The role of textile and clothing industries in growth and development strategies

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Jodie Keane and Dirk Willem te Velde

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Executive Summary

This paper examines the role of textile and clothing (T&C) industries in growth and development strategies in developing countries. It suggests that textiles and clothing industries are important in economic and social terms, in the short-run by providing incomes, jobs, especially for women, and foreign currency receipts and in the long-run by providing countries the opportunity for sustained economic development in those countries with appropriate policies and institutions to enhance the dynamic effects of textiles and clothing. The potential of the textile and clothing industries to contribute to long-run growth and development will depend not only on the attributes (desirable or otherwise) of the investors, but also on the quality and effectiveness of government policies and institutions in developing countries to build on this investment.

Economic aspects

The T&C industries are very important for a handful of countries, in terms of trade, GDP and employment and have contributed significantly in several other countries. The T&C industries provide opportunities for export diversification and expansion of manufactured exports for low-income countries that can exploit their labour cost advantages and fill emerging niches and meet buyer demands. There are also dynamic effects of T&C industries and these dynamic effects are greater, the more linkages have been built up between the garment industry and local textile suppliers.

At the macro level there are a number of ways in which the T&C industries affect economic development.

- T&C industries are a major contributor to incomes for selected countries. The contribution of T&C production to GDP differs by country but is up to 5% in Sri Lanka, 12% in Cambodia and 15% in Pakistan;

- T&C are the dominant source of exports and foreign exchange in several countries. Low income and developing countries such as Cambodia, Bangladesh, Pakistan and Sri Lanka depend on T&C exports for more than 50% of total manufacturing exports (e.g. 80% in Cambodia, 83.5% in Bangladesh);

- The employment effects are also significant. Employment in T&C production for least developed and low income countries as a share of total employment in manufacturing ranges from 35% in selected low income countries, 75% in Bangladesh and 90% in other selected LDCs (e.g. Lesotho, Cambodia).

Social aspects

There are also important social aspects of the T&C industry (apart from the jobs provided). While wages in developing countries in some assembly activities will be lower than wages in developed countries in downstream activities in the same clothing value chain, this misses the point for two reasons. Firstly, without appropriate policies and institutions, developing counties often do not have the skills to enter into higher value added activities such as design and marketing and hence

will not be able to command a similar wage as in headquarter firms in developed countries. We find that textile wages are higher than garment assembly wages, and the latter activities are more prevalent in poorer developing countries.

Secondly, a better comparator is what workers would otherwise have earned had there been no textile and clothing industries, e.g. in other domestic industries (e.g. T&C activities offer women better employment opportunities than they would have had in the rural area, and pay twice the rate of domestic servants in Bangladesh.). Comparing on wages, while T&C activities are not amongst the best paid jobs, they are certainly not the worst even amongst manufacturing activities, let alone agriculture activities. But it would be better to compare on access to employment, as the alternative for women in (urban) garment assembly firms in Bangladesh and Cambodia is seeking employment in rural areas which is dominated by men and where gender inequalities are higher.

Wages paid to manufacturing workers are on average more than double those paid to agricultural labourers (with the exception of Mauritius) and this covers only the formal sector. T&C wages are higher than in several other manufacturing industries (dairy, wood processing, leather etc) but are half the average manufacturing wage, suggesting that textiles and clothing is a first step up the value-added industrialisation ladder beyond agriculture but before many other manufacturing and services activities. T&C wages are higher than those paid to agricultural workers. Foreign firms and exporting firms tend to pay higher wages than local firms, and we provide evidence for this for six countries (Pakistan, Bangladesh, Sri Lanka, Philippines, Thailand and Zambia) and two industries (garments and textiles).

Although most studies on gender and equity in T&C production find a gender bias against women in both working conditions and financial remuneration, employment levels are often in favour of women, e.g. 90% of garment workers in Bangladesh (nearly 1.5 mn female workers) and Cambodia (around 250,000) are young female. T&C employment is usually better (in terms of wages) than the alternatives for using similar skills such as agriculture or domestic services (see above).

