing this negative picture is the fact that the large domestic market has been growing more rapidly than the export market, supported by the India's increasing purchasing power of the expanding middle class. This suggests that **a loss of market share in Europe might be**

compensated for by growth in the domestic market.

- It is not clear what **environmental implications** India's graduation from the GSP will have. Treating and correctly disposing of effluent and other wastes is costly and it is plausible that some leather tanners and others in the sector will seek to trim costs, in the face of a price squeeze following the loss of preferences, by a return to illegal dumping of wastes. If this was to occur it could have severe environmental (and health) consequences.

Overview: economy, society and poverty

The Indian economy has changed hugely in the last 20 years, following a process of economic liberalisation that began in 1991, after a balance of payments crisis. Increased market openness has been accompanied by India's growing power as a trading partner,⁷⁷ and with an estimated population of 1.2 bn and a growing middle class, India also has a substantial internal market.

The Indian economy has been growing rapidly and inflation is down to around 8% (July 2011) after a high of over 16% in early 2011 (Trading Economics).⁷⁸ GDP *per capita* has risen to US\$1,075.⁷⁹ The structure of the economy has changed and the service sector is growing rapidly.⁸⁰ A proportion of Indian exports are moving rapidly up the value chain, as illustrated by the increased importance of the services sector. Information and Communications Technologies are increasingly important, with India hosting call centres for companies around the world and the growth of IT and software related industries. However, this is occurring alongside other sectors in which capital investment and labour productivity rates remain low.

The global financial crisis had an impact in India, with a decline in growth (6.7% in 2008–9, down from an average of 8.8% over the previous 5 years) (Bajpai, 2010). Credit availability and confidence in the banking and financial markets fell and capital became more expensive as inter-banks lending rates climbed (*ibid.*). Stock and real estate values fell and companies in the IT and financial sectors downsized, cut costs and froze recruitment for a time. More widely, demand for labour fell and there were large-scale job losses in some sectors particularly those with high exposure to global markets (e.g. civil aviation, textiles, leather, gems and jewellery) (Pimple, n.d.). Reverse migration increased, as did un- and under-employment alongside a downward pressure on wages. Small and medium enterprises were particularly hard hit as the informal economy expanded to absorb the newly unemployed and competition within the sector increased. This all had implications for poverty and well-being (Pimple, n.d.).

The immediate effect of the crisis was felt in urban areas but had a knock-on effect in rural areas. Job losses in export manufacturing affected rural-to-urban migrants and reduced the remittances sent to their rural families (Pimple, n.d.). Workers who were not able to find new urban jobs sought rural work (*ibid.*), driving down wage rates and total household incomes fell. The most marginalised and vulnerable populations were migrants, informal sector workers and the youth as they were at least 3 times more likely to be unemployed. Women were also more likely to lose their jobs and children were affected with increased drop-out from school and a rise in the use of child labour (Pimple, n.d.). Inequality increased.

⁷⁷ India's leading exports (by value) are in petroleum products (16.9%), gems and jewellery (14.7%), vehicles and parts (4.4%) and machinery (4%) (Department of Commerce, 2011) and trade growth has been led by exports of 'modern' services⁷⁷ and less by goods exports (Ghani and Anand, 2009).

⁷⁸ Trading Economics – <http://www.tradingeconomics.com/india/inflation-cpi> (downloaded 18.08.11).

⁷⁹ 2009 figures. Unadjusted, the GDP *per capita* was US\$1,075 in 2009.

<http://unstats.un.org/unsd/demographic/products/socind/inc-eco.htm>. (Downloaded 18.08.11). India's GDP *per capita* has increased from US\$387 (1995), to US\$449 (2000) and US\$743 (2005).

⁸⁰ In 2010, the service sector contributed 64.9 % of the GDP, while the agricultural sector contributed 14.6 % and the industrial sector 20.5 % (Reserve Bank of India, 2010: 178). This pattern looks set to continue, as the growth has been similarly concentrated (services (over 60%), followed by industry (just under 30%) and lastly, agriculture (around 10%)) (Ghani and Anand, 2009).

India's success in terms of economic growth has occurred alongside growing income inequality income,⁸¹ and inequalities in access to services and well-being. High levels of poverty remain, with 41.6 % living in poverty.⁸² The key drivers of poverty in India are reported to be the ineffectiveness of state institutions, inadequate infrastructure and poor basic health, education and other service provision (World Bank, 2000: 34). Discrimination based on gender, caste, and religion are also powerful drivers⁸³ as are un- and under-employment (with high population growth contributing to the latter) (Kapur Mehta et al., 2011). Poverty is strongly concentrated amongst particular livelihood groups (particularly amongst rural dwellers and especially casual rural labourers) and geographic areas, with high levels of poverty in Uttar Pradesh, Uttarakhand, Bihar, Jharkhand, Madhya Pradesh, Chattisgarh, West Bengal, Maharashtra, and Orissa⁸⁴ (Department of Rural Development of India, 2008: 2). In West Bengal and Maharashtra, high levels of poverty alongside considerable wealth.

India is ethnically diverse and has a complex caste system, and caste discrimination is correlated with poverty status and contributes to labour market rigidities which mean that if some people lose their work (e.g. leather workers), they may find it difficult to find alternative work.

Leather in the Indian economy

India is the third largest leather producer in the world and the sector is of great importance to the Indian economy. It is valued at over US\$5 bn (or around 0.3–0.5% of GDP) (Deloitte, 2009), produces exports of \$3.5 bn (2011) (Hazarika, 2011) and is amongst India's top ten export earners (ranked at eight by the latest comparative figures) (Indo-Italian Chamber of Commerce and Industry, 2008). During the 2000s leather exports grew at a compounded annual rate of around 8.6% and generated around 1.4% of India's exports (Asia Pro-Eco, n.d.). However, other exports are growing more rapidly and the share of leather in India's overall exports is declining.

Although India remains one of the most important suppliers in the global leather supply chain, providing over 10% of international supply, it faces competition from China, Bangladesh and Pakistan and newer/smaller players from East Asia, Eastern and Southern Europe (Deloitte, 2009; Hazarika, 2011). Over 65% of Indian leather exports head to Europe (Indo-Italian Chamber of Commerce and Industry, 2008) and it meets European demands for highly differentiated products (customisation) at lower volumes, in contrast to the US market which favours higher volumes and lower product differentiation, where China is dominant (Deloitte, 2009).

The large domestic market has been growing more rapidly than the export market, supported by the India's increasing purchasing power of the expanding middle class (Deloitte, 2009; Indo-Italian Chamber of Commerce and Industry, 2008) and India has set itself an ambitious export target of \$8.5 bn by 2014, aiming to double exports over 3–4 years (Hazarika, 2011).

Leather is a highly labour-intensive sector with relatively inelastic wages. Between 2.5 and 3 mn people are employed in the sector. There are substantial concentrations of certain religious and more importantly caste groups in the leather sector, with labour drawn almost exclusively from the lowest castes and sub-castes. One of the lowest status groups amongst the 'untouchables' or *dalits* are the *chammars*, or literally leather workers. Women comprise about

⁸¹ The GINI Coefficient for India was 36.8 in 2010 (UNDP, 2010: 154). In 2005, it was 32.5 (UNDP, 2005: 272), and it was 37.8 in 2001 (UNDP, 2001: 184).

⁸² 41.6% live below the international poverty line of US\$1.25 per day (<http://hdrstats.undp.org/en/indicators/38906.html>) (2005) and 27.5% below the national poverty line (<http://data.worldbank.org/country/india>) (2005).

⁸³ <http://www.poverties.org/causes-of-poverty-in-india.html>

⁸⁴ Poor people were highly concentrated in these states, with 76.2 % of India's rural poor lived in these states in 2004–5.

30% of the workforce and have a dominant role in assembly line production⁸⁵ (e.g. in leather footwear, India's top leather export product).

There are about 2,200 tanneries in India, of which 2,100 are classified as small scale units, and there are over 8,000 leather product manufacturing units (Asia Pro-Eco, n.d.).⁸⁶ The leather sector in India was 'reserved' as a 'small scale industry' until 2002. This provided benefits from the state in terms of directed credit⁸⁷ but also contributed to fragmentation, restricted capital investment and prohibited Foreign Direct Investment.⁸⁸ These policy restrictions also apparently encouraged the interlocking of markets and many manufactures sought backward linkages and invested in tanneries, while some tanners became product manufacturers.⁸⁹ In the early 1990s export of raw or semi-finished leather was banned and priority was given to the export of value added goods. This has encouraged Indian exporters to move up the leather value chain. The sector has been completely liberalised (2000s) and this has led to corporate interest and investment is beginning to trickle into the sector (Deloitte, 2009). Despite this, the sector is still dominated by small-scale and cottage industry-based production and ownership is primarily private, household or in the form of small businesses.

Production and employment

Elements of the leather supply chain are spread quite widely across India. However the most important node is the southern state of Tamil Nadu which accounts for the vast majority of tanneries, and produced hides and skins. Tamil Nadu accounts for 40% of India's leather exports, and has some of the best incentive packages in place. West Bengal and Uttar Pradesh are also important tanning hubs. Leather goods parks are being developed in Calcutta, Nellore, and a component park is under development in Agra (Asia Pro-Eco, n.d.). Uttar Pradesh has strong raw material base and Karnataka has emerged as a source for cattle; other regions such as NOIDA (outside Delhi), Mumbai and others are also increasing in importance.

As the largest livestock owning country in the world (FAO, 2010), India's access to one of the key raw materials for leather making provides a competitive advantage.⁹⁰ Another source of advantage is the low wages in the sector, which are some of the lowest (if not the lowest) in the world (less than half of China's) (Deloitte, 2009).

The sector has proven its ability in building business-to-business links (especially in Europe), suggesting that Indian leather has a number of non-price related competitive advantages (Indo-Italian Chamber of Commerce and Industry, 2008). In addition, institutional support to the leather sector in India is amongst the best in the world with at least 12 dedicated industry associations and foundations, and five 'leather parks' (either in operation or under development) (Asia Pro-Eco, n.d.).⁹¹ The Government of India provides financial assistance to

⁸⁵ About 90% of the workforce in the mechanised sector in South India consists of women (Indo-Italian Chamber of Commerce and Industry, 2008).

⁸⁶ Other estimates place the total number of small scale units at around 42,000, accounting for 75% of total production (Export Import Bank of India, 2006). Yet other estimates (more recent) place the small scale production share ranging from 70 to 87%.

⁸⁷ Which arguable has not been a success as even though leather is identified as a lending sector access to credit remains a constraint.

⁸⁸ This appears to have built rigidities into the sector and Indian exporters struggle to compete with the Chinese, despite a huge labour-cost advantage.

⁸⁹ According to the Indo-Italian Chamber of Commerce and Industry, 2008 this pattern has not been seen anywhere else, especially tanners investing in manufacturing.

⁹⁰ Limited in the sense that this does not seem to be the most important factor as production for instance in China is much higher and raw inputs are imported. In fact even in India's case hides etc, though to a lesser extent, are starting to be imported, particularly from Africa. There are also obvious restrictions on cow slaughtering (being a primarily Hindu country and cows considered sacred). Majority of input is buffalo, goat and other. A large amount of slaughter is done informally/illegally thus affecting quality.

⁹¹ E.g. research institutes and associations such as the Central Leather Research Institute (CLRI) which is the largest leather institute in the world, the Council for Leather Exporters (CLE); as well as the Footwear Design and Development Institute (FDDI) (Asia Pro-Eco, n.d.).

the sector,⁹² to up-grade, modernise and enhance the competitiveness of all sub-segments from tanneries, footwear, footwear components, saddler and leather goods to garments (Asia Pro Eco, n.d.).

Among the constraints facing the sector are low utilisation of manufacturing capacity which leads to high unit overhead costs, the patchy penetration of technology into the sector, and a shortage of skilled manpower to meet rapid industrialisation and transformation of sector (following de-reservation in 2002) with high turnover rates.⁹³ The biggest challenges facing the sector are: very high port clearance/customs times, poor infrastructure (specifically power, 8.4% sales are estimated lost to power outages compared to only 2% in China) and low (internal) transportation speeds (avg. 30km/h compared to 60km/h in Europe). Also, in China, the cluster approach has been effective, where information is shared on issues such as planning and product and customer information. In contrast, fierce internal competition in India makes the establishment of a cluster approach impossible.

The poverty implications of graduation

Chapter 3 estimates that the average value (2008–10) of Indian leather exports (CN 41079910) to the EU was €9.9 mn, comprising 14.8% of EU imports of this product, with the losses at €0.6 mn. Assuming that India could no longer maintain its market share of EU leather imports, this estimate would imply a 5.8% decrease in EU imports of Indian leather. In 2007–9 India's global exports of the HS sub-head to which this item belongs (HS 410799, leather incl. parchment-dressed leather) averaged €105 mn.⁹⁴ A €0.6 mn loss would constitute a tiny (less than 0.6%) decrease in the global total, although it could have negative consequences when combined with other negative effects facing the sector. The effects of any reduction in export value and volume will transmit through the economy through the transmission channels identified in Chapter 4.

Price: Leather is a low margin sector. This means that even small shocks (currency, interest rates) can have a major impact on enterprises profitability and viability. Studies have shown, for instance, that during the immediate pre-crisis period the Indian Rupee was appreciating faster than the currencies of key competitors. This had a dramatic impact on margins in the leather sector (Confederation of Indian Industry, 2007). It is also plausible that a contraction of the leather sector, even though small, will have an up-stream impact on livestock keepers, who could see incomes for raw hides fall.

Employment: The leather sector is an important employer, particularly of women and the lowest of the lower castes (chammars), providing between 2.5 and 3 mn jobs. Wages are inelastic, and much of the competitive edge is due to the low-cost labour. However, work in the sector has provided an important route out of poverty, especially in the Southern states where leather is an important industrial sector. Any employment loss that occurs is likely to have negative consequences.⁹⁵ It is also likely to be geographically differentiated, hurting some states more than others, particularly affecting Uttar Pradesh, Madhya Pradesh, West

⁹² A comprehensive scheme, the 'Integrated Development of Leather Sector' (IDLS), has been supported by the Department of Industrial Policy and Promotion (DIPP) since 2002 and will continue until 2012. It provides a 30% subsidy for plant and machinery for small scale industries, 20% for larger units (up to a ceiling amount). In addition the typical duty remission, neutralisation and drawback schemes are also available (Indo-Italian Chamber of Commerce and Industry, 2008). In addition, various states offer support to industrialisation, with Tamil Nadu offering the best incentives package amongst industrialised Indian states.

⁹³ Workers are attracted into other sectors – e.g. in Tamil Nadu, a major leather hub, into electronics manufacturing.

⁹⁴ The figures cited in this chapter for a country's total exports are not directly comparable with those for actual exports to the EU or estimated gains/losses, not least because the former exclude transport costs which are included in the latter. But the differences are not so great as to prevent the figures being used to establish broad orders of relative magnitude. The figures come from different sources, which will lead to differences. Except if otherwise stated, the figures for a country's total exports are derived from its reports to the UN's COMTRADE database and are obtained from ITC Trade Map, whilst the figures for EU imports are taken from the EU's COMEXT database. For this reason, too, the data on imports to the EU are in the EU's autonomous 8-digit Combined Nomenclature whilst those for exports to the world are at 6 digits in the internationally common Harmonised System.

⁹⁵ If a 0.1% loss in exports resulted in a 0.1% loss in employment in leather manufacturing alone, this would translate into 2,500–3,000 people losing their jobs.

Bengal and Maharashtra –which are important nodes in the leather supply chain but also some of the poorest states in the country.

Macro-economic impact: As a major foreign exchange earner, a reduction the value of leather exports could have an effect on India's forex position.

Taxes and transfers: The Indian government offered a relief package for the leather sector in response to the downturn following the global financial crisis (capital grants, tax relief etc) valued at Rs.4 bn in the tenth leather plan and Rs.9.13 bn in the eleventh leather plan (Ali, 2011). This was in addition to funds already committed to modernisation, capacity building and infrastructure investment. This support helped cushion the sector, which fared better than regional competitors (Pakistan, Bangladesh) during the crisis. Looking ahead, it is likely that the government will seek to compensate the sector for any loss of GSP preferences, through tax remissions and other transfers. If perceptible impacts are experienced and they are localised (with, for example, tanning being harder hit than other nodes of the supply chain), state governments may have to step in.

Poverty and well-being effects: It is plausible that the loss of preferential access to European markets will place a price squeeze on Indian leather and that both the volume and value of leather exports will reduce, at least temporarily. Although the reduction is predicted to be small, it may result in job losses (given inelastic wages in the sector), with implications for poverty.

Environmental effects: Leather tanning and linked manufacturing processes have a high environmental impact. Pollution is created at every stage of leather production (pre-tanning, tanning, processing, cutting and manufacture). Heavily polluting chemicals are used in the tanning processes which can result in both water and air pollution and the industry releases a huge amount of toxic effluent (from solid waste in the early stages to liquid and semi-liquid) as well as a highly unpleasant odour throughout the process.

Advanced technologies can reduce pollution dramatically, but investment in technology must be coupled with improved regulation and inspection if pollution is to be reduced. In Kanpur, a city of 3 mn people on the banks of the river Ganges and the self-proclaimed 'Leather City of World', pollution levels were so high that the pollution control board closed 49 high-polluting tanneries in July 2009 (of a total of 404) (Times of India, 2009).⁹⁶ However, this picture is beginning to change and unlike Bangladesh, more than 95% of Indian tanneries are now supported by pollution control devices. There are 19 common effluent treatment plants and 130 individual effluent treatment plants. Government capital grants meet 75% of the investment in treatment plants and the sector has also signed on to 'zero liquid discharge norms' –which are some of the highest environmental standards globally for this sector.⁹⁷

It is not clear what environmental implications India's graduation from the GSP will have. Treating and correctly disposing of effluent and other wastes is costly and it is plausible that some leather tanners and others in the sector will seek to trim costs in the face of a price squeeze, following the loss of preferences, by a return to illegal dumping of wastes. This would have severe environmental (and health) consequences, if it were to occur.

⁹⁶ For example, the main tanneries' effluent disposal unit was dumping 22 tonnes of chromium-laden solid waste in the open every day in 2003 (Sharma, 2003).

⁹⁷ This may be in response to WTO demands as well as past bans imposed on India by key importers, notably Germany. The State Pollution Control Board is now legally empowered to control environmental standards (such as zero liquid discharge).

5.2 Leather in Bangladesh

The key points from the analysis below are set out in Box 12.

Box 12: Key points on the potential gains for Bangladesh

- Gains to Bangladeshi leather exports to the EU resulting from the proposed GSP graduation process have been estimated in Chapter 3 at €0.3 mn. This estimate would imply **a 3.2% increase in EU imports of this item from Bangladesh –equivalent to only 0.6% of its total exports of the HS 6-digit sub-head to which this item belongs.**
- Although the potential export gain is small, it is likely to **generate additional employment.** This will lead to household income increases for the newly employed, and related improvements in wellbeing. If newly employed workers are migrants, one might expect to see an increase in informal transfers in the form of remittances. While we cannot estimate the number of new jobs likely to be created, we can conclude this it is highly likely that they will be low quality jobs and result in the increase in the use of child labour.
- We are unable to estimate the number of new jobs likely to be created, but we can conclude this it **is highly likely that they will be low quality jobs and result in an increase in the use of child labour.**
- The gains for Bangladesh are **too small to have an important impact on tax take,** although a small increase might be predicted. This will be **too small to translate into an increase in public investment or service provision.**
- **Pollution from the leather industry is a serious problem.** It is possible that an expansion of the sector would worsen this (and the net effect of a decline in production in India and an increase in Bangladesh would have negative environmental consequences, as environmental controls are much looser in Bangladesh).

Overview: economy, society and poverty

Bangladesh has experienced macro-economic stability recently. GDP *per capita* is estimated to be US\$638⁹⁸ (2010), inflation has stayed below double digits for almost two decades, and both public and external debt levels are 'fairly comfortable' (World Bank, n.d.). Saving and investment rates, currently at about 24%, are relatively high compared with other countries at similar income levels, and the pace of human development has surpassed that of most LICs (ibid.). The economy has grown at the rate of 6–7% p.a. over the past few years.⁹⁹

Remittances from Bangladeshis working overseas, mainly in the Middle East, are the major source of foreign exchange earnings and exports of garments and textiles are the other major forex sources. Ship building and cane cultivation have become important sources of economic growth. Trade is relatively important to the Bangladeshi economy¹⁰⁰ and in 2010, 16.3% of Bangladesh's GDP was derived from exports (Bangladesh Bank, 2010a: 103). Services generated 49.9% of GDP, with agriculture contributing 20.2% and industry 29.9% (ibid.: 17).