A quick review of donor supported PRSPs suggests that poverty strategies appreciate the importance of textiles and clothing in achieving development goals. But there are different views in different countries – in some countries improving T&C employment lies at the core of a development strategy for that country, while in other countries (that have already had T&C production which may now be under threat) more emphasis is on export diversification.

Trade and other policies

The pattern and effects of textiles and clothing industries in developing countries has been affected by trade and other economic policies. Countries with adequate public policies and private sectors have used the opportunities provided by temporary trade preferences for the T&C to move up the value added chain (e.g. Asian Tigers, Mauritius, Costa Rica); other countries have used the trade preferences to attract a very important part of their manufacturing base (e.g. Lesotho, Bangladesh, Malawi) but may still have to make full use of the opportunities offered to develop dynamically and diversify into other activities at a time they are faced with

competition from other countries, e.g. China which affects T&C based strategies (though wages in southern China are already rising).

Case studies

The importance of T&C production for growth and development and the role of policies were evident in a number of brief country case studies:

- Growing from a virtually non-existent base in the 1990s, Cambodia's garment industry has become a key source of manufacturing exports (80%) and formal employment (65%), and contributes 10-12% to the country's GDP;

- The garment industry is the largest employer in Bangladesh after agriculture. It is the main source of manufacturing employment and exports;

- Mauritius diversified from sugar into textile and clothing in the 1980s and subsequently into tourism and other services. The T&C industry still generated around 19% of manufacturing value added, indirect employment for 250,000 people, and direct employment for around 78,000 people, 70% of total manufacturing employment, although this is now declining due to competition of China in a world less constrained by quotas;

- Madagascar has benefited in important ways from the textiles and clothing industry. It benefited in particular from trade preferences and low labour costs, especially after job relocation away from higher costs in Mauritius, though there are questions about sustainability in a post-MFA quota world also competing with China.

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Jodie Keane is a Research Officer at the Overseas Development Institute, specialising in value chains and trade; in particular new trade and new growth aspects. Her most recent work completed includes for UNIDO ‘Updating Trade and Industrial Competitiveness Indicators’, and DfID ‘Good for Development’ critical review of private, voluntary and mandatory standards as applied to developing country traded goods. She holds an Msc. in the Political Economy of Development, School of African and Oriental and African Studies (SOAS), University of London. Prior to joining ODI she worked as a development economist and consultant in South East Asia (Vietnam and Cambodia). Related research includes the ‘Non-Market Economy Issue: A handbook for developing countries’ for World Bank, evaluation of US and EU anti-dumping policy and procedures using China and Vietnam as case-studies.

Dr Dirk Willem te Velde is a Research Fellow at the Overseas Development Institute and leads the Investment and Growth Programme. He has edited and authored several books, book chapters and journal articles on trade, investment and economic growth issues, including *The Economics and Politics of State-Business Relations*, published by IPPG, 2008; *Regional Integration and Poverty*, published by Ashgate in 2006, and *Foreign Direct Investment, Inequality and Poverty: experiences and policy implications*, published by ODI in 2004. His work on trade and investment has included research and advisory work for UNCTAD, UNIDO, DFID, Commission for Africa, Dutch Ministry of Foreign Affairs COMESA, the Commonwealth Secretariat in a number of developing countries. He holds a PhD in economics from Birkbeck College, the University of London. Previously he was a Research Officer at the National Institute of Economic and Social Research.

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Abbreviations

AGOA	African Growth and Opportunity Act
ASEAN	Association of South East Asian Nations
CRPM	Centre for Research and Policy Making
CSR	Corporate Social Responsibility
EBA	Everything But Arms
EPZ's	Export Processing Zones
EMAS	Environmental Management Audit System
ETI	Ethical Trade Initiative
EU	European Union
FDI	Foreign Direct Investment
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GVC	Global Value Chain
ILO	International Labour Organisation
IMF	International Monetary Fund
ISO	International Standards Organisation
LDCs	Least Developed Countries
MFA	Multifibre Agreement
MVA	Manufacturing Value Added
NIC's	Newly Industrialised Countries
OBM	Own Brand Manufacture
ODI	Overseas Development Institute
ODM	Own Design Manufacture
OEM	Original Equipment Manufacture
PRSP	Poverty Reduction Strategy Paper
T&C	Textile and Clothing
UNCTAD	United Nations Conference on Trade and Development
UNESCO	United Nations Educational Scientific and Cultural Organisation
UNIDO	United Nations Industrial Development Organisation
US	United States
WTO	World Trade Organisation

1 Introduction

The textile and clothing (T&C) industries form a major part of manufacturing production, employment and trade in many developing countries. This paper will examine the importance of the T&C industry in growth and development strategies in developing countries. We will review economic and social aspects and describe the importance of textiles and clothing in incomes, employment and growth and development strategies of developing countries.

The T&C industry is one of the oldest, largest and most global industries in the world. It is the typical 'starter' industry for countries engaged in export-orientated industrialisation (Gereffi 2002) and is labour-intensive. T&C offers a range of opportunities including entry-level jobs for unskilled labour in developing countries. The technological features of the T&C industry have made it suitable as the first step on the 'industrialisation ladder' in poor countries some of which have experienced a very high output growth rate in the sector, such as Bangladesh, Sri Lanka, Vietnam and Mauritius, and have since become middle income countries (Vietnam, Mauritius).

Brenton *et al*. (2007) suggest a number of reasons why the clothing sector has played such an important role in economic development. The sector absorbs large numbers of unskilled labour, typically drawing them from rural agricultural households to rural locations. Despite relatively low start-up investment costs, expansion of the sector provides a base upon which to build capital for more technologically demanding activities in other sectors. Growth of the sector allows imports of more advanced technologies to be financed through revenues gained from garment exports.

However the characteristics of the industry (relatively low capital intensity; low investment costs; and use of low skilled labour), also mean that the industry is relatively footloose and able to adjust to changing market conditions quickly (Nordas 2004). Trade policy regulations has had a major impact on the pattern of textile and clothing production and are likely to do so in the near future. China has become a very important player now that restrictions on its trade are progressively being lifted. This has intensified competition for traditional textile and clothing producers especially small and remote countries.

The structure of this paper is as follows. Section 2 reviews the economic aspects of the textile and clothing industry, from a macro perspective, both static and dynamic. Section 3 reviews social aspects. Section 4 discusses the role of trade and other economic policies in using textiles and clothing industries for growth and development. Section 5 presents some brief case studies on the role of textiles and clothing in growth and development strategies in four countries. Section 6 concludes.

2 Economic aspects of the textile and clothing industry

This section presents an overview of the global T&C industry, total manufacturing and total T&C exports, the contribution of the T&C sector to growth as a share of GDP, and the share of manufacturing employment in the T&C industry.

It begins with a static overview (section 2.1) highlighting the following aspects:

- Share of T&C in trade and foreign currency receipts
- Share of T&C in GDP and incomes
- Share of T&C in employment

But there are also dynamic effects (section 2.2) which need to be considered when examining the role of T&C in growth and development strategies over the long-run. These depend on:

- Learning by doing and knowledge spillovers;
- Linkages between assemblers and suppliers, and agglomeration effects; and
- Upgrading; and the role of value chains and FDI.

2.1 Static aspects

2.1.1. Trade

Textiles and clothing plays a major role in the development and industrialisation process of countries and their integration into the world economy. The WTO (2006) notes that in 2004, developing countries as a group (low and middle income countries) accounted for more than half of all world exports of textiles and clothing and that in no other category of manufactured goods do developing countries enjoy such a large net-exporting position.

All world regions have experienced double digit growth in the manufactured goods sectors within the last two years (see appendix tables A1-A6). While textiles and clothing industries account for only a small percentage of total world manufactured exports, 4.5% in 2006, some regions and countries rely on T&C for a much higher percentage. Regions with an above average share include Asia, and for clothing - South and Central America, Africa, and Asia.