Although elements of the Bangladeshi economy are moving up the value chain, many export sectors are still low-skill labour intensive and relatively low value. Unemployment is high, and the informal sector absorbs a high proportion of the un- and under-employed, suggesting that a high number of new jobs would have to be created before market tightening led to an increase in wages.

⁹⁸ [World Economic Outlook Database-April 2011](#), International Monetary Fund. Downloaded 22.08.11.

⁹⁹ Although this was only 5.8% in 2010 (agriculture, 4.7 %; services 6.4 %; industry 6 %) (Bangladesh Bank, 2010a: 3).

¹⁰⁰ Bangladesh's main exports are readymade garments, frozen food (mainly shrimp), raw jute, jute goods (excluding carpets), leather, tea and fertiliser (Bangladesh Bank, 2010a). Between 2009 and 2010 exports from the jute sector expanded rapidly (raw jute by 32.5%, jute goods by 64.5 %), as did the leather (26.9 %), footwear (11.6 %), petroleum products (62.3 %), engineering products (54.6 %) and fabrics¹⁰⁰ (Bangladesh Bank, 2010a: 98). Some exports declined (tea by 53.7%, fertiliser by 64.1 %, and frozen shrimps and fish by 4 %) (ibid.).

The Bangladeshi economy managed to maintain a steady growth rate despite the global financial crisis, with 5.8% growth in 2009–10 against 5.7% growth in 2008–9. The country did, however, experience some slowdown in the growth of exports and investments: export growth was 4.1 % in 2009–10 compared to 10.3% in 2008–9 (Bangladesh Bank, 2010b: 4).

Between March 2009 and March 2010, at least 170,000 people lost their jobs in Bangladesh. Of these, around 100,000 were in export-oriented sectors (World Food Programme, 2010) and remittance earners, daily workers and shrimp farmers were the most badly affected groups. According to the World Food Programme (2010), households adapted to the financial crises by seeking additional work opportunities, especially for women and children as casual workers.

In response to the crisis, the government introduced a stimulus package for sectors which were particularly affected. It also extended the social safety net for poor and vulnerable people and introduced additional input subsidies and other measures to support agricultural and industrial activities (Bank of Bangladesh, 2010b: 7).

Nearly half of the Bangladeshi population (49.6%) are poor (below the international poverty line of US\$1.25 per day in 2005).¹⁰¹ Around 31% of the rural population are chronically poor and have experienced low consumption, hunger and under-nutrition, lack of access to basic health services, illiteracy and other deprivations for over a decade or more (Sen and Hulme, 2004). About 24% of the total population live in extreme income-poverty and around 19% of rural households are not able to afford three full meals a day, with around 10% subsisting on two meals or less for a number of months every year (ibid.).

The key drivers of poverty are reported to be high population growth, low wages, natural disasters, high income inequality, unequal distribution of land and productive assets, a lack of education and skilled workers, a lack of administrative accountability, limited access to public goods and services, a lack of sufficient infrastructure, chronic irregularity of work, large family structure, death of chief wage-earner, incapability of chief wage-earner through accident, illness, and old age, insufficient food reserves and a lack of participation in local government decision-making (Mony and Maruf, 2006).

However, Bangladesh has relatively low levels of income inequality, with a Gini coefficient of 31.0 in 2010 (UNDP, 2010: 150) down from 31.8 in 2005 (UNDP, 2005: 272) and 37 in 2001 (UNDP, 2001: 184). Bangladesh is relatively homogeneous, with around 98% of the population being ethnic Bengali¹⁰² and the vast majority being Muslim. Minority groups are discriminated against and there has been violence directed at the Christian and Hindu minorities. Although the majority of poor people are engaged in agriculture, the high population density of Bangladesh means that livelihood diversification into off-farm enterprises and the informal sector is easier than in some other countries in the region.

Contextualising leather in the Bangladeshi economy

Leather is an important sector in Bangladesh and grew by an average of 10–15% during the 1990s and around 20% during the 2000s. It earns around 2% of total exports (2008) with a value of US\$500 mn per annum (Ethirajan, 2010). The garments, shrimp and leather sectors combined earn 85% of Bangladesh exports (Dhaka Chamber of Commerce and Industry, 2005: 3).

The EU is the most important destination for Bangladeshi leather, receiving 11.5% of total leather exports (US\$430 mn, including footwear) (Bangladesh Bank, 2010a:98). Up to 98% of leather produced in Bangladesh is exported although lower grades and reused waste is used for domestic consumption (footwear) (Zahur, 2004).

Government policy aims to enable the sector to increase quality and meet international standards. However, around 40% of annual hide procurement occurs during the religious

¹⁰¹ UNDP. HDR Stats – <http://hdrstats.undp.org/en/indicators/38906.html>. Downloaded 22.08.11.

¹⁰² The tribal minorities live mostly in the Chittagong Hill Tracts and in the regions of Mymensingh, Sylhet and Rajshahi.

festival of Eid al Adha when millions of cattle are slaughtered. This leads to considerable waste, as traditional methods can affect hide quality. Similar seasonal gluts are also found in other Muslim countries in the region (e.g. Pakistan).

Production and employment

The production of leather in Bangladesh is highly concentrated with a handful of large enterprises (with political connections) dominating the export sector and benefiting from government support. There are three categories of producer, large industries, small/medium size industries and commercial exporters.

- **Large industries** with bonded warehouses pay no import duties or VAT. They are not eligible for duty draw-back¹⁰³ and have to export virtually 100% of output. There are 6–7 large producers, estimated to be responsible for around 60% of Bangladesh's total leather output.
- **Small/medium size industries** pay import duties and/or VAT on chemical and other items at differing rates. These industries take duty draw-back at pre-fixed rates after each consignment is exported.
- **Commercial exporters** are engaged in the export of crust leather¹⁰⁴ and finished leather on a contract basis. All their production inputs are from local suppliers. They also claim duty draw-back (Zahur, 2004).

There were 4,411 enterprises in the Bangladeshi leather sector (2001–3),¹⁰⁵ which directly employs around 70,000 workers (at tanneries), along with millions more through backward and forward linkages into the wider economy, such as farmers, dairy owners, traders and others directly and indirectly dependant on the cattle industry (Ethirajan, 2010). Around three quarters of leather sector enterprises employ fewer than 20 people and these small enterprises employ over half of the workers in the sector.

Tannery working conditions in Bangladesh are widely considered some of the worst in the world (SOS-Arsenic, 2008; Saleemul Huq, 2001; Ensing, 2009).¹⁰⁶ The use of child labour is prevalent (Ensing, 2009), with most children working in small-scale and informal enterprises which make relatively low quality products and produce predominantly for the local market. Large-scale enterprises, producing better quality export-oriented products tend to employ relatively few children. However, distinctions are not that clear-cut since the bigger factories also outsource much of their work to smaller factories and home-based workers. According to the Bangladesh Institute of Labour Studies, in 2000 there were approximately 1,000 child workers between the ages of 7 and 14 in various sections of the tannery industry. The ILO-IPEC estimates that in 2007 260 children were employed in leather tanneries in Bangladesh, with 3,040 working in shoe industries, and 320 working elsewhere with leather products (Ensing, 2009: 8).

Potential for exploiting expanded export space

Incentive framework: The current incentive framework enables producers to respond to the expanded export space through a favourable tax framework. However, the administration of Bangladesh's import and export processes is notoriously complex (and corrupt). Looking more widely, the Government of Bangladesh has identified the leather industry as one of the highest priority sectors because of its growth potential and its contribution to export diversification and employment generation. It has provided tax incentives (primarily to the large scale, purely exported oriented segment) and has supported change in the sector, primarily in encouraging

¹⁰³ Duty drawback is the reversal of taxes paid on the inputs used in manufacturing.

¹⁰⁴ Semi-tanned wet-blue leather undergoes a final tanning process to produce crust leather. Crust leather has physical properties that are valued, such as size, thickness, fullness, looseness of grain. It is ready for the finishing stage.

¹⁰⁵ Bangladesh Bureau of Statistics <http://www.bbs.gov.bd/Reports/PDFFiles/RptEcoPerEst.pdf>

¹⁰⁶ The authors have not been able to identify a comparative analysis of labour conditions in the leather sectors of Bangladesh and India and are therefore unable to conclude that labour conditions are better or worse in India or Bangladesh.

a shift in exports from wet blue (raw) material to higher value-added and processed leather. It has achieved this by removing export subsidies in the 1990s and by banning certain exports. Government also supports plans for a Leather Industry City, in Savar (Dhaka) to enable the establishment of mega clusters and reduce environmental pollution.

Services and inputs: The leather sector in Bangladesh faces significant challenges in importing essential inputs, including chemicals, equipment and accessories. The shortage of skilled workers and inadequate infrastructure including the provision of electricity, gas and water are major challenges for the sector. An inefficient banking system, the lack of modern port facilities and congestion also has negative consequences for leather exporters, with exporters complaining about customs delays, high duties and complex procedures (Sharif, 2003). Bribery and corruption also create problems.¹⁰⁷

The poverty implications of graduation

Chapter 3 estimates that the average value (2008–10) of Bangladeshi leather exports (CN 41079910) to the EU was €10.2 mn, comprising 15.3% of EU imports of this product and gains from the proposed GSP graduation at €0.3 mn. This estimate would imply a 3.2% increase in EU imports of Bangladeshi leather. In 2005–7 Bangladesh's global exports of the HS 6-digit sub-head into which this item falls averaged €49 mn. Assuming that the potential increase in export space to the EU is not filled by trade diversion, a €0.3 mn gain would constitute a 0.6% increase in this total, which is a very small increase.

Given its export orientation, Bangladesh's leather sector is vulnerable to global shocks, and was hit hard by the global economic downturn with export volumes dropping 19–22% and around 30% of hide and leather remaining unsold at the height of the economic crisis. Prices of raw hides and finished leather are volatile and raw hide prices fell from US\$1.50 per sq foot (the previous year, i.e. 2008) to 90 cents (2009). Just as the sector was beginning to recover from the economic crisis it was hit with yet another crisis in the form of an Anthrax outbreak in August 2010. The sector lost nearly 25% of revenue or over US\$100 mn in potential exports in one month due to the anthrax crisis (Ethirajan, 2010).¹⁰⁸ In addition the government lacks the fiscal capacity to respond effectively to external shocks, in contrast to regional competitors such as India.

This sensitivity to price and volumes of exports suggests that Bangladesh might see benefits from substantial trade diversion as a result of India, Russia and Brazil graduating from the GSP scheme. However, the estimated gains are too small to make a noticeable impact on important indicators: number of enterprises in the sector; employment by the sector; contribution to GDP; impacts on up and downstream sectors.

Prices: Although gains are predicted to be small, Bangladeshi exporters of 'parchment dressed' leather might see an easing of competition with Indian exporters and, if they are able to command higher prices (i.e. closer to the pre-crisis level) and increase export volumes, higher profits (Brazil and Russia are however expected to remain more price competitive). Where competition is based on quality rather than price, it is unlikely that Bangladesh would gain as Indian leather exporters have been moving up the value chain.

Employment: Although Bangladesh's gain through trade diversion will be small it is likely that this will generate additional employment. It is not clear which sizes of enterprises or groups of employees will benefit most from these gains. However, the leather industry in Bangladesh relies on low wages in order to secure a price advantage. Unskilled labour is oversupplied, especially in the informal segments and it is possible that any employment gains will be in the

¹⁰⁷ With the exception of Afghanistan, Bangladesh along with Pakistan has the poorest corruption score in the South Asian region, as measured by the Corruption Perceptions Index, 2009.

¹⁰⁸ Anthrax exists naturally in the soil in some parts of Bangladesh. Livestock get ill after eating contaminated grass, especially during or after the monsoon when water brings anthrax spores to the surface. The outbreak in question was thought to have been caused by people slaughtering anthrax-infected cattle and selling or eating the contaminated meat. Demand for beef and mutton contracted sharply. The fall in the number of cattle slaughtered limited the supply of hides in the tanneries, and led to a sharp increase in price. Tanners resorted to using hides from old stock. Job losses were reported amongst those raising livestock, slaughtering and selling meat.

informal sector. This may see increases in child labour, especially in the small and medium enterprises. However, medium and higher skill sets (particularly management skills) are in short supply and this squeeze may drive up wages.

Bangladesh has some of the worst leather sector labour conditions in the world and increased employment (with worsening work conditions) will see more people drawn into poor quality employment.

Taxes and transfers: Although a small increase in tax take might be predicted, it will be limited by the large informal sector in the Bangladeshi leather industry. The gain will be too small to generate an increase in public investment or service provision. However, if newly employed workers are migrants, one might expect to see an increase in informal transfers in the form of remittances.

Poverty and well-being effects: Growth in the Bangladeshi leather sector resulting from trade diversion is likely to generate some additional jobs, although the numbers are uncertain. Despite poor working conditions in the sector, newly employed individuals are likely to see their household income increase, with benefits for their poverty status.

Environmental effects: Industrial production in Bangladesh is heavily concentrated in the densely populated areas of major cities such as Dhaka and Chittagong. The most important area for leather production is the tannery cluster located in Hazaribagh, an industrial area located within a very heavily populated (slum) residential area of Dhaka (USAID, 2010), although others include Dhanmodi, Basila, and Kamrangichar. In 2006, 200 out of 214 tanneries were located near the capital's three river systems – Turag, Buriganga and Sitalakhya. This matters because harmful pollutants including chromium, lead, sulphur, ammonium and others are released directly into the capital's river systems. Only 2 of the 214 tanneries have an effluent treatment plant (as required by law)¹⁰⁹ (SOS-Arsenic, 2008) and the pollution seeps into groundwater and rivers and creates health problems as well as harming other livelihoods (e.g. downstream fisheries, and staple crop yields) (Saleemul Huq, 2001).

In recognition of these major challenges, in 2001 the Bangladesh High Court ordered the government to facilitate the relocation of the tanneries from Hazaribagh to the Savar area (also in Dhaka) (Zahur, 2004). However this has proved an extremely complex process and there has been little progress.¹¹⁰ It appears that India has had better success in tackling environmental pollution and that in Bangladesh the problems remain more acute.

Institutional effects: If the Bangladeshi leather industry sees a major expansion the balance of authority could shift further in favour of the private sector actors and exporters and away from the government. Some of this has already been seen in the difficulty the government has had, despite injunctions from the Supreme Court, in forcing the relocation the tanning industry to Savar. A strengthened private sector with greater market access and profitability may be even more able to resist government and legal pressure and lobby successfully for additional support.

¹⁰⁹ Embankments, to prevent flooding around the South Asian monsoon, makes the flushing out of waste water difficult which intensifies the impact of this major environmental hazard.

¹¹⁰ Relocation has been delayed by disagreements about compensation (between owners and the government), the restructuring of mortgages (on tanneries) and the completion of support systems (such as an effluent treatment plant). Nearly a decade on, the government is still applying for extensions on the relocation, government investments in the new area have gone to waste, and there is evidence that tannery owners have continued to invest in the Hazaribagh area (SOS-Arsenic, 2008).

5.3 Frozen shrimp in Vietnam

The focal product identified in Chapter 3 is frozen shrimp – CN 03061350. Two other shrimp items (CN 03061380 and CN 16052091) were examined in detail in Chapter 3, in one of which Vietnam would also be graduated. The case study focuses only on one item, however, as it has two potential LDC beneficiaries. As with leather, to ensure comparability of potential losses and gains only figures for Vietnam's loss for the selected item are analysed. In addition to Vietnam, China and Argentina will also be graduated out for 03061350, but the case studies have concentrated on Vietnam on the assumption that the relative impact of any loss will be greatest. (The strength of this assumption for China is supported in the third product – beans – in which China is studied as the only graduate).

The key points from the analysis below are set out in Box 13.

Box 13: Key points on the potential costs for graduation for Vietnam

- The estimated loss resulting from Vietnam's graduation is €24.1 mn. **While this constitutes over a fifth of Vietnam's frozen shrimp exports to the EU, but a much smaller proportion (2.6%) of Vietnam's total world exports of the HS 6-digit sub-head to which this item belongs.**
- Vietnam's shrimp industry is **dominated by small-scale producers.**
- Evidence suggest that while shrimp farmers are less likely to be poor than non-shrimp farmers, in some areas, **at least a quarter of shrimp farmers remain poor.**
- Evidence also indicates that **certain groups within the supply chain** (for example shrimp hatchery labourers, shrimp farmers with limited assets, farm labourers, processing plant workers) tend to be **'extremely poor'.**
- Losses to Vietnam resulting from changing the EU's GSP threshold **could hamper opportunities for these people to escape poverty through shrimp farming and/or push them into chronic poverty.** It may also **push people who are currently considered non-poor below the poverty line.**
- The negative **environmental impacts** of the shrimp industry in Vietnam – particularly loss of mangroves and water pollution – are significant, but **given the scale of the loss in export resulting from changing the GSP threshold it seems unlikely that any noticeable improvements will be observed.**

Overview: economy, society and poverty

The Vietnamese economy is doing well. Growth has been steady¹¹¹ with strong industrial and service sectors.¹¹² However, the trade deficit has been growing steadily.¹¹³

Poverty levels have been declining, as measured by the poverty headcount ratio at \$2 a day (PPP), falling from 68.7% (of population) in 2002, to 38.5% in 2008. Similarly, the poverty headcount ratio at national poverty line went from 28.9% in 2002 to 14.5% in 2008. The official national unemployment rate in Vietnam has historically been low, rising from 2.3% (of the total labour force) in 2000 to 2.4% in 2008. Despite the generally positive trends, the informal sector remains quite large at 68.2% (of non-agricultural employment) (ILO, 2011). According to the World Development Indicators, the Gini coefficient has fluctuated somewhat

¹¹¹ Average annual GDP growth in Vietnam was 5.4% in 2009 (6.3% in 2008 and 7.5% 1999–2009) (World Bank, 2011b).

¹¹² According to the EIU in 2007 (latest figures available), industry accounted for the largest share of GDP at 42.3%. The services sector represented about 38.2%, and the agricultural sector was 19.5% (EIU, 2008a).

¹¹³ Since the early 2000s, Vietnam's trade deficit grew steadily from \$2.5 bn in 2003 to \$10.4 bn in 2007, when Vietnam acceded to the WTO in January 2007, although the EIU forecasts that the trade deficit will fall to \$6.9 bn by 2011, but increase to \$9.5 bn by 2012. In 2009 leading export items were: garments (16% of total exports), crude oil (10.9%), fisheries (7.5%), footwear (7.2%), electronics and computers (4.8%), rice (4.6%), wood products (4.5%), and coffee (3%) (EIU 2011a 2008a; 2005a).

in the last decade, going from 37.6 in 2002, to 39.2 in 2004, to 37.6 in 2008. These figures mask the high geographic (and ethnic) differences, summarised by Minot et al. (2003: 68) and CIE (2002: 11–5). Poverty rates are:

- highest in Northeast and Northwest Vietnam, along the border with China and Lao PDR, in the interior of the central coast, and the northern part of the Central Highlands.
- intermediate in the two main deltas – the Red River Delta, and the Mekong Delta.
- lowest in large urban areas, particularly in Hanoi and Ho Chi Minh City, and in the Southeast region.
- consistently much lower in urban than in rural areas.

Contextualising frozen shrimp in the Vietnamese economy

Since 2000, Vietnam's fisheries sector has seen a rapid growth in output, rising 64% between 2000 and 2006¹¹⁴ and with shrimp production also growing rapidly.¹¹⁵ This has propelled Vietnam to being the fifth largest producer of fishery products globally behind China, India, Indonesia and the Philippines. In 2006, the fisheries sector accounted for over 6% of total GDP and 19.3% of agriculture, fish and forest sector production. It is Vietnam's third highest exporter in value terms (\$3.35 bn, 2006) and the EU was its second most important destination (Nguyen and Tran, 2007).¹¹⁶ In 2006, frozen shrimp and catfish occupied the largest share of fisheries exports, accounting for 44% (\$1.5 bn)¹¹⁷ and 22% (\$1.1 bn) respectively and the EU was the third most important destination.¹¹⁸

The development of the fisheries sector has been under the intense focus of the Vietnamese government for more than 10 years, reflecting the importance of the sector to the Vietnamese economy and the government's hope that expanding the sector would support poverty reduction. This has included support to households to purchase their own fishing boats (the first 'Fisheries Sector Master Plan', 1997), which has influenced the shape of the fishing industry, with large numbers of small boats. Later plans have seen a push for expanded production and exports,¹¹⁹ and the aim to build modern fishery ports.¹²⁰ The fisheries sector is also a focus in Vietnam's Comprehensive Poverty Reduction and Growth Strategy (CPRGS) (2002) which outlined government aims to provide fisher households and communities more access to education, production inputs, information, extension services, credit and consumer markets, and upgraded infrastructure (FAO, 2005a).

Production and employment

According to the FAO, 96% of all processed aquaculture production is destined for export (FAO, 2005a). Fishery and shrimp production is broadly divided into two types: wild catch and aquaculture. In 2006, the former type accounted about 56.4% of fish production, but only 22.8% of shrimp production. In the light of signs of stress due to overexploitation and over-fishing in wild catch fishing areas, aquaculture has experienced significant output gains in recent years, with aquaculture fish production consisting of 43.6% of total fish production, and aquaculture shrimp production representing 77.2% of total shrimp production.

¹¹⁴ Rising from 2,250.5 to 3,695.9 in thousand metric tons (mt)

¹¹⁵ As a share of total fisheries production in 2006, shrimp production accounted for 12.4% in terms of volume. Between 2001 and 2006, shrimp production grew 84.3% from 249.19 to 459.3 thousand mt. (Between 2000 and 2005, FAO estimated an average annual Vietnam shrimp catch of 100,628 tonnes (Gillett, 2008:34).) The total area of water surface used for aquaculture has also increased dramatically. In 2006 it was 1,050 thousand hectares (ha), up by 64% from the 641.0 thousand ha utilised in 2000 (Nguyen and Tran, 2007).

¹¹⁶ Japan, 25% (\$843 mn); EU, 21.6% (\$724 mn); United States, 19.8% (\$664 mn); South Korea, 6.3% (\$210 mn); ASEAN, 4.5% (\$151 mn); and China, 4.3% (\$146 mn) (Nguyen and Tran, 2007).

¹¹⁷ In 2006, total shrimp exports amounted to \$1.46 bn (Nguyen and Tran, 2007).

¹¹⁸ The main shrimp-specific export destinations were: Japan, 40% (\$581.2 mn); US, 28.9% (\$422.9 mn); EU, 10.6% (\$154.3 mn); and Australia, 5.2% (\$76.7 mn) (Nguyen and Tran, 2007).

¹¹⁹ Under the 2006-2010 plan, the goal was to raise fisheries production by 3.8% annually, while also increasing exports by 10.6% a year, to about \$4.5 bn per year by 2010 (Stanton et al., 2010).

¹²⁰ The current 'Master Plan for Development of the Fisheries Sector 2006-2010' is being updated, but will include plans to construct more modern fishery ports along the coast over the 2010–20 period.

Not only has the area dedicated to aquaculture increased since 2000, so too has the capital intensity of production, with Vietnam's shrimp sector shifting from extensive to intensive farming practices, requiring higher levels of investment in capital, labour and management. According to the FAO, industrialisation of the sector has raised the entry barrier for poor producers to be involved directly in shrimp farming as intensive or semi-intensive farming requires a higher degree of financial assets and skills. High land prices in shrimp farming areas are also acting as a significant barrier to entry. (Thong et al., 2010:132–3; Nguyen et al., 2004:54).

Employment: According to the FAO, a significant number of people live in Vietnam's coastal areas, of which 80% are believed to be directly or indirectly engaged in fisheries activities. Exact figures are not available, but the Ministry of Fisheries suggests four million people living in or near tidal areas and roughly one million people living in coastal lagoon areas are directly or indirectly engaged in fisheries activities (Nguyen et al., 2004:53–4). Box 14 highlights some of the opportunities provided by shrimp farming for increased income and employment generation.

Box 14: The case of Ca Mau province

The case study of the Ca Mau province in Vietnam provides some insights into the opportunities provided by shrimp farming for increased incomes, employment creation, and reduced poverty. Income from shrimp farming amounts to 25% of household income in the province, as compared to only 8% from rice farming. In 2002, incomes in Ca Mau were 8.5% above the average level for the Mekong Delta region, and 20% above the national average. Poverty has decreased; between 2000 and 2004, the number of poor households fell by more than 17,000, and the poverty rate fell from 15.5% to 7.8%. Moreover, in 2002, the poverty rate among shrimp-farming households was 28.6%, compared to 34.7% for non-shrimp-farming households. Between 2000 and 2004, the rate of poor households participating in aquaculture increased markedly, from one-half to two-thirds, reflecting perhaps some indication that households perceive shrimp farming as a viable route out of poverty.

The composition of jobs in Ca Mau have altered due to the growth of aquaculture, with jobs in forestry and agriculture falling from 290,000 in 1997 to 194,000 in 2003, while jobs in the aquaculture sector grew from 85,000 to 312,000. Thus, the aquaculture sector not only absorbed all the jobs lost in other sectors, but increased the number of jobs in the labour force. The jobs created were primarily low-skilled jobs across segments of the shrimp production and processing chain and related services, such as working as hired labour (dredging and maintaining ponds), working for seafood processors, running small business such as shrimp-collection services, and running boats. In Ca Mau, there are 25 seafood processing enterprises (21 for shrimp processing) employing 20 000 full-time and seasonal workers, of which 60% are women.

Source: Thong et al. (2010: 135-6).

While engaging in shrimp farming may be a viable path out of poverty, the uneven distribution of gains is none the less also contributing to greater inequality in Vietnam. The World Bank estimates that the income from shrimp aquaculture for poor households is one-third that of non-poor households, while poor households also generate a smaller share of their income (44%) from shrimp farming than is the case for rich households (68%). The primary reason for the income divide relates to the differences in size of landholdings: more than 35% of households in the province are landless, while 25% hold more than 4.9 acres (Thong et al. 2010:136–7).

The FAO conducted a classification of poverty within the shrimp supply chain based on factors such as land ownership, qualitative self-assessments of well-being made by local people, and monthly income (Nguyen et al. 2004:56–7). Supply chain participants categorised as 'extremely poor or poor' were:

- Shrimp hatchery labourers: Poorer labourers, including migrant labour. Limited skills. May be employed part-time, depending on seasonal production cycles (less employment opportunities in northern-central coastal areas).
- Shrimp nursery operators: Includes some poor people with limited assets with access to small ponds for shrimp nursing.
- Shrimp farmers – extensive, with limited or no investment: Includes poorer farmers with limited assets. May be involved through cooperation/equity with wealthier farmers in large extensive ponds.
- Farm labourers: Includes extreme poor and poor with limited assets, including women, sometimes landless, employed either on an occasional or seasonal basis.
- Ex-shrimp farmers: Poor people (men and women) who invested in shrimp farming, but were unsuccessful and had to sell land due to debt (mainly arising from disease losses).
- Processing plant workers – women: Poor women, sometimes migrant workers from rural areas. Includes landless. It is estimated that around 85% of processing plant workers are women (FAO, 2005).
- Processing plant workers – men: Poor men, sometimes migrant workers from rural areas. Includes landless.

Geographic and environmental context of production

The rapid expansion of shrimp aquaculture has caused significant coastal environmental problems, with the loss of important natural assets such as mangrove forests. Prior to 1943, mangrove forest coverage was around 400,000 ha, which had reduced to 252,500 ha by 1983 due to high rates of population growth, conflict, clearance for rice planting and firewood, and the proliferation of coastal shrimp farming. In 2000, the Asian Development Bank estimated that only 110,000 ha of mangrove forest remained, concentrated mostly in the Mekong river delta (191,800 ha) (Nguyen et al., 2004: 53).

Another serious environmental concern is water pollution from intensive shrimp farming areas, with resultant impacts on fresh groundwater supplies in areas with sandy soil, and serious shrimp disease outbreaks related to shrimp viruses and wastewater discharge. It is common for producers to dispose of wastewater in rivers and channels without proper treatment, spreading pollutants to surrounding areas and increasing the risk of an epidemic. It is these stresses on the environment that may ultimately restrict production increases in shrimp. Moreover, Vietnamese fisheries have faced some market access challenges in its top export markets in light of concerns of contamination in the production process and the presence of antibiotic residues (Thong et al., 2010: 138–9; Nguyen et al., 2004; Nguyen and Tran, 2007).

Vietnam has made some progress in implementing sanitary and phytosanitary measures such as Hazard Analysis and Critical Control Point (HACCP) programmes at the farm level to reduce risks of contamination in production processes. Other initiatives include certification and eco-labelling, such as the pilot scheme in southern Vietnam that saw shrimp certified organic fetch a 20% market price premium for exports to Germany and Switzerland. However, in both these cases, implementation of quality assurance systems and standards at the farm level requires knowledge, skills, and investment in infrastructure and extension. The poorest farmers and household producers, with limited human, social, and financial assets, are likely to find the transition the most difficult (Nguyen et al. 2004:60–61).

The poverty implications of graduation

Chapter 3 estimates that the average value (2008–10) of Vietnamese frozen shrimp exports (CN 03061350) to the EU was €115.1 mn, comprising 7.9% of EU imports of this product. The EU is the third most important shrimp-specific export destination for Vietnam (see 'contextualising frozen shrimp in Vietnamese economy' section). The losses to Vietnamese exporters of this one frozen shrimp item resulting from the proposed GSP graduation process have been estimated at €24.1 mn. Assuming that Vietnam could no longer maintain its market share of EU frozen shrimp imports, this estimate would imply a 21.0% decrease in EU imports of Vietnamese frozen shrimp. In 2007–9 Vietnam's global exports of the HS sub-head into

which this item falls averaged €934 mn. A €24.1 mn loss would constitute a 2.6% decrease in this total, which is a moderate decrease.

The unit value of frozen shrimps and prawns has decreased over the period 1997–2010 for all producers of frozen shrimp (CN 03061350) but the market share of Vietnam halved over this period. During the 2001 to 2006 period, however, shrimp production grew 84.3% in Vietnam (see 'contextualising frozen shrimp in Vietnamese economy' section). Given this, how might potential losses from graduation be transmitted through to households?

Employment: Vietnam's shrimp industry is dominated by small-scale producers. They are less likely to be poor than non-shrimp farmers, as illustrated by the Ca Mau case study, but a fair proportion of shrimp farmers are nevertheless poor. Further, we know that there are certain groups within the supply chain (shrimp hatchery labourers, shrimp farmers with limited assets, farm labourers, processing plant workers) who tend to be extremely poor.

Losses experienced as a result of changing EU GSP thresholds may negatively impact poor people engaged in shrimp production, as these groups of people typically have few or no assets to draw on, leaving them vulnerable to irreversible declines in well-being. Even marginal increases in competition may make it difficult for some farmers to compete – for example, we know that the industrialisation of shrimp production has resulted in entry barriers for poor people (e.g. financial assets, skills).

Access to goods and services: A key input for successful shrimp farmers is access to bank loans. Shrimp producers report that future shrimp harvests are often used as collateral to secure loans; however, the increasing challenges related to shrimp production makes the incurring of debt that much riskier (Thong et al., 2010: 137). Quick or unexpected losses in Vietnam's shrimp exports could harm those who have incurred debts to fund shrimp farming

Assets: Focus-group discussions with shrimp farmers from Phu Da and Phu Xuyen communes in coastal Thua Thien Hue province reveal some of the issues influencing the accumulation of assets by poor farmers and households (Nguyen et al., 2004: 58). These include: market price fluctuation; the inability of shrimp farmers to influence shrimp buyers' prices; access to investment and credit; government policies around land, credit and taxes; access to supporting services (district extension); and environmental deterioration. Losses experienced through a decrease in export sales are likely to affect the rate by which those involved in the shrimp industry can accumulate assets.

Poverty effects: The loss in shrimp exports resulting from Vietnam's graduation is not large but may still have a poverty effect. We know that many shrimp farmers are small-holders and in one district at least, around a quarter of them are poor. Given their vulnerability, and the vulnerability of others involved in the shrimp value chain, such as shrimp hatchery labourers and female processing plant workers (who are sometimes migrant workers, and sometimes landless), even a marginal change may have a poverty enhancing effect.

Environmental effects: The negative environmental impacts shrimp industry in Vietnam – particularly loss of mangroves and water pollution – are significant. It seems unlikely, however, that such a small loss will ameliorate these challenges at any noticeable level.

5.4 Frozen shrimp in India

Key findings on the potential gains of India from the graduation of other suppliers are given in Box 15. As the overview of the Indian economy has been provided already in relation to leather, we move straight to the position and characteristics of the shrimp industry.

Box 15: Key points on the potential gains for India

- Gains to Indian frozen shrimp exports to the EU resulting from the proposed GSP graduation process have been estimated in Chapter 3 at €8.3 mn. This is equivalent to **an increase of 1.5% in India's global exports of the HS sub-head to which this item belongs.**
- Despite the small increase in shrimp exports to the EU estimated as a result of changes to GSP preferences, it is probable that new jobs will be created. These changes may also result in **an increase in the incomes of those engaged (directly or indirectly) in shrimp production and exports.**
- In India, shrimp farming is a better income earner for farmers than other forms of agriculture, and therefore increased incomes – if significant enough – **could support poverty exit.**
- But shrimp **farmers face constraints**, in terms of access to information, skills and knowledge, which hampers productivity and the benefits they can gain from increased market access.
- The benefits derived from a small gain in export trade may be **gendered** – social and cultural norms prevent women in some places from engaging in and benefiting directly from shrimp farming.
- The extent **to which poorer people will benefit** from a small increase in trade will be **mediated by existing power structures and imbalances in the Indian shrimp value chain.**
- The **environmental impact of a small increase in shrimp exports to the EU is unlikely to be significant.** It may, however, **exacerbate in a small way existing problems**, such as such as water pollution and the salinisation of drinking water wells and paddy fields.

Contextualising frozen shrimp in the Indian economy

In response to global demand, and as part of India's program of economic liberalisation in the early 1990s, marine product exports from India have risen substantially, more than tripling in volume between 1990 and 2003. Export growth was equally dramatic in value terms, from US\$498 mn in 1990 to US\$1,331 mn in 2003, with the majority of fisheries products going to various South East Asian markets, Japan and the EU (25%) (Kumar and Shinoj, 2009). Today, marine product exports account for about 17% of India's total agriculture and good exports, up from 15% in the early 1990s (Chopra et al., 2010), with the fisheries sector growing more rapidly than crop and livestock sectors (Kumar and Shinoj, 2009). Marine products are a large foreign exchange earner for India – constituting around 13% of India's total agricultural exports (in value terms), and the sector is recognised as a powerful income and employment generator.

India is now the world's second-largest shrimp exporter (Chopra et al., 2010: 67).¹²¹ Shrimp is a major constituent in the export basket of marine products. Frozen shrimp is a high export earner – and a high proportion of India's marine product exports (Kumar and Shinoj, 2009). The value of frozen shrimp exports rose between 1995–6 and 2006–7 from 23,568 m rupees to 45,060 m rupees. The export share value of frozen shrimp in total marine products exports declined over this period, from 67.7% to 53.9%, however frozen shrimp remained the highest export earner in terms of marine product exports. The main trade destinations of frozen shrimp are the EU, Japan and the US (Kumar and Shinoj, 2009).

¹²¹ Note that the bulk of India's aquaculture production is constituted by fishes like carps that are consumed locally, whereas high valued species like shrimp and crab are cultured mainly for export purposes (Flaherty et al., 2009: 25).

India's strategic location in the Indian Ocean, which experiences heavy rain creating both fresh and saltwater bodies suitable for aquaculture production, along with the long coastline, warm climate and relatively low wages, provide enormous resource potential and comparative advantage for the development of aquaculture (Flaherty et al., 2009: 25). Despite this, shrimp productivity in India is much lower than in other major shrimp producing countries, such as Thailand, Malaysia, China and the Philippines and this has implications for India's exports prospects, as well as for the welfare of shrimp producers (ibid.: 26).

Production and employment

There was a significant growth in commercial hatcheries in the early 1990s in India. For example, in the states of Andhra Pradesh and Tamil Nadu, a large number of commercial integrated shrimp farming units with foreign collaboration emerged, adopting 'scientific' culture systems with facilities for production of shrimp seed, shrimp feed, and processing. But this trend did not continue for long as the large scale corporate shrimp farms failed to make profits, and consequently, shrimp farming became more or less a small farmer activity¹²² concentrated at the coasts (MPEDA 2008 in Umesh et al., 2009).

Shrimp farms are operated using both leased out government/private lands and landowner-operated shrimp farms. A credit system functions throughout the sector, operated and controlled primarily by intermediaries. Intermediaries act as input suppliers and providers of credit at each stage in the supply chain, and are also involved in buying back the harvested shrimp. On average, farmers pay 30% interest on their loans, which negatively affects their profitability (Umesh et al., 2009). Box 16 outlines the shrimp production process in the Sundarbans in West Bengal.

Box 16: The production process: the case of the Sundarbans, West Bengal

Many people are involved in the shrimp export market. The first step in the production process involves the prawn-seed collectors. In the Sundarbans, there are no shrimp hatcheries, so aquaculture farms rely on a supply of shrimp larvae, known as prawn seeds, collected from the wild. In response to rapidly growing demand, many poor people have adopted prawn-seed collection as their primary activity. An estimated 150,000 people are involved, including a number of children. These people tend to be the poorest people, with no livelihood alternatives and no land.

Middlemen, known as *aratdars*, buy prawn seeds from collectors and resell to farmers in the region. In addition, these middlemen often serve as financiers, providing boats and nets to the collectors on the condition that they can buy the catch.

Aquaculture farmers will either own or lease their land. *Panchayats*, the local level administrative and political units, play an important role in aquaculture activity, from the allocation of land to farmers to the sale of the final product. Farmers pay them licence fees, and the *panchayat* influences the allocation of government assistance and subsidies, often favouring *panchayat* members and their relatives.

Farms employ two types of workers – temporary low paid construction workers and permanent workers, including maintenance workers, supervisors and security guards. There are an estimated 732,000 shrimp farm workers in the Sundarbans.

Shrimp production involves the use of a variety of inputs – shrimp feed, fertilisers, lime, pesticides, medicines, and equipment for pond treatment and preparation – selling these inputs has become a profitable business for many suppliers in the region.

Source: Chopra et al., 2010: 70.

With the development of shrimp farming, employment opportunities in coastal areas have increased greatly. As Flaherty et al. (2009: 84) note from their study of Orissa, the onset of shrimp culture has brought about a change in the occupational patterns of the coastal people. Many have opted to farm shrimp rather than to cultivate paddy or catch fish. The growing

¹²² 90% of the total area utilised for shrimp culture is on farms of less than 2 ha, 7% of farms are between 2 and 5 ha and the remainder has an area of greater than 5 ha.

demand for shrimp, coupled with the limited livelihood options in coastal areas, has attributed to this occupational shift. In addition, labourers who were mostly migrating to other areas in search of work in the non-agricultural season are now able to get employment in shrimp ponds (Flaherty et al., 2009: 86). Case studies carried out at a sea-based farm in the Nellore District of Andhra Pradesh showed an increase of 2–15% employment and 6–22% income for farm labourers following the establishment of shrimp farms (CIBA, 1997 in FAO, 2005b).

The expansion of the shrimp market in Orissa has also led to the opening up of subsidiary businesses, which further increase employment. For example, businesses dealing with shrimp feeds, medicine, lime, water pumps, nets, etc, have expanded in the area (Flaherty et al., 2009: 87). The FAO concluded that over 300,000 jobs have been generated in the main and supporting sectors of the shrimp aquaculture sector in rural areas (FAO, 2005b).

In the case of Orissa, there are significant increases in household income. For example, respondents from a study on shrimp farming in Orissa found that the income from one unit of shrimp culture is equivalent to seven times the income from one unit of rice farming. In this study they found that established shrimp farmers were able to afford luxuries such as a car, television and bicycles. Spending on cinema, opera, marriage and birth ceremonies has also increased as the purchasing power of shrimp farmers has increased. Table 19 shows the dramatic increase in household income.

Table 19: Change in household income following adoption of shrimp culture

Area	No. of households in sample	<i>Per capita</i> income of the sample households prior to shrimp culture	<i>Per capita</i> income of the sample households after adopting shrimp culture
Dharama	40	68,549	43, 473
Ersama	40	42,815	182,697
Satapada/Chilika	11	19,363	18,727

Source: Flaherty et al., 2009.

Chopra et al. (2010: 74–5) find that shrimp farmers are better off than agriculturalists in terms of *per capita* income. But the security of their income is much lower, due to the frequency of harvest loss. They also found that prawn-seed collectors had higher incomes compared to fisherman. On the downside, they found that the collectors suffered more chronic health problems as a result of their work and often faced conflict over the price of their catch. Unsurprisingly, salary-earning and waged households (basically, the formal sector) had even higher levels of income security and health security, but that prawn-seed collectors lacked the skills, particularly literacy, needed to move into these categories of work.