Table 1: World merchandise trade by product

	Total manufactured exports as a % of total exports (2006)	of which clothing (2006)	of which textiles (2006)
World	70.1	2.6	1.9
Asia	81.9	5	3.2
Europe	78.4	2.2	1.7
North America	73.5	0.8	1
South and Central America	31.4	3	0.7
CIS	24.9	0.4	0.4
Middle East	21.4	0.7	1.2
Africa	19.6	2.7	0.4

Source: WTO (2006)

The top textile exporters are EU-25, China, Hong Kong, the US, Korea, Taiwan and India and in 2006 these countries accounted for 80.5% of total world textile exports. Clothing exports from less developed countries have increased over the period 1990 to 2006, with Bangladesh and Indonesia increasing their exports of clothing more so than the US over this period. Cambodia, Honduras and Malaysia are amongst new entrants to the group of top 20 clothing exporters over 1990-2006. Vietnam has dramatically increased its share of clothing exports over the period 1990 to 2006. As with textiles, Europe, China and Hong Kong are the largest clothing exporters, but overall the clothing export market is less concentrated.

Clothing is a key manufacturing export for many developing countries. Haiti, Bangladesh, Cambodia, Lesotho and Macao (China) are the economies with the highest dependence on clothing exports. Several African countries also have a high dependence on clothing exports, such as Lesotho (64%), Madagascar (56.4%), and Mauritius (35.5%). Those countries with a dependence of more than 50% on clothing exports tend to be low income, with the exception of Macao China and Honduras which are classified as lower middle income countries. There is less overall dependence on *textile* exports for developing economies. Pakistan has the highest dependence on textiles (44.1% of manufacturing exports), followed by Nepal.

Textiles and clothing is a key export especially for low to middle income countries. Bangladesh has the highest total dependence on textiles *and* clothing as a total share of merchandise exports (83.5%), followed by Pakistan (67.2%) and Sri Lanka (47%).

Table 2: Countries with a high dependence on textile and clothing exports as a % of total merchandise exports, 2006

Economy	Textile share in total merchandise exports `	Clothing share in total merchandise exports	Share of textile and clothing in merchandise exports
Bangladesh	6.9	76.6	83.5
Pakistan	44.1	23.1	67.2
Sri Lanka	2.2	44.8	47
Mauritius	3.6	35.5	39.1
Tunisia	2.9	27.6	30.5
Guatemala	3.0	25.8	28.8
Vietnam	2.0	14.9	16.9

Source: WTO (2006)

2.1.2. Share of T&C in manufacturing and total GDP

T&C industries contribute in varying degrees to GDP directly. Some general observations include:

- Manufacturing is on average a fifth of GDP, less in low income countries and higher in middle income countries;
- The contribution of the T&C industry to manufacturing value added increases with incomes but begins to fall at some level. The share of T&C in MVA is a third in low-income countries but around a sixth in middle income countries.
- Combined, T&C contributes 7% of GDP in low income countries.

Table 3: Average performance for selected T&C developing country exporters 2006

Country Group	MVA % GDP	T&C % MVA	T&C as a % of GDP	Merchandise trade as a % of GDP	GDP per capita
Least Developed Countries	12.2	8.7	1.1	68.6	2710.6
Low Income	19.4	36.3	7.0	66.9	3822.1
Lower Middle Income	24.7	13.8	3.4	67.9	6419.1
Upper Middle Income	21.2	10.5	2.2	98.8	10990.6

Source: World Development Indicators – based on tables A7-A10 in Appendix A

The contribution of T&C is still very high in some LDCs even though it has fallen recently. The contribution of T&C to MVA in Bangladesh was 30% (latest year for which data available). In Madagascar, it fell from 36% in 1990 to 6% in 2006 and in Nepal from 31% in 1990 to 19% in 2006. With respect to other low-income countries, the contribution of T&C to MVA in India increased to 24.4% in 2003. In Pakistan, the contribution of T&C to MVA was 92% in 2006. The T&C industry makes a substantial contribution to the economy as a whole; the data suggest that Pakistan has been able to maintain the competitiveness of its exports over 1990-2006. El Salvador's MVA as per cent of GDP barely increased between 1990 and 2006 nor did the contribution of T&C to MVA. Vietnam has substantially increased its exports of T&C and clothing in particular.