The Orissa study highlighted that prevailing social and cultural norms prevent the participation of women in shrimp farming. The rural lives of women are dominated by a patriarchal social system, which maintains a rigid division of labour that controls the roles and responsibilities that women can take on. Poor families may allow women to work out of economic necessity, but this does not reflect well on the family (Flaherty et al., 2009:150).

There are factors that are preventing shrimp farmers from reaching their potential, however. A study by Shakir et al. (2010: 289) in Kerala found that there were high levels of illiteracy (20%) and primary education (65%) amongst shrimp farmers. Very few had secondary education (15%) or were graduates (10%). The study Flaherty et al. (2009: 92) uncovered similar findings: they found that there were low levels of education amongst most shrimp farmers, which had restricted them from taking advantage of the latest techniques in shrimp culture (Flaherty et al., 2009: 92). Umuesh et al. (2009) argue that small-scale shrimp farmers in India are unorganised and do not have access to technological innovations and new

scientific knowledge about shrimp farming. These farmers contribute around 80% to the total shrimp production, but are poorly served. Poor organisation, lack of skills and lack of information make these farmers vulnerable to the numerous risks and hazards that impact their livelihoods, farm productivity, and competitiveness (Umesh et al., 2009).

Geographic and environmental context of production

Shrimp farming is practiced mainly in the coastal states of Andhra Pradesh, West Bengal, Orissa, Karnataka and Tamil Nadu (Flaherty et al., 2009: 26), with around half of the output coming from Andhra Pradesh (FAO, 2005b). As in Vietnam, shrimp aquaculture has been responsible for the degradation of mangroves along India's East Coast over the last decade (Hein, 2000: 48). Shrimp aquaculture has also contributed to other environmental problems – including water pollution, salinisation of drinking water wells and paddy fields, destruction of fry of wild fish and crustacean species – as well as social conflicts related to land conversion. Indeed, protests from local villages, supported by various social and environmental NGOs, culminated in the 1996 Supreme Court judgement and 1997 Aquaculture Bill which established a regulatory framework for shrimp aquaculture in India.

The inappropriate and excess use of chemicals and fertilisers and the accumulation of excess feed from shrimp farming makes the soil acidic and unsuitable for any further use either for agriculture or other fish culture, at least in the short run. Moreover, the intense use of chemical, fertilisers and antibiotics can trigger disease outbreaks in shrimp ponds, posing a financial risk to shrimp farmers. The extent and nature of the environmental effects depends on the production system adopted for shrimp farming. For example, the low intensity traditional and extensive shrimp farms are likely to cause a greater destruction of mangroves than the semi-intensive shrimp farms because of their greater spread. But high yielding intensive and semi-intensive shrimp farming will lead to greater land degradation and water pollution (Bhattacharya, 2009).

For example, in Orissa, the shrimp industry has taken lands that were used for paddy cultivation – but the seepage of salt water from the shrimp ponds has destroyed neighbouring paddy fields, making the land unproductive. This results in poor landowners with dwindling paddy crops having no choice but to sell their fields at bargain prices to aquaculture owners. Due to the seepage of saline water into aquifers and drinking water tables, drinking water is no longer potable, and villages have to carry barrels of water to meet demands (Flaherty et al., 2009: 91). Conversion of the agricultural lands into shrimp ponds has had significant impacts on crop and livestock production – and in Orissa, the poorest and most vulnerable members of society, especially those that rely on government owned land or common resources, have been particularly profound, with landlessness and indebtedness on the increase (ibid.).

The government has attempted to regulate shrimp farming to limit environmental damage. For example, the Government of India enacted the Coastal Aquaculture Authority (CAA) Act in 2005. The CAA was mandated with enforcing proper regulatory measures in coastal aquaculture in a more sustainable and eco-friendly manner (Umesh et al., 2009).

Potential for exploiting expanded export space

National and state governments have supported the expansion of shrimp exports. Increasing shrimp exports has been given 'extreme focus' status in India's national plans (Flaherty et al., 2009: 28). States have initiated policies and programmes in support of shrimp farming: for example, in West Bengal, the State Department of Fisheries supports shrimp farming through extension and training services, liberal credits and subsidies for nets and boats, insurance and savings schemes and infrastructure development, such as establishing warehouses, processing units, roads and communications' (Chopra et al., 2010: 67).

A number of related constraints may limit shrimp farmers from exploiting expanded export space, however.

- *Disease:* Following a period of growth, the shrimp industry in India experienced decline in the mid-1990s due to White Spot Disease (WSD). The disease outbreak was largely the result of the coastal states in India being new to commercial-scale

shrimp farming – and as a result their farming practices and extension services were inadequate (Ministry of Agriculture, 2002: 1). Antibiotic residue drawn from a consignment sent to Europe, and Japanese buyers' concerns with muddy and mouldy smells in farmed shrimp, also damaged Indian shrimp exports in the mid-2000s (Flaherty et al., 2009: 29).

- *Food safety and phyto-sanitary standards:* These standards have become more stringent in importing countries over the last decade and Chopra et al. (2010: 68) argue in some cases they have functioned as non-tariff barriers for Indian exporters. The cost of compliance ranges between 1 and 5% of total production – and an inverse relationship has been observed between the scale of operation and cost of compliance, making it harder for smaller firms to adapt, driving some out of business (ibid.).
- *Inadequate information, knowledge and extension services:* As Shakir et al. (2010: 287) note, inadequate management of the shrimp farming industry has resulted in frequent disease outbreaks, forcing farmers to shut down their farms. High labour costs and land tenure issues have also forced some farmers to abandon shrimp ponds. Umesh et al. (2009) cite similar evidence. They argue that small shrimp farmers neither have the skills to adopt scientific norms, nor access to useful technical information essential for shrimp farming. The availability of technical personnel in fisheries departments to support the vital extension functions at the grassroots level are inadequate, resulting in poor transfer of technology, lack of coordination with other departments, and poor research linkages (Umesh et al., 2009).

The poverty effects of graduation

Chapter 3 estimated that the average value of India frozen shrimp exports to the EU (CN 03061350) is €152.4 mn, comprising 10.5% of EU imports of this product, and the gains from GSP graduation €8.3 mn. This is potentially a 5.4% increase in EU imports. In 2007–9 India's global exports of the HS sub-head into which this item falls averaged €541 mn. A €8.3 mn gain is equivalent to a 1.5% increase in this total, which is relatively small.

Given this, and the literature reviewed above, how might potential gains from the graduation of competitors be transmitted through to households?

Employment: Despite the small increase in shrimp exports to the EU estimated as a result of changes to GSP preferences, it is probable that new jobs will be created. It may also drive up incomes of those engaged directly or indirectly in the shrimp industry. As the analysis above suggests, there is evidence that shrimp farming is a better income earner for farmers than other forms of agriculture, and therefore increased incomes could in a small way support poverty exit. However, this may be partially offset by the increased poverty of those households negatively affected by the environmental consequences of their neighbours' shrimp enterprises. Also, shrimp productivity is lower in India than in competing countries (for example, Thailand), which may limit the expansion of shrimp exports to the EU and related employment increases, although this has been taken into account to some extent in Chapter 3. Further, shrimp farmers face constraints, in terms of access to information, skills and knowledge, which hampers productivity the benefits they can gain from increased market access. Finally, the benefits derived from a small diversion in trade may be gendered – evidence from Orissa at least highlights that social and cultural norms prevent women from engaging in and benefiting directly from shrimp farming.

Authority: The extent to which poorer people – such as labourers and small scale farmers – will benefit from a small increase in trade will be mediated by existing power structures and imbalanced in the Indian shrimp value chain. Evidence suggests that middlemen facilitate and benefit from inputs supply to shrimp farmers – and any benefits from increased shrimp production may not be passed on fully to farmers or labourers. *Panchayats*, or local level administrative and political units, may also try to capture whatever gains they can from increased exports.

Poverty effects: The majority of shrimp farmers in India are smallholder farmers. A small increase in frozen shrimp exports may benefit them by increasing their incomes.

Environmental effects: The environmental impact of a small increase in shrimp exports to the EU is unlikely to be very significant. It may, however, exacerbate existing problems, such as such as water pollution and the salinisation of drinking water wells and paddy fields.

5.5 Shrimp in Bangladesh

Key findings on the potential gains of Bangladesh from the graduation of other suppliers are given in Box 17. As the overview of the Bangladesh economy has been provided already in relation to leather, we move straight to the position and characteristics of the shrimp industry.

Box 17: Key points on the potential gains for Bangladesh

- Gains to Bangladeshi frozen shrimp exports to the EU resulting from the proposed GSP graduation process have been estimated in Chapter 3 at €6.5 mn. This is potentially a **5.4% increase in EU imports and a 1.8% increase in Bangladesh's global exports of the HS sub-head within which this item falls.**
- In the case of Bangladesh, the estimated changes resulting from changing the EU's GSP graduation threshold are small – though more significant than for India.
- The **EU is the biggest export market for shrimp for Bangladesh.**
- Increased exports of shrimp may **increase employment opportunities for shrimp farmers and labourers, as well as those involved in associated businesses,** such as input selling.
- **Labour conditions in the shrimp industry in Bangladesh are poor,** and increases in exports may expose workers to more unpaid overtime and result in no or only marginal improvement in their terms of employment. **Women and children are particularly vulnerable** to exploitation and low health and safety standards.
- If shrimp production and exports increase, there will be **negative environmental impacts, through water pollution and soil infertility.** This has **negative implications for traditional livelihood activities such as cattle grazing and poultry keeping.** Water pollution is also documented to have negative health effects, through water-borne diseases.

Contextualising frozen shrimp in the Bangladeshi economy

The fisheries sector has played an important role as one of the highest earning and fastest growing sources of non-traditional exports in Bangladesh. According to the FAO, the share of output from the fisheries sector rose to a peak of about 6% of GDP in 2000, before levelling out to just over 5% of GDP in 2002, a level similar to that achieved in the early 1990s. In terms of export earnings, the proportion derived from the fisheries sector has declined from 6.9% in 1991, to 4.76% in 2002, to 2.7% in 2010 (FAO, 2007; Khatun, 2004). In 2010, total fisheries exports amounted to \$437 mn.¹²³

Shrimp (especially the tiger shrimp, locally called *bagda* shrimp, and fresh water shrimp, locally called *galda*) plays a central role in overall fisheries exports, comprising a high, but decreasing, share of the sectoral total: shrimp exports comprised 85% of overall fisheries exports in 1993, 90% in 2003, and then fell to 75% in 2010. As a share of total exports, shrimp exports have gradually diminished over time: from a peak of 7.8% in 1994, to 4.5% in 2003, and 2.0% in 2010. In 2010, total frozen and unfrozen shrimp exports were valued at \$343 mn, ranking as the second top export behind only textiles and apparel (at the HS2 level). As a share of all agriculture-based exports (HS chapters 1–24), frozen shrimp accounted for 47% in 2010. As a share of GDP, output from the shrimp sector was estimated at 0.36% in 1993, and 0.48% in 2003. Export tonnage of frozen Bangladesh shrimp was 20 mn kg in 1998, rising to 39 mn kg in 2010 (FAO, 2007; Khatun, 2004).

¹²³ Export figures sourced from the Bangladesh Shrimp and Fish Foundation, see reference section.

About a third of domestic shrimp production is sent to export markets. The EU, the US and Japan are the major destination for Bangladesh shrimp, accounting for more than 95% of these exports. In 2003, the EU took 52.1% of these exports, the US took 38.6%, and Japan accounted for another 4.5% (WTO, 2006; Khatun, 2004). Thus, the EU continues to act as a sizeable export market for shrimp from Bangladesh.

Production and employment

In the 1990s, the total area under shrimp cultivation increased threefold. According to a 2004 FAO report, the total area for shrimp cultivation was 141,353 hectares or roughly 1% of total land area in Bangladesh. In 2005–6, the total shrimp cultivation area was 218,000 hectares. In general, the production method of shrimp cultivation used in Bangladesh is extensive (rather than intensive) with low inputs, little or no nutritional inputs, accompanied by little or no mechanisation (FAO, 2007; Khatun, 2004).

There are generally three types of fisheries in Bangladesh: inland capture, inland culture and marine capture. The inland (capture and culture) fisheries provide the bulk (78%) of fish to total domestic production, with slightly less than half of this coming from capture (Khatun, 2004).

Employment figures vary, but inland fisheries appear to be made up of small-scale fishing communities, with inland capture fisheries providing employment for approximately 770,000 Bangladeshis (no estimate available for inland culture fisheries) (FAO, 2007). It is estimated that the marine capture fisheries employs over 167,000 fishermen and support staff, with an additional 185,000 engaged in part-time shrimp fry collection activities. A 2004 FAO report suggests that about 2 million people are employed in the upstream and downstream fisheries sectors on a full-time basis, representing about 7% of total employment in Bangladesh at the time (FAO, 2007; Khatun, 2004).

Shrimp processing factories incorporate cleaning, washing, processing and freezing facilities. They tend to function with excess capacity, using less than 50% of their capacity (according to a 2004 FAO report), with most firms operating at only 13%.

Gammage et al. (2005) outline the supply chain of shrimp production in Bangladesh. The supply chain comprises multiple actors:

- Shrimp fry collectors catch the fry and then the fry is transferred to the villages. Women and child workers sort and count the catches.
- Hatcheries are also part of the supply chain of shrimp production. Hatcheries produce shrimp from mother shrimp. Hatcheries get the mother shrimp either from farmers or fishermen.
- Fry *faria* purchase the fry from fry catchers or from hatcheries. During the off-season, they are often faced with financial difficulties (Gammage et al. 2005). They often lend money from fry *aratdar* 'which locks them into a contract to sell all fry to the lender' (Gammage et al. 2005).
- Fry *aratdar* also purchases the fry from the hatcheries.
- Commission agents receive the fry from the fry *aratdar* and sell the fry to the farmers. Shrimp commission agents especially trade with exporters and processors. They obtain significant rents through their manipulation of shrimp prices.
- There were 130 shrimp processing plants in Bangladesh in 2005. In addition, there are shrimp retailers who sell shrimp for local consumption to the hotels, restaurants, supermarkets, etc. (In 2004, there were 128 shrimp processing plants of which 61 were licensed to export, and 44 had permission to export to the EU (Khatun, 2004)).
- Shrimp nurseries also play a part in the supply chain of shrimp production. Nurseries adapt the fry to the production environment.

The FAO's domestic supply chain analysis conducted a ranking exercise to assess the 'poverty situation' of different stakeholders and actors in the value chain (Khatun, 2004). The report

identified fry collectors, hatchery workers, depot workers and processing plant workers as the most vulnerable in the production chain, in terms of their lack of land ownership, their low daily calorie *per capita* intake and their low income levels. As such, these groups have few productive assets and limited capabilities, are involved in irregular occupation and rely on subsistence living with no savings. Other vulnerable groups include fishing crews of small mechanised boats, artisanal fisherman with non-mechanised boats, and ice van operators (Khatun, 2004). According to USAID, 40% of all fry catchers and 62% of processing factory workers are women and girls. In shrimp farming, 73% of women work in casual or temporary employment, while in processing industry 92% of women are employed under atypical contracts (USAID, 2009).¹²⁴ Fry collectors and small farmers are mostly dependent on larger buyers and in many cases they are locked into contracts where they are obliged to sell their product to particular purchasers (Gammage et al., 2005: 30). Workers in the shrimp industry typically work 12 hours per day, and many are forced to work unpaid overtime. According to the Solidarity Center (2008: 26–8), they had very low levels of social protection, such as healthcare, childcare, and poor levels of safety. High levels of child labour are the result of a lack of child care options – women have no choice but to take their children to the workplace.

Geographic and environmental context of production

The main shrimp cultivation areas are found in the coastal districts of Chittagong, Khulna, Bagerhat and Shatkhira. All of these districts have experienced high GDP growth between 1995–6 and 2005–6, and Chittagong District has one of the lowest incidences of poverty (at 35%) (Deb et al., 2008: 3).

As in other countries, the Bangladeshi shrimp industry has adverse effects on the environment and on health. Shrimp cultivation increases salinity, which significantly decreases soil fertility. It also damages communal forests, mangroves and coastal vegetation (Battacharya et al., 1999: xvii; Paul and Vogl, 2011). As shrimp cultivation promotes water pollution, it increases the possibility of the emergence of water-related mortality – especially premature deaths through diarrhoea and dysentery (Battacharya et al., 1999: xviii).

Potential for exploiting expanded export space

The Government of Bangladesh (GoB) has provided direct subsidies in the form of cash incentives linked to local-content requirements and the promotion of export diversification that cover the costs of handling, processing, upgrading, and freight charges and/or in lieu of duty drawback and bonded warehouse facilities. Implemented in 2002, the scheme provides a cash incentive of 10% (of export value) for exports of frozen shrimp and other fish. In 2004–5 the government's total outlay on cash incentive subsidies was Tk 7.5 bn mainly for local fabrics (56%), frozen shrimp (23%), and jute products (13%). Unfrozen and unprocessed prawns and shrimps were also subject to an export restriction under Bangladesh's Export Policy 2003–6. Other forms of public support to agriculture relate to research, agricultural extension, pest and disease control measures, training, marketing services, and various infrastructural services (WTO, 2006).

The GoB also grants domestic support through agricultural credits at concessionary rates provided by nationalised commercial banks or specialised banks. Total domestic support in 2003–4 amounted to \$142.3 mn, mostly in support of wheat and rice. Some support measures are targeted at poor and marginal farmers, but the dollar amounts are minimal. For instance, investment subsidies to poor and marginal farmers (including the fisheries and livestock sub-sectors) composed of credit facilities at concessional rates of 1.5% per annum amounted to \$90,000 in 2004–5. During that year, marginal farmers also received a 2% interest rebate for timely loan repayment that totalled \$30,000 (WTO, 2006).

In addition to the 1998 National Fisheries Policy (NFP), which supported increased production and self-employment through the provision of inputs (for example, credit and fertiliser) and emphasised the importance of ecological balance and bio-diversity, a shrimp-specific policy has also been developed to address a wide-range of industry-specific issues such as production

¹²⁴ http://www.usaid.gov/our_work/cross-cutting_programs/wid/eg/gate_valuechain.html

techniques, skill training, quality control and hygiene, ecological balance, infrastructure and marketing (Khatun 2004).

To reduce production costs in light of regional competition, support to domestic production has been bolstered through subsidising agricultural inputs such as seeds, fertiliser, irrigation, capital, and electricity, in addition to direct subsidy measures and government procurement practices. Reports note that improvements have been made to the accessibility of key inputs and services, but significant problems remain (WTO, 2006).

On the downside, while port efficiency has improved in recent years, with vessel turn-around times at Chittagong falling from 6.5 days in 1998–9 to 4.2 days in 2004–5, congestion, inefficient management practices, slow customs procedures and cargo handling, labour unrest and high official costs continue to heighten transaction costs that undermine the economy's productivity, competitiveness and international trading links. Moreover, the lack of a linked transport system, inadequate dredging, the lack of skilled manpower and appropriate planning for upgrading have led to under-utilisation of seaports (WTO, 2006; EIU, 2008b; EIU, 2003).

The provision of electricity remains a key bottleneck for economic growth and development. According to the WTO, the country's installed power generation capacity of 5,025 MW (2004–5) was greater than peak demand of 4,308 MW, but actual generation was about 3,800 MW. As such, demand remains unsatisfied by supply despite the presence of new generating stations by independent power products and the rehabilitation of some existing facilities. Power generation is constrained by serious financial constraints (affecting maintenance of old units), high system loss, and low efficiency (WTO, 2006).

The poverty implications of graduation

Chapter 3 estimates that the average value (2008–10) of Bangladeshi frozen shrimp exports (CN 03061350) to the EU was €119.3 mn, comprising 8.2% of EU imports of this product, and the gains from GSP graduation €6.5 mn. This estimate would imply a 5.4% increase in EU imports of Bangladeshi frozen shrimp. In 2005–7, Bangladeshi global exports of the HS sub-head within which this item falls averaged €367 mn. Assuming that the potential increase in export space to the EU is not filled by trade diversion, a €6.5 mn gain in frozen shrimp exports would constitute a 1.8% increase in this total, which is quite modest.

Prices: Fish and fish products such as shrimp are central to food security in Bangladesh: according to CGIAR (1998 in Gammage, 2005: 6), almost three quarter of the animal protein intake comes from fish products. Although the Bangladeshi shrimp cultivation sector has grown rapidly, the global market for seafood products is still dominated by Thailand, Indonesia, China, and Ecuador. All these countries have increased their value added production in their exports through innovations in production and processing seafood, while the Bangladeshi fishing sector has lagged behind in these developments (Gammage et al., 2005: 1). The price implication of this is that rather than an increase in shrimp production, shrimp will be diverted from domestic to export markets, which may result in increased domestic shrimp prices.

Employment: Increased exports of shrimp would have mixed employment results. First, according to Solidarity Center (2008), workers in the shrimp industry are exposed to overtime and unpaid work. The industry may force workers to work overtime instead of hiring new workers. Also, the industry contains a high percentage of undocumented workers, making it difficult to assess the likely impact of GSP on employment. Even if the employment increases, the labour standards would continue to be very low due to the existence of 'widespread informalisation of the industry', 'exploitation of female workers', 'persistence of child labour', and low health and safety standards (Solidarity Center, 2008: 27).

Taxes and transfers: Due to the high percentage of unregistered farms and processing plants, it is difficult to estimate whether any increase in the volume of exports would increase taxes (Solidarity Center, 2008: 25).

Poverty and well-being effects: The increase in export space may have a significant poverty reduction effect given the role of the EU as Bangladesh's biggest export market for shrimp.

Yet, the existence of overtime and unpaid work practices, and the widespread informalisation in the industry may hamper poverty reduction.

Environmental effects: If shrimp production and exports increase, there will be negative environmental impacts, through water pollution, for example. Shrimp production decreases soil fertility, which in turn causes serious damage to traditional livelihood activities such as cattle grazing and poultry keeping (Battacharya et al., 1999: xvii). There are also health impacts of water pollution resulting from shrimp production – with an increase in water-borne diseases documented.

5.6 Shrimp in Madagascar

Key findings on the potential gains of Madagascar from the graduation of other suppliers are given in Box 18.

Box 18: Key points on the potential gains for Madagascar

- Gains to Malagasy frozen shrimp exports to the EU resulting from the proposed GSP graduation process have been estimated in Chapter 3 at €4.0 mn. This is equivalent to a **5.4% increase in EU imports. The data on Madagascar's global exports suggest that the EU is overwhelmingly the largest market, so that this figure provides a broad approximation to the likely increase in overall exports of this item.** This is a considerable increase.
- An **increase** of this magnitude should lead to **employment creation**.
- Job creation in Madagascar will be channelled through the **medium and large size firms that dominate industrial shrimp fisheries**.
- The increase in frozen shrimp exports could increase the number of hours **children work in shrimp fishing**.
- Shrimp is a **highly valuable export for Madagascar** – second only to apparel exports – so even a small increase in export earnings should have a positive effect.
- Shrimp exports are an important **source of revenue** for the government – through **licence fees and taxes**. These gains may be transmitted through to households through economic and social investments and/or transfers.
- While concerns have been raised about **the sustainability of industrial shrimp fishing**, the Government of Madagascar has taken a number of steps to **manage the environmental impact of shrimp trawling** (e.g. eco-certification and supporting environmental protection measures). A 5.4% increase in shrimp exports may intensify these environmental problems unless it merely offsets an underlying downward trend.
- The need for Madagascar to **compete on a price basis may reduce these potential gains**. Infrastructure challenges (in roads and power, for example), as well as rising fuel prices, may also limit the extent to which producers, workers and exporters can exploit increased EU export market opportunities.

Overview: economy, society and poverty

Madagascar's GDP (\$9.22 bn in 2009) and grew at 1.6% in 2010 after falling by 4.6% in 2009 (the combined effect of a domestic political crisis and the global financial crisis) and growing by 7.1% in 2008 and 6.2% in 2007. Inflation was 9.0% in 2009 (World Bank, 2010).

Agriculture accounts for just over one-quarter of GDP and services for over half; industry provides just 17% (CIA, 2011). Exports stood at 28% of GDP in 2009, while imports were 52%. Top exports include textiles/garments, shellfish, petroleum oils, vanilla, cloves, prepared or preserved fish, coffee, and chromite. Traditional crops of coffee, vanilla, cloves, and pepper continue to represent the main portion of agricultural exports, but seafood exports, especially prawns, continue to grow. The country is rich in minerals and manufacturing is of growing

importance, with textiles/garments manufacture growing as a result of economic liberalisation and establishment of a free zone (UNData, 2011).

Roughly 86% of the population has some form of employment, an increase of 3.3% since 2001. The urban employment rate has increased over the past years, but remains lower than the rural rate. Employment growth has been driven by greater participation of women, who make up half of the workforce. The primary sector comprises 88% of rural employment, and 45% of urban employment. The informal sector dominates employment, with most workers having no formal education. Agricultural jobs are the lowest paying, while non-agricultural, formal sector jobs are the highest paying (Stifel et al., 2007).

Madagascar is an LDC. Of the total population, 69% live below \$1.25/day (2005)¹²⁵ (World Bank, 2010). Roughly 76.7% of the rural population, and 52.1% of the urban population, are poor. Toliara province in the south-west has the highest poverty incidence. The majority of rural poor live in the three most densely populated provinces of Antananarivo, Fianarantsoa, and Toamasina (IFAD, n.d.).

High adult illiteracy, low school enrolment, low life expectancy, a lack of basic infrastructure (such as sanitation and drinking water), as well as economic deprivation, have been identified by the Government of Madagascar as the major drivers of poverty (Republic of Madagascar, 2000: 1). CARE builds on this, citing social exclusion, poor governance and gender inequality as key contributors to poverty (CARE, n.d.). The rapid population growth in the country hampers poverty reduction. Since most workers are poor, creating good jobs is more important than simply creating more jobs (in Madagascar, good jobs are those in the formal sector, and access to good jobs depends on education levels) (Stifel et al., 2007).

Fluctuations in world food prices put Madagascar in a vulnerable position because it imports a significant proportion of its food. Rising oil prices also harm the economy – the country produces no oil – by increasing transportation costs. A high percentage of exports compared to overall GDP means that the country is susceptible to external shocks. This is particularly the case given that its main exports are in internationally competitive sectors (e.g. textile/garments, vanilla, coffee). The 2008–9 financial crisis affected export-oriented sectors, particularly textiles, shrimp, and tourism.

Contextualising shrimp in the Malagasy economy

The shrimp sub-sector – captured and farmed – is Madagascar's most valuable fishery export, and a highly important source of domestic employment. In terms of foreign earnings, shrimp exports are second only to apparel exports. Between 2000 and 2006, frozen shrimp exports made an average contribution to GDP of 2.23%,¹²⁶ accounted for around 13.6% total exports and a growing share of agriculture-based exports. In 2006, frozen shrimp exports totalled \$128 mn in value (WTO, 2008; EIU, 2005b; 2007; 2011b).

In recent years, annual shrimp production has been between 10,000 and 13,000 tonnes, with about two-thirds of shrimp catches linked to the export-oriented industrial trawl fleet. Industrial shrimp exports are dominated by whole shrimp (66%), mostly sold to Europe, and headless shrimp (29%), mostly sold to Japan. A small portion of shrimp exports are sold to neighbouring countries such as Mauritius and Reunion. The quality of Malagasy shrimp fetches a higher price in Europe than shrimp products from Asia or Latin America – indeed, Malagasy shrimp exports have developed on the basis of targeting a higher value niche within the EU's shrimp market (Pettersen, 2007). Chapter 3 estimated that the average value of Malagasy frozen shrimp exports to the EU (CN 03061350) is €74.3 mn, comprising 5.1% of EU imports of this product. Shrimp catches from traditional fishing (individual/group with non-motorised vessels or by foot in very limited fishing areas), totalled 3,450 tonnes in 2004 and is aimed primarily at supplying the domestic market (Gillett, 2008; FAO, 2008).

¹²⁵ Poverty figures have fluctuated in recent years: 68.7% (2005), 72.1% (2004), 80.7% (2002), 69.6% (2001), and 71.3% (1999) (World Bank, 2010).

¹²⁶ In its 2008 country profile of Madagascar, the FAO notes that the capture and aquaculture fisheries (not just shrimp) contributed 7% of domestic GDP (FAO, 2008b).

Production and employment

There are three categories of coastal shrimp fishery: industrial (68.6% of catches during 2000–04 period), traditional (27.3% during 2000–04 period), and artisanal (4.1% during 2000–04 period). According to the World Bank, the shrimp industry in Madagascar directly employs 62,000 people and an additional 200,000 people indirectly benefit from the industry (World Bank, 2008: 99) (the estimated population of Madagascar is almost 22 million (CIA, 2011)). All industrial shrimp fishing fleets in Madagascar are local companies relying on significant amounts of foreign capital (Gillett, 2008).

Industrial: Roughly two-thirds of shrimp production in coastal fisheries is controlled by industrial freezer trawlers, and annual shrimp trawler production is relatively higher in Madagascar compared to other countries. But the average catch size, and the catch of shrimp per hour, has fallen over time (for example, the catch of shrimp per hour of trawling has fallen from more than 40 kg in the 1960s, to 30–35 kg in the 1980s, to 20–30 kg over 2000–04). These trends have led to sustainability concerns over the high-level of exploitation of this natural resource (Gillett, 2008; FAO, 2008; Fennessy *et al.* 2003). Industrial shrimp fisheries are dominated by medium and large size firms (World Bank, 2008: 100–101).

Artisanal: Artisanal shrimp fishermen use ‘mini-trawlers’ with small engines, operating mainly on the west coast at depths of 10 metres, only during the day, and often very close to coastal estuary and mangrove areas. The mini-trawler design was originally introduced under an FAO programme to assist artisanal fishing through motorisation and facilitate entry into the modern fishing sector. Ultimately, however, the mini-trawlers have been taken over by the owners of the industrial shrimp trawling vessels (Gillett, 2008). There are approximately 6,000 artisanal fishermen (World Bank, 2008: 100).

Traditional: Over the last 25 years, production from the traditional shrimp fishery has increased by 400%, from 800 tonnes in the late 1970s to about 3,500 tonnes by 2004. Unlike in the industrial and artisanal operations, traditional shrimp fisheries are not subject to a legal framework of shrimp fishing licences, which has led to a rapid and uncontrolled expansion of this category of operators. Thus, while the number of operational industrial trawlers has declined, traditional shrimp fishers have increased (Gillett, 2008). In traditional fishing, there is no motorised equipment. Instead, *pirogues* and other craft using nets are used. The catches are sold immediately to middlemen (their number is approximately 400) as there is no cold storage of catches on board. These catches are later sold in local markets unlike the catches of industrial/artisanal shrimp fisheries which export almost all of their shrimp. Many women work in the traditional shrimp fishing sector (World Bank, 2008: 100).

Industrial and artisanal shrimp farmers are organised under the Madagascar Shrimp Fishers and Farmers Cooperative (GAPCM). Traditional shrimp farmers are not organised. For political and social reasons, the government has tended to protect the interests of traditional shrimp farmers (FAO, 2008c: 229).

According to the ILO, 28% of children between the ages of 5 and 17 actively work. Children mainly work in the agricultural and fishing sectors (ILO, 2008). There is not any available data for the number of child workers in the shrimp industry.

Geographic and environmental impact of production

Shrimp fishing takes place in all of Madagascar’s coastal areas and the surrounding deep seas. In parallel to growing concern surrounding the environmental impact of shrimp trawling, eco-certification was introduced by the Marine Stewardship Council (MSC) in Madagascar in 2003. This certification aims to protect the environment and natural resources by informing consumers about whether the ‘fishery products have been produced from well-managed fisheries’ (FAO, 2008: 229). Recent initiatives such as the establishment of a ‘Temporary Commission of the Users of the Port of Mahajanga’ and the implementation of the project ‘Zone d’Aménagement Concerté’ focuses on establishing more effective monitoring systems in shrimp fishing zones, rehabilitating the infrastructure of some ports and supporting environmental protection measures (World Bank, 2008: 102).

Potential for exploiting expanded export space

Infrastructure: The government's 'Madagascar Action Plan' (MAP) sets out the country's economic and social development strategy for the period 2007–11, and envisages a 'sustainable green revolution' and the establishment of agri-business centres to provide training and other inputs such as irrigation, seeds, fertiliser and storage, and instructions on their usage. To complement MAP, a transport policy has been developed to integrate isolated production zones and support entrepreneurship.

But serious bottlenecks remain. For example, the country's national road network covers 50,000 km, of which only 8,000 are considered in fair condition, thus representing a significant impediment to Madagascar's economic development by adding to costs and time in getting product to market. In 2002–6, a total of 3,600 km of motorways and 4,000 km of roads were rehabilitated, reducing the percentage of rural communities not connected to the road network from 59% to 33%. None the less, only around 600 out of 1,557 rural communities have access to regular transport links (EIU, 2008; WTO, 2008).

Electricity supply cannot meet demand and the rate of electrification is low. In rural areas, less than 2% of the population has access to electricity and reliable access to electricity is perceived to be an urban privilege. Infrastructure is insufficient and a large proportion of generation and distribution facilities are obsolete (WTO, 2008; EIU, 2008).

Fuel is an important energy input in Madagascar's shrimp export sector. Trawling, used in both industrial and artisanal shrimp fishing, requires high fuel consumption. Fuel accounts for about 20% of costs. (FAO, 2008: 228).

Export support: Shrimp exporters approved for the Industrial Free Zone (ZFI) regime are granted various tax advantages, as long as 95% of their output, in value terms, is exported. According to the WTO, about 202 ZFI companies were active in 2006, employing roughly 116,000 people. ZFI exports accounted for 56% of the 2006 total with textiles and clothing exports accounting for 70%, and shrimps and crustaceans for 15% (WTO, 2008). The fisheries sub-sector enjoys comparatively high tariff protection at 18.8% (WTO, 2008).

International health and hygiene standards

The shrimp industry in Madagascar meets international standards for health and hygiene. The Malagasy government has developed policies to attempt to sustain the wild shrimp resource, reduce environmental risks, and achieve certain quality and standards. For instance, since 1996 the government made considerable investment into the control of quality standards. In 1997, the government initiated Madagascar's National Shrimp Research Programme (PNRC), with a budget of €3.8 mn, which focused on the socio-economic and biological concerns related to shrimp production (FAO, 2008b: 126).

Quality standards in the industrial shrimp fishery are high but the same does not apply to the artisanal and traditional shrimp fishery industries. This partially explains why artisanal and traditional shrimp industries sell their catches onto local and regional markets, while industrial shrimp exports focus on the EU market (World Bank, 2008: 102).

The poverty implications of graduation

Chapter 3 estimates that the average value (2008–10) of Malagasy frozen shrimp exports (CN 03061350) to the EU was €74.3 mn, comprising 5.1% of EU imports of this product, and that the gains from graduation would be €4.0 mn. This estimate would imply a 5.4% increase in EU imports of Malagasy frozen shrimp. Inconsistencies in the data on Madagascar's exports to the world and to the EU are too great to support an attempt to show how this would increase total exports of the item, but as the EU appears to be overwhelmingly the largest market, the proportional rise in total exports of this item are likely to be similar.¹²⁷ Assuming

¹²⁷ As explained in footnote 94, the figures for exports to the world and to the EU are not directly comparable. In most cases they offer a broad comparison, but in this case the figure for imports of this single CN 8-digit item into the EU is larger than the figure for global exports of the broader HS6 sub-head!

that the potential increase in export space to the EU is not filled by trade diversion, a €4.0 mn gain would constitute a considerable increase.

Madagascar does face infrastructure challenges which may constrain increased shrimp exports (e.g. inadequate electricity, poor roads). Rising fuel prices may also limit the benefit that producers and exporters derive from increased exports. But the Government of Madagascar has in place a policy framework that should support shrimp exporters to capture gains from the graduation of competing countries. For example, the sector enjoys relatively high levels of tariff protection and support through Madagascar's Industrial Free Zone. Health and hygiene standards in shrimp production are high and facilitate access to EU markets; this is an area where Madagascar has an advantage over its competitors.

Given this, how might potential gains from the graduation of competitors be transmitted through to households?

Prices: In terms of prices for producers, it is difficult to estimate how this increased export space may affect price. Indeed, Chapter 3 highlighted that Madagascar's market share of EU shrimp imports has declined, with Vietnam, Argentina and Bangladesh increasing their shares. The graduation process is likely to help Madagascar resist price pressure from Argentina and Vietnam (both of which, with China, are likely to graduate) but not against Bangladesh, where competition is likely to be based on quality. This suggests that graduation may slow down the decline in Malagasy exports but this is unlikely to be turned into an increase unless Madagascar can begin to compete on price and this would pose challenges, particularly with increasing and volatile fuel prices.

In terms of prices for domestic consumers, given the segmented nature of the market – with catches from industrial and artisanal shrimp fishing sub-sectors mostly exported, and the catches from the traditional shrimp fishing sub-sector consumed locally – it is unlikely that prices for domestic consumers will be affected.

Employment: Employment generation (or more likely retention) will be a key transmission channel from potential increased exports of frozen shrimp to the EU. Shrimp exported to the EU from Madagascar is generated through industrial shrimping. Therefore, employment creation resulting from potential increases in exports to the EU will be channelled through the medium and large size firms that dominate industrial shrimp fisheries.

Taxes and transfers: Licence fees for fishing constitute an important component of government revenue in Madagascar. These fees are closely related to the earnings from the export. In addition, the shrimp industry provides substantial tax revenue for the government (AFD, 2008). A possible increase (or slowdown of decline) in shrimp exports to the EU following the graduation of Argentina, Vietnam and China may increase revenue for the Madagascar government (compared to the counterfactual) through licence fees and taxes, which may be transmitted through to households in the form of public investment.

Authority: As noted above, the government has tended to resolve conflicts between the different sub-sectors of the shrimp industry in favour of traditional shrimp farmers. There does not seem any strong reason why graduation will alter this stance.

Assets: If graduation maintains exports at higher levels than would otherwise occur, the incomes of those associated with industrial shrimp fisheries may increase. Asset holdings of these households may in turn increase.

Poverty and well-being effects: This gain may lead to income increases (or maintenance instead of decline) for those currently employed by or through industrial shrimp fishing and frozen shrimp exports. But the need for Madagascar to compete on a price basis may reduce potential gains.

Environmental effects: Concerns have been raised about the sustainability of industrial shrimp fishing. Average catch size has decreased over time, leading to concerns over the intensiveness of shrimp fishing in Madagascar. The Government of Madagascar has taken a

number of steps to manage the environmental impact of shrimp trawling (for example, eco-certification introduced by the Marine Stewardship Council (MSC) and 'Zone d'Aménagement Concerté', which focuses on monitoring shrimp fishing zones, and supporting environmental protection measures). A 5.4% increase in shrimp exports may intensify these environmental problems, but only if it is a net increase and not simply a slow down in a declining trend.

Fiscal effects: Given that shrimp is a highly valuable export for Madagascar – second only to apparel – even a small increase in export earnings (or slowdown in decline) should have a positive effect. Shrimp exports are an important source of revenue for the government – through licence fees and taxes – and an increase in exports should result in increased government revenue for infrastructure and social investments.

5.7 Processed unshelled beans in China

Key findings on the costs for China of graduation are given in Box 19.

Box 19: Key points on the costs of graduation for China

- **Losses** to China's unshelled beans exports have been estimated to be **very small – just €0.2 mn.**
- **Unshelled beans are not an important export item for China to the EU.** Therefore, any loss will be **marginal**, particularly given China's significant vegetable trade with other countries such as the US and Japan.
- **There** is a considerable amount of domestic consumption of green beans in China, and therefore the graduation of China in this product could **benefit domestic consumers.**
- **Green bean farmers may be affected by losses in the short run, but we can assume that in the medium term they will diversify, planting other vegetable crops to compensate.**
- **Larger processing plants**, which typically have a diversified export bundle, **should be able to offset their losses** by increasing the processing of other export agricultural products.
- Labour turnover in horticulture is quite high, so we can anticipate that **workers (both farm labourers and processing plant workers) will cope with any employment losses by moving into the production and processing of other agricultural products.**
- We **anticipate** that any **changes resulting from China's graduation in this product will be marginal** and absorbed by migration to other areas, and other rural industries.

Overview: economy, society and poverty

GDP and export growth has been strong in China in recent years.¹²⁸ The agricultural sector accounted for approximately 10% of GDP, the industrial sector 46%, and the service sector 43% (EIU, 2011: 18). The fastest growth segment of the labour force has been unregistered workers – unreported workers in registered enterprises, workers in unregistered enterprises, and undocumented rural migrant workers in urban areas. This development implies that informal urban employment has increased substantially in recent years (World Bank, 2009).

China was re-classified in mid-2011 for the first time by the World Bank as a UMIC. The poverty headcount ratio at US\$1.25/day was 15.92% in 2005.¹²⁹ The World Bank estimates that the poverty headcount ratio at the national poverty line (% of population) was 2.8 % in 2004.¹³⁰ The Gini coefficient for China was 41.5 in 2010, 44.7 in 2005, and 40.3 in 2001 (UNDP, 2001, 2005, 2010).