Although low income countries are more dependent on T&C exports, low middle income countries are the most significant group of developing country exporters. The contribution of T&C to MVA for the group as a whole averaged around 14% in 2006. In Syria the contribution of T&C to MVA is highest at 42%. In Sri Lanka, T&C contributed 33% to MVA. In Morocco and Colombia T&C contributes approximately 20% to total MVA. The contribution of T&C to MVA is lower in the Dominican Republic, Guatemala and the Philippines. The contribution of T&C to total MVA in Colombia, Guatemala, Morocco, Sri Lanka, Syria and to a lesser extent the Dominican Republic increased between 1990 and 2006 (or nearest year). However, in other cases the contribution of T&C to total MVA decreased.

Within the high-middle income grouping, Mauritius has the highest share of T&C exports in total manufactured exports. However, the contribution of T&C to MVA is relatively low reflecting to a certain extent the Mauritian transition from T&C (a key contributor in the 1980s and 1990s) to other value added activities

2.1.3 Share of T&C in Employment

Traditionally the T&C sector was responsible for significant job numbers in developed countries, but over the last decades the sector has become the first step towards manufacturing production and employment for many developing countries. While total world employment in T&C hardly changed in recent decades, the distribution of employment changed substantially with the EU and US losing jobs and mainly Asia gaining (ODI *et al*. 2002).

Appendix A presents data on employment within industry T&C employment for selected countries across country income groupings, including average wages and the share of wages in MVA. The average result for the country income groupings are summarised in Table 4 below.

Table 4 Average T&C employment and contribution to growth for selected developing economy exporters (most recent data)

Country Group	Share of manufacturing employment in T&C (%)	No. employed ('000s)	Average wages in T&C production (US$million)	Share of T&C wages in MVA	Value added per employee (US$million) in T&C production
Less Developed Countries	59.1	340,862	401	35.3	536.4
Low Income	34.4	567,348	1,498.5	38.9	1,749
Lower Middle Income	35.7	994,014	3093.3	41.7	2,791.1
Upper Middle Income	28.4	206,718	3153.6	43.3	1,846.7

Source: UNIDO Industrial Statistics, World Development Indicators, and ILO Labour stats – averages are based on a selection of countries in each group, see Table A11

These averages reveal that textiles and clothing are responsible for the majority of formal jobs in a number of LDCs, and a third in low and middle income countries. However, the average picture overlooks country specific features. LDCs such as Bangladesh, Cambodia, and Lesotho all have very high shares of total manufacturing employment in the T&C industry (77%, 90% and 89% respectively). In terms of value added per employee, this is highest for Bangladesh and Cambodia. However, in Bangladesh, the share of wages in MVA is twice as high as in Cambodia.

For low income countries such as Pakistan and El Salvador, T&C employs a relatively large share of the total employment in manufacturing (44.3% and 50.2% respectively) with relatively higher wages ($1,647 and $2,675 respectively).

Within the lower middle income country group Honduras has a very high share of employment in T&C (76%), a very high share of wages in MVA (67.5%). Sri Lanka has a relatively high dependence on the T&C industry for employment (46.4%). Morocco has a relatively high share of labour employed in T&C (40%).

2.2 Dynamic aspects

Beyond the static aspects, there are several other pathways through which textiles and clothing affects economic development. T&C production may be considered as the first step up on the industrialisation ladder and the wider effects depend on:

- learning by doing and knowledge spillovers;
- agglomeration effects;
- local linkages;
- upgrading; and the role of value chains and FDI

This section discusses the theoretical pathways with some illustrated examples, while section 2.3 provides country examples.