¹²⁸ The GDP growth rate (annual %) in China in 2010 was 10.3%, higher than that in 2009 (9.2%) and 2008 (9.6), but lower than 2007 (14.2%) and 2006 (12.7%).

¹²⁹ <http://hdrstats.undp.org/en/indicators/38906.html>.

¹³⁰ <http://data.worldbank.org/country/china>.

The rural poverty headcount rate was 12.49% in 2001, compared to an urban poverty headcount of 0.5% (Shen and Fou, 2008: 20).¹³¹ While the reduction in poverty in China over the past decades is significant, the challenge to further reducing poverty in the country is that nearly half of the poor are dispersed in regions of the country other than the western provinces (World Bank, 2009).

An overdependence on low-productivity and low-income agriculture is one cause of poverty in China. Nevertheless, migration from rural to urban areas has increased the income of the remaining rural labourers. Insufficient infrastructure (such as transportation and power) and poor access to services (such as health and educational services) contribute to rural poverty (Wang, 2009), but since the 1990s, urban poverty has been rising as a result of decreased public employment, and the erosion of welfare systems previously provided by state-owned enterprises (Shen and Fou, 2008: 18). Other causes of urban poverty are underemployment, poor education and health conditions, and limited social security and public services (Wang, 2009).

Contextualising unshelled beans in the Chinese economy

China has the highest production of green beans – which are part of the ‘unshelled beans’ product category – in the world, at 14.5 million tons in 2008.¹³² Yet China is not among the top exporters of green beans.¹³³ This may be partly related to strong domestic demand, in turn due to increasing incomes and a rapidly growing urban population (Diop and Jaffee, 2005: 238; Yuman et al., 2004). None the less, in 2008 China was one of the main developing countries exporting canned vegetables and fruits to the EU. Key export products were canned mushrooms, canned tomatoes, and canned asparagus (Centre for the Promotion of Imports from Developing Countries, 2009: 11). Neither unshelled beans nor canned beans are on this list.

Production and employment

In China, there are approximately 200 million farming households with average land holdings of 1–2 acres per farm. There are at least 400 000 food processing enterprises, most with ten or less employees (Gale and Buzby, 2009:3). Small-size farms are dominant in China (Miao et. al., 2011: 1252). Farmers decide what and how much to plant, and move in and out of different agricultural crops frequently (Gale and Buzby, 2009: 3; Miao et. al., 2011: 1252). Products such as green beans are often exposed to volatile prices, which in turn leads to serious production losses for farmers.

China has a comparative advantage in the labour-intensive horticultural sector due to the plentiful supply of rural labour (Rae et al., 2006: 3). Yet there is a high labour turnover in the industry (Gale and Buzby, 2009:3). This can partly be explained by migration out of rural areas. For instance, 114 million rural labourers migrated from rural areas to urban cities and coastal areas in 2003 (Ping and Shaohua, 2005: 1).

Processing companies are generally located close to those regions where the vegetables are produced (Yuman et al., 2004: 60). In terms of ownership, foreign proprietors, foreign joint ventures, and corporate processors are large processors, whereas privately owned individual processors are generally small processors (Yuman et al., 2004: 61).

Small processors mainly engage in primary processing (such as washing, grading, and packaging), while the larger processors concentrate on further processed vegetables such as vegetable juice, vegetable mash, dried/dehydrated vegetables, pickled vegetables, and vegetable powders (Yuman et al., 2004: 62). Large processors usually process more than one

¹³¹ Rural poverty in China is mainly concentrated on the northern, northwestern and southwestern provinces of China (Shen and Fou, 2008: 22). Moreover, 85% of the total urban poor lives in the provinces which are located in the northeastern industrial regions and poor central regions such as Gansu, Shaanxi, and Guizhou (Shen and Fou, 2008: 25).

¹³² <http://faostat.fao.org/site/339/default.aspx>.

¹³³ Top exporters were France (54,129 tonnes), United States of America (30,669 tonnes), Netherlands (41,980 tonnes), Spain (28,505 tonnes), Egypt (22,802 tonnes), Kenya (15,371 tonnes), Mexico (23,584 tonnes), Belgium (14,706 tonnes), Germany (7,738 tonnes), and Ethiopia (7,993 tonnes).

vegetable product. For instance, in Anqiu province of China, Anqiu Linfu Food Co. – one of the seven largest processing firms – processes ginger, scallion, taro, garlic and onion (Yuman et al., 2004: 64).

Geographic and environmental impact of production

Green beans are mainly grown in the northeastern provinces and the Inner Mongolia Autonomous Region of China. In 2009, there was a severe drought in the Northeast of China, which drastically decreased the production by 50% (Miao et al., 2011: 1252).

The eastern coast of China is the main region in which vegetables are grown for export. Eight of the ten top vegetable exporting provinces (Shandong, Guangdong, Fujian, Zhejiang, Jiangsu, Liaoning, Guangxi and Tianjin) are located in the eastern part of China (Yuman et al., 2004: 41).

The Chinese Government has established several policies and programs to increase the quality and safety of vegetable production. The government introduced the Vegetable Basket Project (VBP) in 1988. In the first phase of the project (1988–94), the government aimed to increase vegetable production in order to overcome the shortages in the supply of vegetables for domestic consumption. During the second phase of the project (1995–2001), the focus was on diversifying the varieties of vegetables, which was achieved by building the transportation infrastructure between the regions of China and developing greenhouse technology in the northern part of China. The last phase of the project concentrated on increasing the quality and safety of vegetable products, including enactment of the Action Plan for Pollution-free Agricultural Products in order to meet international safety standards demanded by importing countries (Yuman et al., 2004).

Despite such measures there are still concerns regarding safety and quality of Chinese agricultural exports. Firstly, banned agricultural chemicals and veterinary drugs are still used to increase crop yields. Secondly, many of China's farms and processing companies are located close to the heavily industrialised regions plagued contaminated water, air, and soil as a result of industrial effluents and vehicle exhaust. Thirdly, poor storage and transportation equipment leads to the development of bacteria, viruses, parasites, and fungi (Gale and Buzby, 2009:2).

The poverty implications of GSP graduation

Chapter 3 estimates that the average value (2008–10) of Chinese unshelled beans exports (CN 20055900) to the EU was €9.4 mn, comprising 18.7% of EU imports of this product, and losses resulting from GSP graduation of €0.2 mn. Assuming that China could no longer maintain its market share of EU unshelled beans imports, this estimate would imply a 2.1% decrease in EU imports of Chinese unshelled beans. In 2008–10 China's global exports of HS 200559 (the HS sub-head within which this item falls) averaged €10 mn, so a loss of €0.2 mn, equivalent to 2%, is unlikely to have extensive negative impacts.

Price: Domestic consumption of green beans is high. Graduation could benefit domestic consumers if a decline in exports to the EU is not offset by increasing exports to other markets. Although green bean farmers may be affected in the very short run, we can assume that in the medium and long term they will compensate by switching to other vegetable crops. As for the processing industry, the larger processors have a diversified export bundle and should be able to offset their losses by increasing the processing of other export agricultural products. As unshelled beans are not an important export item to the EU, any loss will be marginal particularly given China's significant vegetable trade with other countries such as the US and Japan.

Employment: As labour turnover in horticulture is quite high, we can anticipate that producers and workers will cope with any loss in employment by moving into the production and processing of other agricultural products. Given the unskilled nature of farming and the primary processing industry, we know that unskilled workers will be most adversely affected, if there is any effect at all. In essence, we can anticipate that any change resulting from China's graduation will be marginal and be absorbed by other areas and other rural industries.

Poverty and well-being effects: The loss in EU will be very marginal for China and we therefore anticipate that the impact on households will not be significant. Evidence suggests that farmers adapt their cropping to meet demand and there is a high turnover of rural labour. We anticipate any loss will be able to be absorbed.

Environmental effects: The marginal loss of green bean exports will not have any significant (positive or negative) environmental effect. Environmental problems resulted from green beans production apply across the horticultural industry (they are not specific to green bean production). Given that we anticipate that farmers will compensate for the marginal loss by shifting to another vegetable crop, it is unlikely that the marginal loss will result in less environmental damage.

5.8 Unshelled beans in Kenya

Key findings on the potential gains of Kenya from the graduation of China are given in Box 20.

Box 20: Key points on the potential gains for Kenya

- The **scale of the likely gain by Kenya is small (€0.13 mn)** and would imply a 0.5% increase in EU imports of Kenyan unshelled beans.
- The **price** typically offered by exporters for fresh French beans is above that offered by canneries, suggesting that there might be little incentive to expand production to meet the increased export space. But prices offered by canneries may be above the domestic price for French beans, suggesting that an **expansion in the demand from canneries might benefit farmers**, who would divert second grade beans from the domestic market to the canneries.
- As the production of French beans is highly labour intensive, expansion in the value of unshelled beans exports will **almost certainly translate into job creation**.
- It is **not clear whether more beans will be grown or whether there will simply be a reduction in the fresh French beans available on the domestic market**. If more beans are grown, this might benefit producers (at least some of whom will be smallholder outgrowers). This in turn will generate increased employment for casual agricultural labour. Independent of whether production increases or not, it is **likely that there will be an increase in demand for processing staff**. It is not clear whether up and downstream industries will benefit.

Overview: economy, society and poverty

The Kenyan economy has suffered from several shocks since 2008, including post-election violence, drought, and the global food and financial crises. However, the economy has rebounded. GDP in 2010 was \$31.4 bn and economic performance in the first three quarters of 2010 was better than anticipated, with the average economic growth rate being 5.4%, compared to 2.1% in 2008 and 2.3% in 2009.¹³⁴ In 2010, agriculture grew at a rate of 5%, industry at 7.6%, and services at 4%, which is a more moderate grow rate for the sector that has driven growth over the last decade, largely through growth in the ICT and financial subsectors. While agricultural growth has bounced back, it has yet to reach the levels of 2007, and can be interpreted as representative of recovery from bad weather and the lower demand for horticultural exports seen in 2008 and 2009 (KNBS, 2010; World Bank, 2011c).

Exports of goods and services were 25% of GDP in 2009 (World Bank, 2011c).¹³⁵ Agriculture represents a key sector of the Kenyan economy, contributing roughly 24% of GDP and, both directly and indirectly, 60% of export earnings including agro-based manufacturing, transport, wholesale, and retail trade. The horticulture sub-sector experienced growth in the period between 2002 and 2006. The total value of production increased from Kshs. 32.0 bn to

¹³⁴ GDP growth was 5.9% in 2005, 6.9% in 2006, and 7.2% in 2007.

¹³⁵ Top exports include tea, cut flowers, petroleum oils other than crude, prepared vegetables, and coffee (UNData, 2011).

Kshs. 54.4 bn. Revenues from the export of cut flowers increased from Kshs. 14.8 bn in 2002 to 42.3 bn in 2007, while export revenues for vegetables increased from Kshs. 10.2 bn to Kshs. 20.8 bn between 2002 and 2007. Bean production increased from 481 225 tons to 531 800 tons from 2002 to 2006 (Government of Kenya, 2008). Manufacturing was a major contributor to output and export earnings in 2010 and is a sector that shows great promise for creating employment. A large portion of manufacturing consists of food processing. The 12% growth in the sector during the third quarter of 2010 is in contrast to growth in the sector of 3.6% and 2% in 2008 and 2009 respectively (AEO, 2011).

From 2003–7, wage employment in the formal sector increased from roughly 1.7 million to 1.9 million. The number of paid jobs in the informal sector increased over the same period from around 5.7 million to 7.4 million, the majority of which were in wholesale, retail, restaurant and hotel sectors – an increase from 3.36 million to 4.37 million (Kenya Ministry of Trade, 2009). Agriculture is a large employer of rural people, with estimates indicating that 3.8 million people work on farms and in livestock production and fishing. An additional 4.5 million work in off-farm informal sector activities (Government of Kenya, 2008).

Kenya is a LIC, with gross national income *per capita* of \$783.4 in 2008, (UNData, 2011). The 2005–6 Kenya Integrated Household Budget survey shows a decline in poverty from 52% (1997) to 46% (2005/2006). This fall is comparable to other sub-Saharan countries, but the level of poverty remains higher than that of neighbouring countries (Tanzania, 36%; Uganda, 31%). Poverty incidence varies by region and the 2005/2006 survey reveals that Central province had the lowest rate of poverty (30.3%), compared to Nyanza (47.9%), Rift Valley (49.7%), Eastern (51.1%), Western (53.2%), Coast (69.7%), and North Eastern (74%) (World Bank, n.d.).

While it is on track to meet most of the Millennium Development Goals by 2015, Kenya is a long way from meeting targets for the eradication of extreme poverty. The persistently high rates of poverty are partly attributable to high rates of inflation between 2003 and 2009 that have negatively influenced the purchasing power of the population, with the greatest impact on the poor and vulnerable. Poverty and unemployment, especially among youth, are continuing challenges for Kenya (AEO, 2011).

Inequality in Kenya is high with a Gini coefficient of 47.7 in 2010 (rural, 39%; urban, 49%) (up from 42.5 in 2005) (UNDP, 2005, 2010). Inequality has decreased in rural areas since 1997 but increased in urban areas (World Bank, n.d.).

Kenya's HDI has risen from 0.464 in 2009 to 0.470 in 2010. This compares with 0.389 for Sub-Saharan Africa as a whole, and 0.624 for the world. Kenya ranks 128th out of 169 countries on the HDI scale. Of particular concern to the Kenyan government currently is youth income and skills development (AEO, 2011).

Of its roughly 40 million inhabitants, Kenya has approximately 31 million people living in rural areas (IFAD, n.d.). The poor disproportionately live in areas removed from roads suitable for a motor vehicle and lack access to education. Land quality and availability play an important role in driving chronic poverty. Chronically poor people are more likely to live in low potential agricultural regions, with almost four out of five households found consistently in the bottom wealth tercile living in agricultural zones classified as mid-low to lowest potential. In terms of land constraints, roughly 75% of chronically poor households live in regions where the median farm size is less than two acres, while fewer than 7% live in regions where median farm size is greater than 4 acres (Burke and Jayne, 2010).

Household data collected by the Government of Kenya in 1994 reveals that the agricultural sector contains the highest poverty rates in Kenya. The highest incidences of poverty – approximately 71% – are found among pastoralists, followed by subsistence farmers and then casual workers. Many rural household heads are subsistence farmers (42%), the next most common livelihood is that of unskilled private sector work (11%). Looking nationally, 96% of casual workers live in rural areas and 38% have no education. Rural poverty statistics seem to indicate that while an expansion of the agriculture and the informal sectors does not

necessarily reduce the poverty headcount ratio, it does reduce inequality and poverty severity by narrowing the poverty gap (Oiro et al., 2004).

Contextualising unshelled beans in the Kenyan economy

Kenyan exports are limited mainly to primary commodities. This is partly due to limited capacity for value addition in the manufacturing sector and relatively underdeveloped intermediate industries (Kenya Ministry of Trade, 2010). But, as explained below, it is also partly because fresh agricultural export products achieve higher prices than processed ones.

Horticulture is the fastest growing agricultural subsector and a large foreign exchange earner. French beans represent the second largest category of horticultural exports (following cut flowers) and in 2002, bean processing was the fastest growing subsector behind cut flowers (Kimenyi, 2002). This is supported by Kenya having comparative advantage in the production and preparation of fresh and preserved beans due to ecology and low labour costs. The sector is also well established, as European companies began looking to source canned beans in Kenya in the mid-1970s (Jaffee, 1987).

Because of the price premium, Kenya exports more fresh than canned unshelled beans (11 mn kg fresh, 0.07 mn kg canned beans, 2008) (HCDA Kenya, n.d.). Besides canning French beans, the other two methods of processing in Kenya are freezing and dehydration.

In the Kenya context, exports of the EU trade nomenclature category 20055900 unshelled beans comprise processed French beans. Beans selected for processing are usually either those that have failed to reach export grade as fresh French beans or those that have been produced too far away from the cool chain and processing facilities for fresh export.

Firms processing beans obtain 50–75% of their beans from smallholders (Kimenyi, 2002). Some are sourced from the firms' own farms, others from contract farmers, and a small portion from non-contract farmers (ibid.). The high involvement of smallholder farmers is apparently explained by the high degree of labour intensity in producing French beans (Jaffee, 1987). However, increasingly stringent phytosanitary regulations¹³⁶ and traceability requirements (imposed by European supermarkets) has seen a greater degree of market interlocking and increased consolidation, with a shift to larger farmers who can meet the new requirements and smaller (and poorer) farmers being squeezed out due to difficulty (and costs¹³⁷) associated with guaranteeing food safety without third-party certification and close monitoring. Also smallholders tend to be geographically dispersed, increasing coordination costs (Okello et al. 2007). In addition to exporters' shift in preference towards larger farms, importers also increasingly prefer larger exporters. Thus, in Kenya the trend has been towards the consolidation of exporters and producers. This has also affected other aspects of the supply chain. Brokers and middlemen are disappearing as exporters deal directly with large-scale producers and exporters increasingly hire their own staff to monitor production in the field in order to provide evidence that they are meeting food quality and safety requirements (Okello, et al., 2007).

Despite consolidation in the value chain, some institutional mechanisms have enabled smallholder farmers to continue production: changing target market or product; contracting between exporters and groups of smallholder farmers; forming alliances between NGOs, donors, and the public sector. The first avoids certain safety and quality standards while the others reduce transaction costs by increasing economies of scale or securing the capacities necessary to meet standards. Contract farming is of increasing interest, as it enables smallholder farmers to secure access inputs while providing exporters with assured procurement at the quantity and quality desired.¹³⁸ Several public-private and private-private partnerships have developed to support the horticulture sector in Kenya. Examples include:

¹³⁶ Adherence to international standards requires use of safer but more expensive pesticides, investment in expensive assets such as grading/packaging and cooling facilities, as well as technical records of pesticide use and application.

¹³⁷ The cost of monitoring numerous smallholder farmers is higher and exporters do not want to bear this cost and small-holders are not able to.

¹³⁸ For further information on contract farming in the Kenyan French bean industry, see Strohm and Hoeffler (2006).

creation of the HCDA's Fresh Produce Handling Company by the Government of Kenya and the Japanese International Cooperation Agency; smallholder regulatory and pest control mechanisms implemented by the Government of Kenya, the Kenya Plant Health Inspectorate Service, and USAID; a partnership between DFID and HCDA to train horticulture service providers to serve smallholders; training, auditing, and the provision of financial aid to smallholders seeking EurepGAP certification funded by Care International, Reach the Children, and ICIPE; PrideAfrica's facilitation of linkages between EurepGAP trainers, input sellers, banks, and exporters (Okello et al., 2007).

Bean picking on small farms is generally undertaken by family members, although some local workers may be hired. Large farms almost exclusively employ hired labour. Bean picking and grading employs women almost exclusively. Women may live on-farm or migrate seasonally (Jaffee, 1987). In some parts of the country (Maragwa District), the majority of bean-pickers are young (60% under 35), attracted to the sector by high youth unemployment but in others (Nakuru District) over half of the pickers over 35 (55%) (Kimenye, 2002).

Processing largely employs female casual workers (Nakuru District and Maragwa District: 87% casual workers of which 79% are female) (ibid.).¹³⁹ Female involvement in bean processing may also reflect that when a high value agricultural crop is produced commercially, women commonly lose control of the land allocated to them by their husband for food production. Men tend to control the production of cash crops, signing contracts and making decisions and women are relegated to the role of unpaid labour (World Bank, n.d.). By working in processing they gain a wage, which they have some chance of controlling.

French bean processing also has up and downstream linkages into the wider economy, as it creates employment in the production of glass jars, cans, plastic crates, cardboard cartons, or uniforms for factory workers.

The production and processing of French beans is *geographically concentrated* around Nairobi. For processors, this means that they are close to the major bean producing areas (typically within 2 hours drive of the international airport and in Central Province¹⁴⁰ and Eastern Province¹⁴¹), suppliers of secondary inputs (containers, spare parts), government and the international airport (Kimenye, 2002; Okello et al., 2007).

Potential for exploiting expanded export space

Bean production is highly intensive in terms of labour, fertiliser, and agro-chemicals. Kenya has a comparative advantage in the supply of cheap labour and contract farming, and larger-scale farming has been undertaken to address the challenge of fertiliser costs (Kimenye, 2002). The agricultural sector's performance has declined over the past few years. This has been attributed to a catalogue of failings: increased climatic variability (and inadequate irrigation), poor access to farm credit, the prohibitive costs of farm inputs, inadequate extension services, inappropriate technology and limited application of innovation, poor infrastructure¹⁴² and inadequate policies, and institutional and legal frameworks (Kenya Ministry of Trade, 2009).

Despite this, horticulture remains a success story. Its initial success was enabled by two particular contextual factors:

- effectively exploiting the growth in demand for South Asian vegetables (particularly from the UK); and

¹³⁹ Interviews with factory management revealed that casual work is preferred because the factories do not operate at full capacity throughout the year, and females preferred because the work is delicate, including removing tips of the beans and packaging them (Kimenye, 2002).

¹⁴⁰ Murang'a, Maragwa, Thika, Kiambu, Kirinyaga and Nyeri.

¹⁴¹ Embu, Meru, Machakos and Makueni.

¹⁴² Poor road infrastructure between rural growing areas and processing centres and the deterioration of the highway between Nairobi and the port of Mombasa has constrained bean processing (Kimenye, 2002).

- capitalising on opportunities generated by the tourist industry in Kenya, including cheaper cargo transportation costs, and increased demand for high quality horticulture from local hotels and restaurants (EPZA Kenya, 2005).

A number of other continuing factors have sustained its importance and point to its ability to exploit potential export space in processed unshelled beans. Kenya has a tropical and temperate climate that supports year-round growing and it already reliably and consistently produces a wide array of fruits, vegetables, and flowers. It has a readily available and well-trained labour force at low cost and a number of international and local seed companies are present in Kenya, supplying high quality seeds to farmers.¹⁴³ In addition, a number of large and medium sized companies provide stability and technology to the sector. Further, producers and exporters have developed close links with EU importers over the years and have good working relationships with them.

Other practical issues are important. Nairobi is a regional cargo hub with direct cargo flights to many European cities. This matters particularly for the export of fresh beans and without the fresh beans sub-sector, Kenya would be unlikely to have a significant role in processing and exporting unshelled beans. In addition, the sector has a relatively good enabling environment. The Horticultural Crops Development Authority (HCDA), a state corporation, is mandated to regulate the horticultural industry through licensing and application of rules outlined in the Agricultural Act, Cap 318. It also provides advisory and marketing services to industry stakeholders as well as promotes the development of horticultural crops. A range of organisations collaborate with the HCDA¹⁴⁴ to support the sector (EPZA Kenya, 2005). The GoK has implemented standards in line with importer requirements in packaging, sizes and quality, and health, particularly in recent years (EPZA Kenya, 2005). Although government provides support the sector it does not interfere (*ibid.*) and it provides a stable liberal, macroeconomic policy framework that has favoured foreign investment and international trade (EPZA Kenya, 2005).

This all suggests that Kenya will be in a good position to exploit any space in the export market and may well benefit from trade diversion.

The poverty implications of GSP graduation

Chapter 3 estimates that the average value (2008–10) of Kenyan unshelled beans exports (CN 20055900) to the EU was €26.1 mn, comprising 52.1% of EU imports of this product and that the gains from graduation are €0.13 mn. This estimate would imply a 0.5% increase in EU imports of Kenyan unshelled beans. As with Madagascar's shrimps, the inconsistencies between the sources for EU imports from Kenya (at CN 8-digit level) and Kenya's global exports (at HS 6-digit level) prevent any plausible attempt to show the relative importance of this gain, but is it unlikely that a €0.13 mn gain would have extensive effects.¹⁴⁵

The scale of the likely gain by Kenya is small. It will therefore be unlikely to have a measurable impact on Kenya's GDP or on the number of enterprises in the sector. However, changes of this scale could very easily result in additional contracts for smallholder outgrowers, increased employment for agricultural casual labour and processing staff and thus (probably small impacts) on up and downstream industries.

Prices: Trade diversion of this scale is unlikely to influence price substantially if at all. However, previous negative shocks have highlighted the sensitivity of the horticulture sector. Shifts in international prices and demand have a significant effect on the production of French

¹⁴³ Kenya is a signatory to the UPOV (International Union for the Protection of New Varieties of Plants) convention making it an attractive location for growing new plant varieties.

¹⁴⁴ Fresh Produce Exporters Association of Kenya (FPEAK); Export Promotion Council (EPC); Kenya Bureau of Standards (KBS); Kenya Agricultural Research Institute (KARI); Ministry of Agriculture; Kenya Flower Council (KFC); Kenya Plant Health Inspectorate Service (KEPHIS); Pest Control Products Board (PCPB); Kenya Industrial Research and Development Institute (KIRDI); Kenya Universities and Colleges of Agriculture; National Resources Institute (NRI); Japan External Trade Organisation (JETRO); and Japan International Cooperation Agency (JICA).

¹⁴⁵ ITC Trade Map shows global HS 6-digit exports as lower than the COMEXT figure for EU CN 8-digit imports.

beans in Kenya. Given that much of its bean exports are directed towards Europe, the Kenyan economy is particularly affected by fluctuations in demand in Europe. A precipitous drop in European demand for horticultural products during 2008–9 at the time of the financial crisis translated into a significant drop in the volume and value of Kenyan horticultural exports. The same can be said of the disruption in demand caused by the volcanic ash that shut down air traffic in Europe in 2010. Presumably, these drops had effects on incomes and employment, although statistical data on this does not seem to be available.

Employment: The processed French bean sector is less susceptible to short-term demand fluctuations than the fresh market and impacts on employment tend to be lagged. Increased employment by smallholder farmers, casual labourers on large-scale farms, and casual workers in canneries (and those working for suppliers of goods to canneries) might have implications for poverty reduction.

The extent to which changes in exports of (processed) unshelled beans affect smallholder farmers would depend, in part, on the extent to which they can switch (and/or benefit from switching) between selling their produce to canneries and fresh produce exporters. Farmers under contract would have little opportunity over the short term to switch. If prices for fresh produce are higher than those offered by canneries, moreover, there would be little incentive to grow beans to meet increased export space for processed unshelled beans. There also remains the question of the extent to which smallholder farmers might switch between French beans and other crops (e.g. coffee).

Increased casual labouring opportunities on large-scale farms might be expected to benefit poor households. Workers at canneries might also benefit.

Taxes and transfers: The Kenyan government has placed great emphasis on bolstering its export sector, meaning lowered taxes on exports and on the profits of companies engaged in exporting. It has also established export processing zones with various incentives for exporters. Thus, an increase in trade of processed unshelled beans may not necessarily translate into increased government revenues as taxation rates are already low.

The importance of trade diversion for informal transfers will depend on the degree to which workers in the cultivation and processing of beans are migrants sending remittances or are workers providing other support to their extended family.

Environmental effects: The environmental impacts of bean production include air and water pollution from agrochemicals as well as water depletion due to irrigation. The Kenyan government has created the Water Resource Management Authority to regulate water removal from catchment areas. It is hoped that this will help to conserve water in an era of increased climatic variability and greater demand for irrigation (for horticulture and staple food crops). However, horticulture is 'water-hungry' and four crops of French beans are grown per year in Maragwa under irrigation, compared with only one crop per year being grown in Njoro where production is rain-fed (Kimenye, 2002). This suggests that whilst expansion of horticulture could have implications for Kenya's scarce water resources, it is unlikely that the expansion arising from China's graduation will be of a sufficient scale to result in substantial additional environmental damage.

6 Conclusions

The focus of this report is to establish the likelihood of any negative poverty effects arising from the new GSP graduation formulae proposed by the EC being offset in whole or part by positive effects in countries that are able to capture some of the market held by graduates. It has identified all the goods and suppliers that would be affected solely by the new product and income graduation criteria if they were implemented in 2014, on the assumption that the trade and income pattern is largely unchanged from the situation in May 2011 when the EC's proposal was made available. In many cases the products affected either attract a zero MFN tariff (in which case graduation has no effect) or there are no significant poor-country sources of EU imports. So Chapters 2 and 3 narrow the focus onto a list of products where gains for very poor countries appear to be most plausible. Chapter 5 provides a detailed analysis of eight case studies where offsetting positive and negative poverty effects appear to be most likely.

6.1 The big picture

Changing the graduation formulae in the GSP will not have major aggregate effects. This is only to be expected given that most of the states being graduated without an alternative regime are eligible only for the Standard GSP. Only 4% of EU imports made under the Standard GSP in 2008 comprised goods that attracted a positive MFN tariff (Stevens and Kennan, 2011: Figure 2). If only a very small share of beneficiaries' exports under the Standard GSP obtain a preference, the loss of this cannot have a large aggregate effect.

But this does not rule out the possibility that there could be significant local effects, for particular graduates or products. And if there are significant local effects, this could have an impact on poverty. As shown in Chapter 4, apparently small changes can have longer-term effects on the poverty profile of individuals or groups. So it is important to focus on those cases where the impact (negative or positive) is more likely to be significant. Of the 57 items on the longlist of goods identified in Chapter 2 on which there will be graduation, 46% will experience an increase in tariff of over 5 percentage points.

But it is also important when focusing in this way to remain aware of the big picture. The main conclusions to be drawn from this are as follows.

- 1 The 'headline figure' is that the number of GSP beneficiaries will fall by over half and the value of EU imports that are graduated out of the GSP by product or from UMICs will more than double from €244,831 mn (annual average 2008–10) to €504,349 mn, mostly as a result of the income graduation but with also a 13% net increase in product graduation.
- 2 This headline may be misleading, since many of the goods affected by graduation face zero MFN duties and/or account for only a small share of EU imports from countries graduated solely on the income criterion. For the eight states facing new product graduation, the share of affected imports that are zero-rated under the MFN is (in declining order): Iraq (100%), Nigeria (98%), Ukraine (89%), China (42%), India (56%), Thailand (31%), Indonesia (25%) and Vietnam (20%). It is countries at the end of this list, therefore, that will tend to be affected most (though account must also be taken of the level of the positive MFN tariffs that they face – see Table 2). Among countries graduated solely on income grounds it will be Cuba, Argentina, Costa Rica, Panama, Gabon, Venezuela and Uruguay (plus the micro-state of Palau) that will be most affected, though some of these may have finalised FTAs with the EU by 2014.
- 3 It is far from clear whether, or on which goods, there will be any shift in EU trade patterns as a result of graduation. The EC proposal itself appears to be in two minds, arguing on the one hand that graduates do not need the GSP because they are sufficiently competitive to hold their own without it, and on the other that graduation will relieve 'pressure' on less competitive poor states and that it 'would focus the GSP

preferences on the countries most in need.’ Clearly, if imports from the graduates do not decline compared to the counterfactual of an unchanged *status quo* there can be no relative gains for ‘the countries most in need’. Leaving aside broader questions of the economic welfare implications for the EU of increasing its tariffs, if the level of imports from the graduates is unchanged the effect on poverty reduction in developing countries will be wholly negative; money will be taken out of the supply chain and transferred to EU governments. Similarly, if the net effect is to reduce imports and increase domestic European production, there is no possibility of positive poverty effects offsetting any negative ones

- 4 To the extent that the pattern of imports does change, overwhelmingly it will be HICS, UMICs and LMICs not graduated *on that product* that will gain market share. This is true at every level of analysis.
 - a. The report focuses attention on the goods in which a poor-country gain is most likely, but in the process establishes that ‘the exception proves the rule’. Rich countries account for 40% of EU imports of those goods that are covered by the GSP and face a positive MFN tariff. Only 2% is sourced from LICs – the same share as LDCs, which are not a separate income category but are spread (currently in the EU’s lists) between all four of the income groups.
 - b. Even when focusing only on the suppliers of goods that already have a foothold in the EU market (accounting for 5% or more of imports) the share of LICs is only 3.2% of the total number of product/supplier combinations (as against the almost two-thirds accounted for by HICs and UMICs).
 - c. This pattern even applies to the ten items selected as the ones in which LDC gains are most likely. LDCs would receive only 16% of the total estimated gains, a slightly lower share even than HICs (for a group of products that are typically ‘low income’) and dwarfed by the share of UMICs (39%) and LMICs (29%).
 - d. And in all of the cases studies, selected as extreme examples of poor-country potential, the estimated gains for the poor-country beneficiaries are smaller than the estimated losses for graduates because non-poor suppliers capture some of the vacated market.
- 5 A strong influence on this pattern of gains (apart from the aggregate dominant market share of non-poor states) is to be found in the nature of the goods that will be affected. Of the 102 separate items covered by Table 5, 72% of the ‘key products’ subject to new product graduation are agricultural or fisheries, with organic chemicals accounting for a large part of the remainder. The US and Switzerland will be major beneficiaries of any trade shift in relation to chemicals, whilst for the agriculture and fisheries goods supply capacity will be a major determinant of whether or not a country is able to gain.

6.2 Focusing on the likeliest areas for poor-country gain

If the intention is to focus the gains from the GSP on those countries that need it most, new graduation is not an effective way to achieve it. Too many of the goods on which there will be new graduation are ones that poor, uncompetitive countries cannot supply. Of those that they can supply, the increase in tariff on the graduates may not be large enough to check their pace of growth or, if it is, the gain will more often be captured by non-poor states (including the richest in the world) than by the poorest.

None the less, the big picture may overlook important gains for vulnerable states. Though small relative to the aggregate effects of the change, the gains could be very important for particular poor countries or communities within them. It is for this reason that the primary focus of this report has been to highlight cases where a poor-country gain appears most likely to occur.

There is strong body of evidence that even a transitory shock can result in declines in consumption and well-being that can have substantial and surprisingly long-term impacts. These are transmitted to households through a set of channels around which we have framed our analysis: prices, employment, taxes and transfers, access to goods and services, authority

and assets. By looking at these we have been able to assess potential poverty, environmental and fiscal effects.

Many of the changes in trade are very small, even for the beneficiaries, especially when seen in the context of their exports to the world and not just the EU. But there are some cases in which non-trivial effects can be expected.

Leather

Poverty effects: The estimated losses for India (€0.6 mn) and gains for Bangladesh (€0.3 mn) are very small. Even so, in India this small change could result in job losses, or reductions in employment, and may particularly affect those low-caste workers or women who cannot easily find other sources of employment. In Bangladesh, the small gain is likely to generate additional employment and accompanying increases in household income – though it is likely that the jobs will be of low quality and result the increased use of child labour.

Environmental effects: Treating and correctly disposing of effluent and other wastes associated with leather tanning is costly and has significant environmental consequences. In India, it is less likely that environmental conditions will improve. It is more plausible that some leather tanners and others in the sector will seek to trim costs in the face of a price squeeze following the loss of preferences, and potentially return to illegal dumping of wastes. In Bangladesh, the expansion of leather exports will exacerbate existing environmental problems. We conclude that the net effect of a decline in production in India and an increase in Bangladesh would have negative environmental consequences, as environmental controls are looser in Bangladesh.

Fiscal effects: Given the size of the potential change in exports in India and Bangladesh *vis-à-vis* the size of their economies, fiscal effects and resulting changes in government expenditure are negligible.

Frozen shrimp

Poverty effects: The estimated losses for Vietnam are €24 mn. This is the largest gain or loss in value terms examined in this report, and while this constitutes over a fifth of Vietnam's frozen shrimp exports to the EU, it is a much smaller proportion of total frozen shrimp exports (2.6%). Vietnam's shrimp industry is dominated by small-scale producers, who may feel the income and poverty impact of this export loss. This may push them into poverty, or hamper their opportunities to use shrimping as a source of poverty escape. In addition, certain groups within the shrimp value chain (e.g. labourers and processing plant workers) have been found to be very poor, and may be adversely affected.

The combined gains for India, Bangladesh and Madagascar are €18.8 mn. In all countries, we anticipate that a small number of jobs will be created, and there will be an increase in income for those directly or indirectly engaged in shrimp production and exports. In India at least, where it is also dominated by small-scale producers, shrimp farming has been found to be a better income earner than other forms of agriculture. Even small increases in shrimp exports could therefore support poverty exit. In Madagascar, the picture is different: job creation will be channelled through the medium and large size firms that dominate industrial shrimp fisheries.

The extent to which job creation and increased production opportunities have a poverty impact depends on a number of factors. In India, for example, existing norms and customs may prevent women from benefiting from increased export opportunities. In Bangladesh, labour conditions in shrimp production are poor, and increased exports may expose workers to practices such as unpaid overtime and result in an increase in the number of hours children work in shrimp fishing.

Environmental effects: It is not possible to say whether the net environmental effect of changes in the GSP will be positive or negative as we do not know whether a decline in shrimp exports from Vietnam will reduce environmental damage, and if so by how much and over what time period. Nor do we know how much increased exports from India, Bangladesh and

Madagascar will exacerbate existing environmental problems, such as loss of mangroves, water pollution and the salinisation of drinking water wells and paddy fields. Governments in two beneficiaries have taken steps to manage the environmental impact of shrimp production through legislation and regulatory measures (India and Madagascar) and eco-certification (Madagascar).

Fiscal effects: The estimated increase in shrimp exports to the EU from India and Bangladesh may have small positive fiscal effects. The scope and nature of these effects are difficult to determine, however. In Madagascar, we anticipate the effects will be more prominent. Shrimp is a highly valuable export sector for Madagascar, second only to apparel exports. A 5.4% increase in exports to the EU should have a positive effect on government revenue, which may be transmitted through to households through economic and social investments and/or transfers.

Unshelled beans

Poverty effects: We expect that the small (€0.2 mn) loss in exports of unshelled beans from China to the EU will not have a poverty-inducing effect. The evidence suggests that both farmers and processing plants will be able to compensate through diversification (i.e. planting or processing another vegetable crop). In Kenya, the small (€0.13 mn) gain may benefit vegetable farmers and translate into job creation, albeit on a small scale.

Environmental effects: We do not anticipate that changing the graduation threshold of the EU's GSP trade scheme will have significant environmental effects in China or Kenya.

6.3 Overall conclusions

The Commission proposals now being discussed have some good features: they give the GSP more permanence and the tidying-up removes a source of confusion. But, as shown at both an aggregate and a very detailed level, they are a poor way of helping fledgling industries in very poor, less competitive states.

No clear pattern emerges from the case studies (selected through a process of focusing attention on instances where a poor-country gain is most likely) of less-poor producers in buoyant industries being graduated in favour of poorer producers in fledgling or struggling industries. In the case of shrimp, India, which is a potential beneficiary, is the world's second-largest shrimp exporter; in Bangladesh shrimp plays a central role in the fisheries sector, which is one of the country's highest earning and fastest growing exports. In the particular leather item considered, India (the graduate) actually has lower average exports to the EU than does Bangladesh (the beneficiary).¹⁴⁶ The broader picture is that India is, indeed, one of the three largest world producers but Bangladesh is not a new entrant. After two decades of double-digit growth its exports are already substantial, a handful of large enterprises dominate its exports and tannery working conditions are some of the worst in the world. In India any effect of graduation might be felt by the low-caste and women workers found in high concentrations in the leather sector who may not have the job mobility enjoyed by others, leaving them more vulnerable to the consequences of job losses.

This report does not investigate the relative merits of alternative methods of concentrating gains on the poorest, but there exist at least three options. Although not the focus of this report, it is worth mentioning these options for two reasons. The first is to demonstrate that they do exist: graduation of some states is not the only (nor the most obvious) way to help other states. The second is that this report establishes the bar against which to measure the relative attractions of these alternatives – and shows it to be low. It suggests that the task of demonstrating that the alternatives would be more effective ways of focusing the benefits of the GSP on those that need it most should not be too difficult.

¹⁴⁶ This is possible because graduation is determined by a country's share of EU imports for a whole product group.

The first option is further relaxation of the rules of origin. This is ruled out by the EC on the grounds that the origin rules have already been dealt with, but this is an argument about convenience and priorities not about any absolute barrier to new proposals. The option is an important one as it is the only change given the principle structural features of the GSP (which limits its preferences to tariffs on goods imports) that could benefit LDCs given that they already obtain under EBA the removal of all the access barriers that are covered by the GSP. Other reforms that could help them would require more radical redrafting of the GSP's boundaries (e.g. to extend preferences to some services imports).

The other two options could benefit non-LDC LICs which may also be in great need of support, especially for exports into which they have tentatively begun to diversify (or are on the brink of doing so). One is to extend and deepen the GSP+. The proposed changes to the eligibility criteria may result by itself in more states obtaining GSP+ preferences, though it is hard to predict the extent of this in a non-speculative way given the social, political and environmental conditions that must also be fulfilled. But, almost by definition, the proposed change will not affect many small, poor states since it is aimed at states that do not currently meet the vulnerability criteria. For those vulnerable states that already meet the other conditions, the only way to improve GSP+ (and to offset any erosion from the entry of states that do not currently meet the vulnerability criteria) is to extend it to goods that are currently excluded and/or to remove or reduce residual tariffs. Since non-vulnerable states are automatically excluded, this could be done across the board subject only to EU sensitivities. It is a simple matter to identify the goods that are important to current beneficiaries which do not receive duty-free access (and those that would make the scheme more valuable to non-beneficiaries and, hence, possibly increase the incentive for them to meet the social, political and environmental conditions).