2.2.1 Learning by Doing and Knowledge Spillovers

Firms in developing countries able to participate in global production networks and global value chains (GVC's) of which T&C is often the first[1], are typically expected to increase their skills, knowledge and technology – all considered as key factors for productivity enhancement and growth (UNIDO 2004). Less technologically advanced countries can exploit their late coming and distance from the technological frontier in order to tap into new technologies. Firms in developing countries are therefore posited to 'learn by doing' through trade with more developed and developing countries (Young, 1991) and participation within GVC's through international knowledge spillovers.

Without achieving and sustaining learning by doing and national knowledge spillovers, developing countries and producers may not be able to capture all benefits. As we will argue later, developing country governments have a role to play in formulating industrial policy to ensure that the potential benefits which may accrue from T&C export production are harnessed in such as way so as to result in positive learning spillovers for the wider economy. Increasing the skill level of labour should translate into higher productivity effects and value added in order to maintain competitiveness at the initial stages of development and move onto other activities. Learning effects within the economy are cumulative and can work across sectors.

2.2.2 Agglomeration Effects

The climate in which low income countries can drive development from a manufacturing base created by the T&C sector is now framed by the presence of extremely large supplying countries in the global market (Brenton *et al*. 2007). While start-up costs are comparatively small and scale economies are not important which favours production in locations where labour costs are low, there are some important changes in the nature of the global market for clothing that may condition the role that

[1] For reasons such as the relatively low levels of capital employed and low skill of labour, T&C production is often one of the first step onto the industrialisation ladder and into global production networks.

the sector can play in development relative to previous episodes of industrialisation. For example, the scale of production in China has had implications for other developing countries trying to get on the T&C ladder.

On the other hand, while China and India derive scale economies in terms of T&C production, it is also the case that the cost competitiveness in Southern China is being eroded by domestic pressures such as wage and land rental increases – the negative effects of agglomeration on competitiveness. This will present opportunities for other T&C exporters who are able to tap into existing niche markets. In Southern China, land and labour costs are rising within EPZs so much so that large firms are reconsidering their investment strategies and looking to other South East Asian economies where land and labour costs are lower. UNIDO (2004: 3) also suggested that even successful enterprises may find it difficult to sustain competitiveness as the wages in their countries rise and market conditions change.

2.2.2 Local linkages

The development of local linkages with garment assembly such as business support systems may facilitate the transition into higher value added activities and horizontal diversification into other sectors, as arguably in the case of Southern China, but it also raises demand and prices of factors of production.[2] Alternatively, the competitiveness of the T&C value chain may be enhanced through backward vertical integration, such as through the development of the textile industry.

As an example, in Pakistan a broad policy framework 'Textile Vision 2005' aims to make the textile industry more competitive with additional investment downstream in order to increase the overall textile exports of the country. Increasing the share of manmade fibre based products is also being stressed. Pakistan is in the process of expanding the raw material base by encouraging the production of polyester staple fibre and other man made fibres within the country (UNCTAD 2005a).

2.2.4. Industrial Upgrading and the role of value chains and FDI

The participation in global networks and global value chains can help industrial upgrading and improved economic performance. Gereffi (2002:21) classifies the T&C industry as a buyer-driven GVC which contains three types of lead firms: retailers; marketers; and branded manufacturers. Industrial upgrading in the clothing industry is primarily associated with a shift from assembly to full package production, which changes the relationship between *buyer* and *supplier* in a direction that gives far more autonomy and learning potential for industrial upgrading to the *producer*. This implies vertical integration, whilst also influencing GVC governance structures and the balance of power in favour of producers. Producers can move up the T&C value chain and integrate vertically, or they diversify moving horizontally into other sectors.[3] In order to do this, producers and countries need to develop local linkages and supplier capabilities.

[2] China is increasing exporting more sophisticated products given its level of income. See Rodrik (2006).

[3] It has been observed that countries diversify until they reach a certain level of income, after which they begin to specialise again (for an example, see Carrere et al. 2007).