The third option would need more careful tailoring. It is to extend or deepen the Standard GSP on items that are of interest primarily to LICs and in which any particularly competitive beneficiary already breaches the product graduation threshold. Again, it is not a difficult task to identify the goods that are important exports from LICs that do not obtain duty-free access under the Standard GSP. Having established this longlist, the next step would be to assess item by item the feasibility of improving the Standard GSP in ways that would not be captured by highly competitive states. One way would be to establish WTO acceptable criteria that would exclude the most competitive states from the preference. There may be scope, for example, to extend the current differences in the threshold for product graduation. The current regime already applies a different threshold for textiles and clothing than for other goods, and a similar differentiation might be applied to other sensitive goods where a small number of more competitive GSP beneficiaries have significant market shares.

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Appendix

Appendix Box 1: Methodology for the estimation of elasticities

Estimation of own price elasticities of demand provide useful information on the likely shape of the demand curve faced by producers. An ideal demand system (AIDS) model is often deployed within the literature in order to estimate actual own price and cross price elasticities. The PCAIDS model uses the same logic but is based on market shares and is therefore proportionately calibrated. That is, market shares can be used in PCAIDS models in place of the weights typically included in AIDS model, on the assumption that time-series to calculate weights are not available. We first calculate industry demand proxied by a pooled sample consisting of the major suppliers to the specified product market as follows:

$$\ln(Q) = \beta_1 + \beta_2 \ln(P_a)$$

This is where Q is the aggregate product quantity and P_a is an average price of all of the prices of good n . Cross price elasticities of demand can also be informative through providing an indication of possible switches within a given market in response to a hypothetical price increase. We use the PCAIDS model to estimate own and cross price elasticities of demand. The underlying demand structure can be expressed as follows:

$$S_1 = a_1 + b_1 \ln(p_1) + b_{12} \ln p_2 + b_{1,n-1} \ln p_{n-1}$$

$$S_{n-1} = a_{n-1} + b_{n-1} \ln(p_1) + b_{n-1,2} \ln p_2 + b_{n-1,n-1} \ln(p_{n-1})$$

The shares can be used in place of the weights typically included in AIDS model, on the assumption that time-series to calculate weights are not available. Market shares are calculated as an average across a sample period. We used the following formula:

$$S_{it} = \alpha_i + \sum_j \gamma_{ij} \ln p_{jt} + \beta (X_t - \ln P_t)$$

This is where S_{it} represents the share of country i 's export of good x in time period t , p_{jt} represents the average price of all goods in time t ; X_t represents the total expenditure on good x at time t , $\ln P_t$ is a price index. Once β has been estimated econometrically, the PCAIDS own price elasticities can be expressed as follows:

$$\varepsilon_j = \frac{b_{jj}}{s_j} - 1 + s_j (1 + \varepsilon)$$

And cross price elasticities, calculated as follows, where ε is equal to the price elasticity of aggregate demand for the product of consideration.

$$\varepsilon_{ji} = \frac{b_{ij}}{s_i} - 1 + s_i (1 + \varepsilon)$$

Formally, the diversion ratio between A and B is defined as the ratio of the cross-elasticity of B's demand to A's price elasticity of demand. An estimate of the diversion ratio implies an estimate of the cross price elasticity, which is the fundamental economic measure of competition between two products. We calculate diversion ratios as follows:

$$D_{ji} = S_j / (1 - S_i)$$

This is where the diversion ratio is proportional to firm j 's share in a given market.

Source: Adapted from Deaton and Muellbauer (1980), Epstein and Rubinfeld (2001).

Note: 1. Calculated so as to avoid non-linearity and approximated by a Stone price index given by $P_t = \sum_i S_{it} \ln p_{it}$

Appendix Table 1. Own price elasticities of demand for fish products

Product	Based on data from which countries (and period)	Short-term price elasticity	Long-term price elasticity
Fresh salmon	France 1992	-1.06	-1.30
Salmon	EU 1999	n.a	-1.89
Salmon	EU 1984 to 1992 annual	n.a	from -1.586 to -0.514
Tuna	France 2000	-0.395	-2.63
Tuna	Spain 2000	-1.47	-5.56
Tuna	World 1984–2000	n.a.	-1.92
Shrimp imported from Asia	EU 1990 to 2004 quarterly	n.a	-0.52
Shrimp imported from South America	EU 1990 to 2004 quarterly	n.a	-0.69
Shrimp imported from rest of the world	EU 1990 to 2004 quarterly	n.a	-0.15

Source: Campbell et al. (2003); Jensen et al. (2003); Poudel and Keithly (2008).

Appendix Table 2. Own price elasticities of demand for horticultural goods

Commodity	Own-price elasticity
Asparagus	-1.69
Avocados	-2.67
Cabbages	-1.11
Green Peas	-1.14
Green Beans	-0.7
Green Corn	-0.9
Pineapples	-1.35
Mangoes	-0.84

Note:

Calculated with respect to the world market, using FAO data over the period 1970–2000. Due to the lack of data on prices, the export unit value at the world level was used as a proxy.

Source: FAO (2004) reported in Henson (2008)

Appendix Table 3. Own price elasticities of demand for octopus products

Estimate	Approach to analysis	Source
0.20 (luxury good)	PCAIDS model for cephalopod group (squid, cuttlefish and octopus)	Jafrey et al. (1998)
-0.80–0.27	All fish into the UK market	Lechene (2000)
-0.16–0.66	Frozen fish into the UK market	Revell and Fousekis (2002)

Source: Rodger et al. (2008)

Appendix Figure 1. The shrimp value chain in Bangladesh

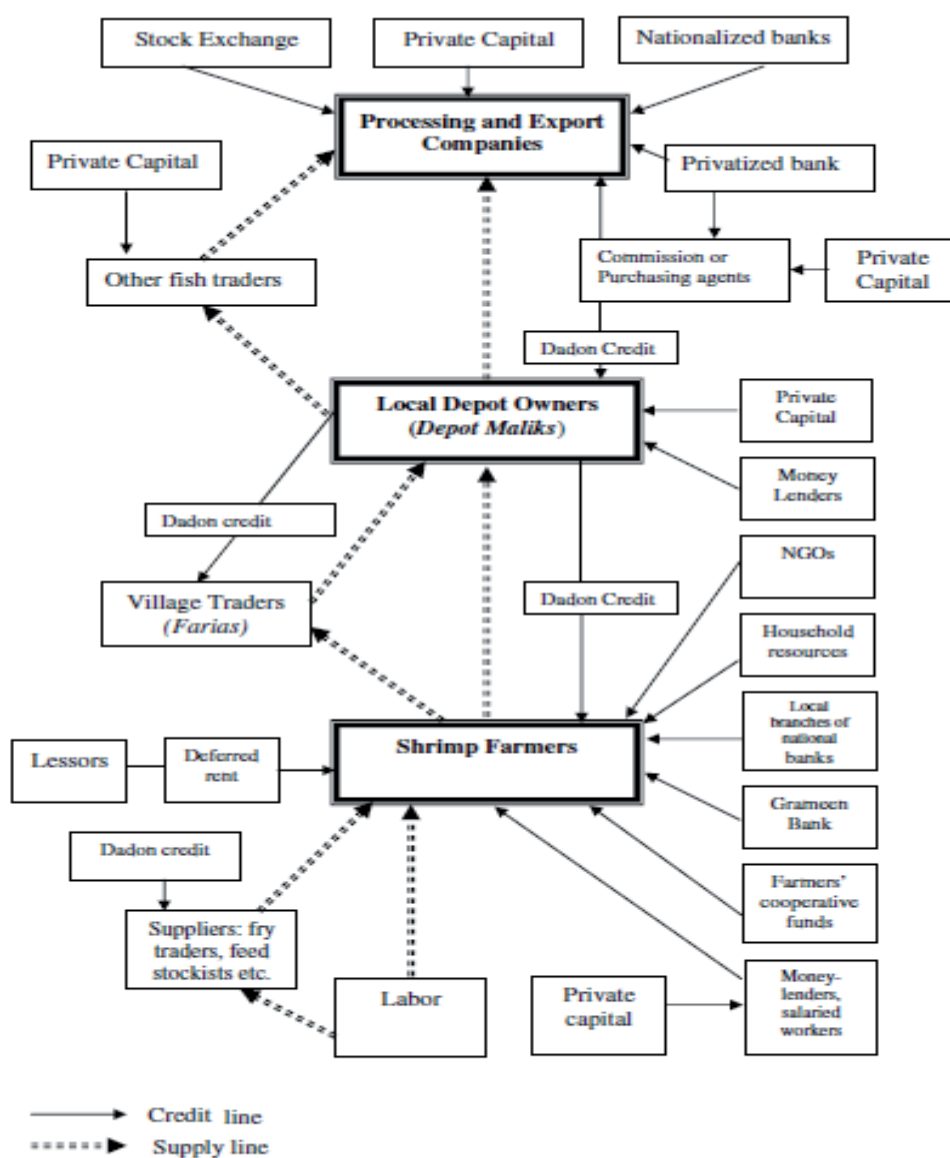
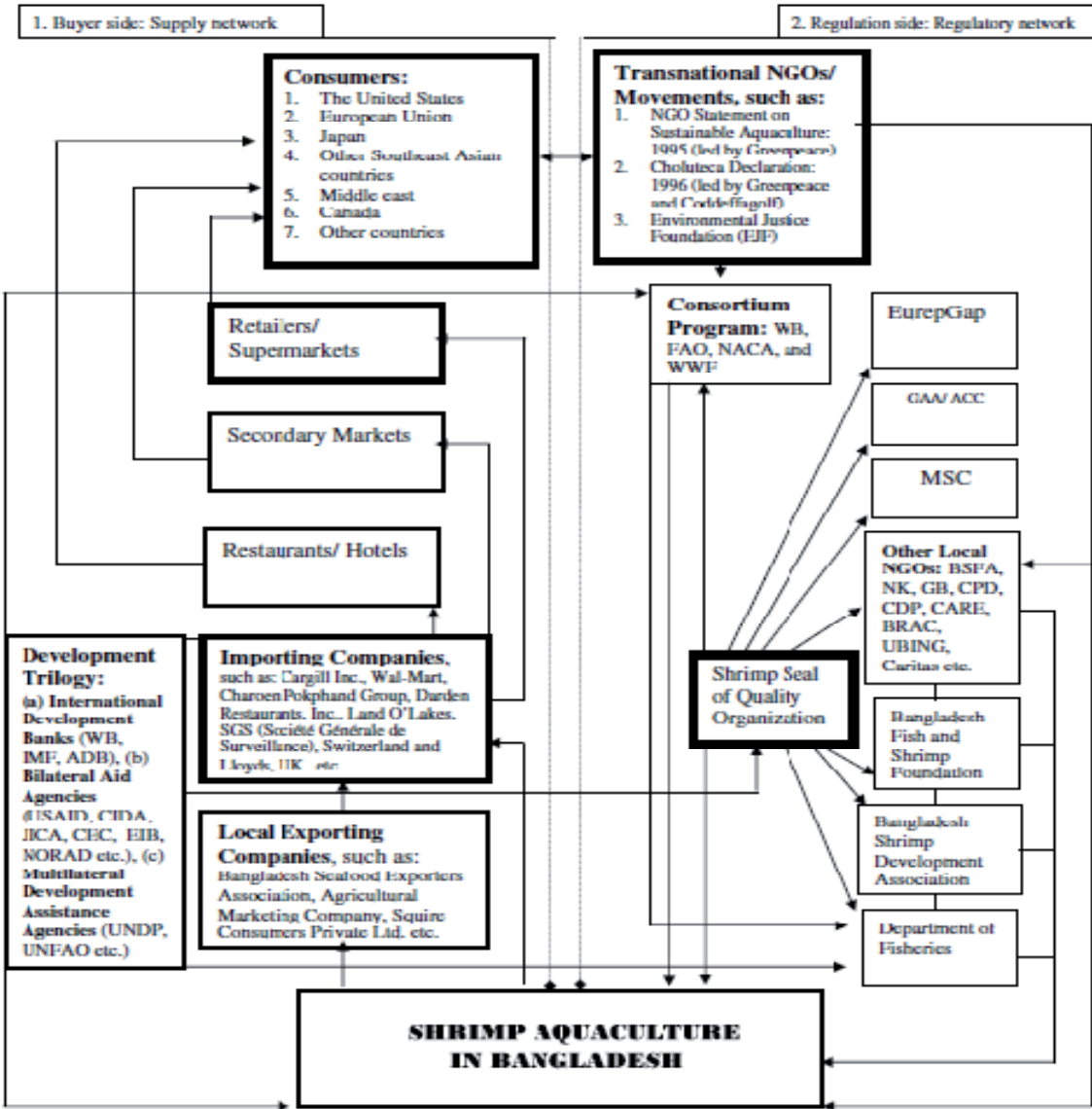


Fig. 2. Local supply chain.

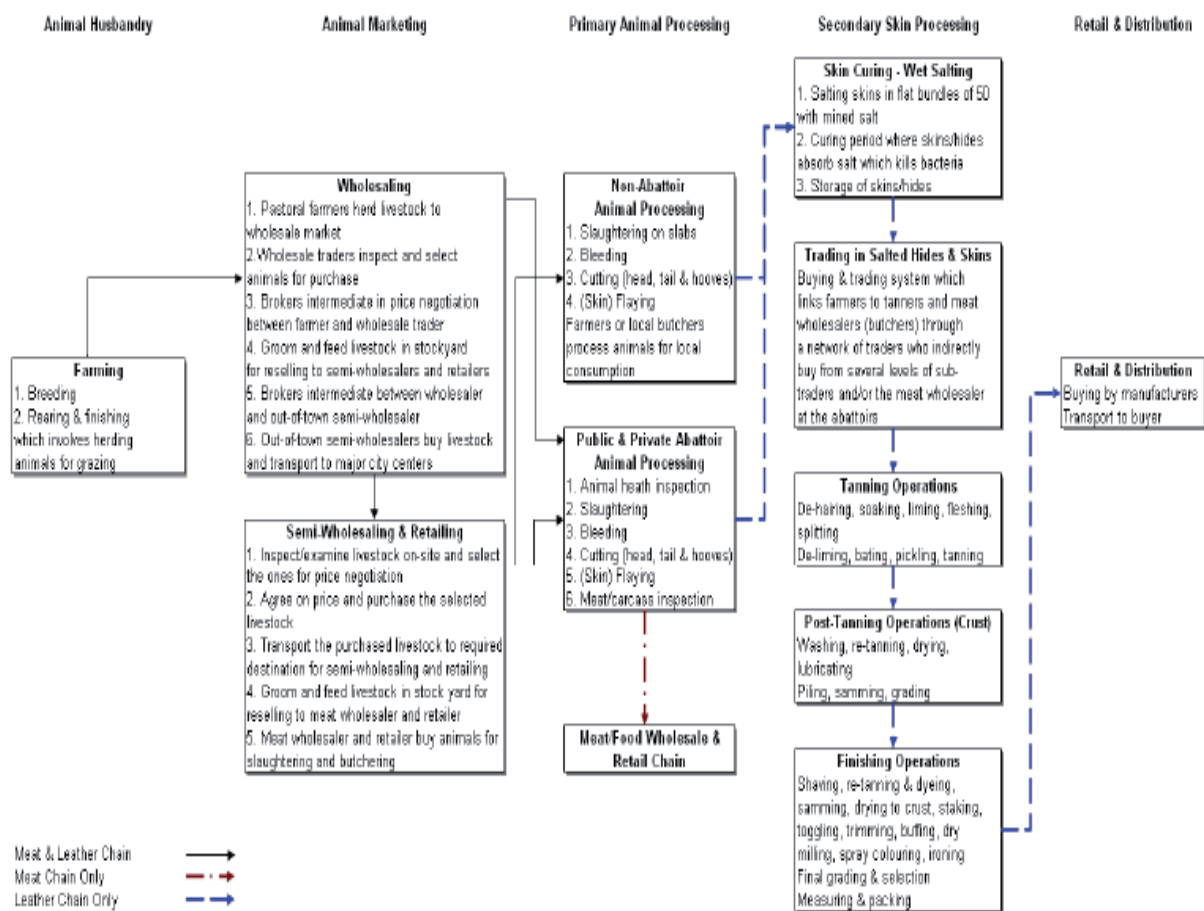
Source: Islam (2008).

Appendix Figure 2. The twin driven shrimp commodity chain in Bangladesh



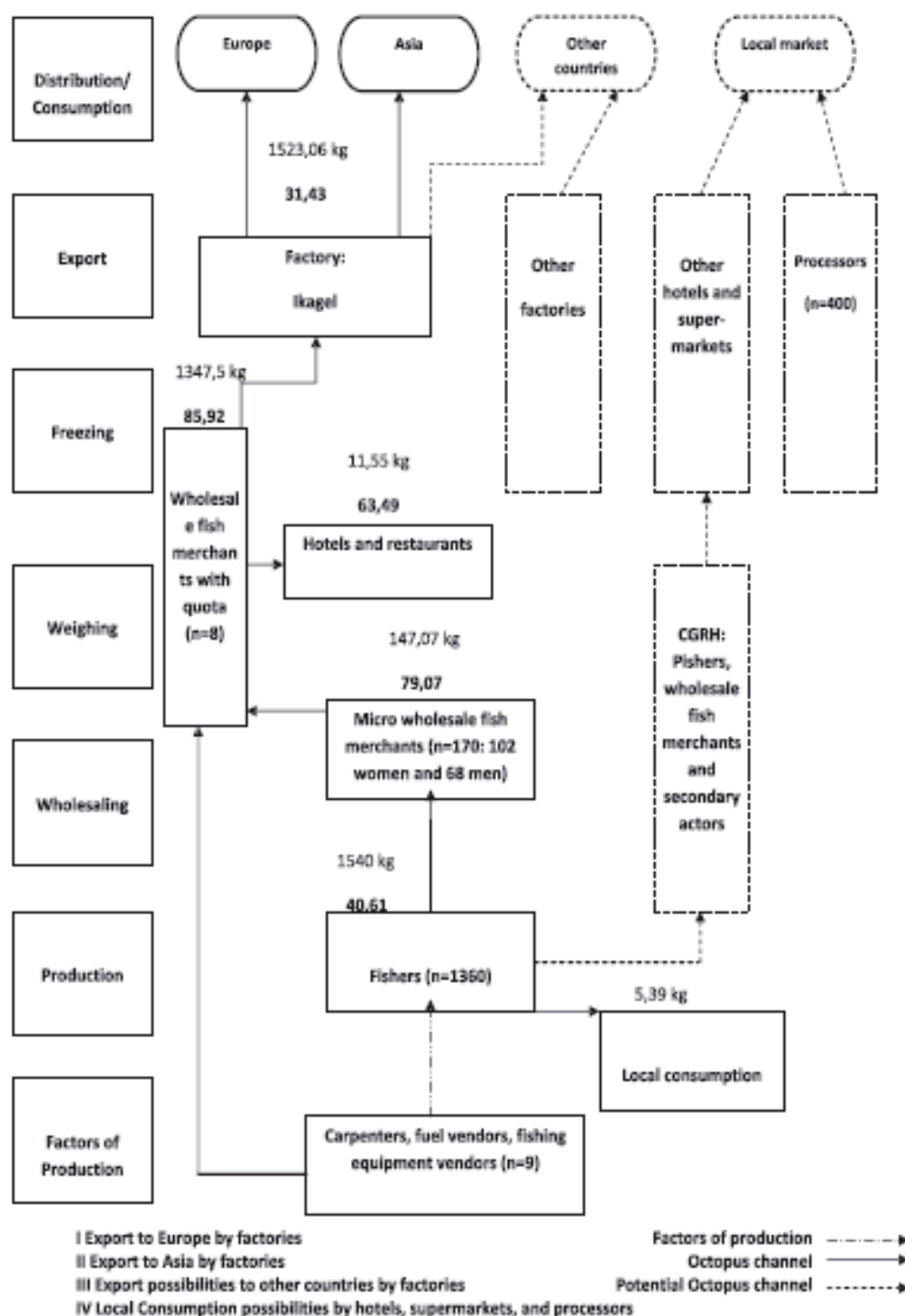
Source: Islam (2008).

Appendix Figure 3. The leather GVC



Source: Radwan (2007).

Appendix Figure 4. Octopus value chain



Source: Mitchell and Coles (2011).