East Asian economies such as Hong Kong, South Korea and Taiwan are good examples of industrial upgrading. They started out with low technology T&C industries and upgraded into higher value added activities and higher technology industries, making a transition from Original Equipment Manufacture (OEM) to Own Design Manufacture (ODM) to Own Brand Manufacture (OBM).[4] As this process of technological and industrial upgrading occurred, T&C production relocated and moved offshore within the region. This stylised description of the development of the manufacturing industry within East Asia is known as the 'Flying Geese' model (Akamatsu 1962). China, Viet Nam and Cambodia have more recently been able to take part in this regional process of upgrading as T&C production has been offshored and outsourced to its (mostly) coastal regions from other East Asian Newly Industrialised Countries (NIC's).

A major question is whether and how other countries can replicate the East Asian model of upgrading? Most authors suggest that due to the fragmentation of production, buyers increasing require suppliers to take on increasing responsibility for fabric and input sourcing, supplier managed inventory and production flexibility, for example, whilst they maintain control of production, export and marketing networks and in particular, branding (See Figure 1 in Appendix E for a stylised overview of the apparel value chain). The implications noted by Brenton *et al*. (2007) for developing country T&C producers involve higher barriers to entry than in the past.

The post-quota era of T&C production has seen increased consolidation of T&C production amongst preferred suppliers. UNCTAD (2005a) notes that in most cases those countries with a geographical proximity to major buyer markets have gained.[5] As buyers expect to rely more on core suppliers, they may be less footloose in their relations with suppliers. This can be good for host country, but T&C producers are either 'locked into' or 'locked out' of T&C GVCs.

Achieving preferred supplier status may be some distance away for some developing country T&C producers unless they are able to competitively differentiate themselves based on other factors. This is likely to remain the case until 'locked in' countries are able to move up their technology trajectory and look to outsource and/or offshore their own T&C production base to 'locked out' countries.

The previous discussion suggested that upgrading occurs via participation in value chains (without direct ownership). But it can also occur via FDI (which involves ownership of local firms). FDI can provide market access for developing country producers to developed country markets and the opportunity to upgrade and add additional value through knowledge spillovers and technological transfer, similar to being part of a global value chain.

Regarding specific FDI projects in T&C manufacturing in developing countries, Japan was the largest outward investor in 2004, followed by the US. The most attractive host countries included China, Eastern Europe and the US, followed by South and South East Asia.

[4] See Humphrey and Schmitz (2004).

[5] It is noted that low labour costs are not enough to ensure consolidation, geography and proximity to markets in order to supply just in time delivery are key determinants.

It is noted by UNCTAD (2005a) that between 2002-4 overall the developing East Asia Pacific region accounted for most FDI in T&C manufacturing (38.5%), followed by Central and Eastern Europe (29.1%) and Latin America and the Caribbean (13.1%). Africa accounted for 5.1% of total FDI projects in T&C manufacturing over the same period.[6] In Cambodia, the textiles, clothing and leather industry was the second most attractive FDI destination in 2002, after wood.

[6] See UNCTAD (2005a:10) and Table 6. North America accounted for 7.3% of total FDI projects in T&C manufacturing 2002-4, Europe 5.1% and Developed Asia-Pacific 1%.

3 Social Aspects of the Textile and Clothing Industry

This section discusses social aspects of the textile and clothing industry, which includes the following aspects:

- wages;
- labour standards;
- gender; and
- poverty reduction strategies.

3.1 Wages

Labour abundant countries have a comparative advantage in garment assembly as they can compete on lower wages. This is a traditional economic argument but it is sometimes turned into a negative social argument that such comparatively low wages are unfair because they are lower than wages paid in developed countries, headquarters or lead firms. There are several wrong or incomplete inferences with that argument. What really matters is whether wages paid to developing country textile and garment producers are different from those in other sectors, and whether workers would be paid a formal wage at all without the presence of textiles. This is a difficult question because it is difficult to construct a counterfactual. Kabeer and Mahmud (2004) suggest that the wages women are able to earn in the garment industry are higher than in the available alternative forms of employment, which is sometimes lacking altogether. This section will present the relative wages paid to labourers within T&C industries, as compared to other sectors and manufacturing industries.

3.1.1 Wages in T&C compared with other sectors

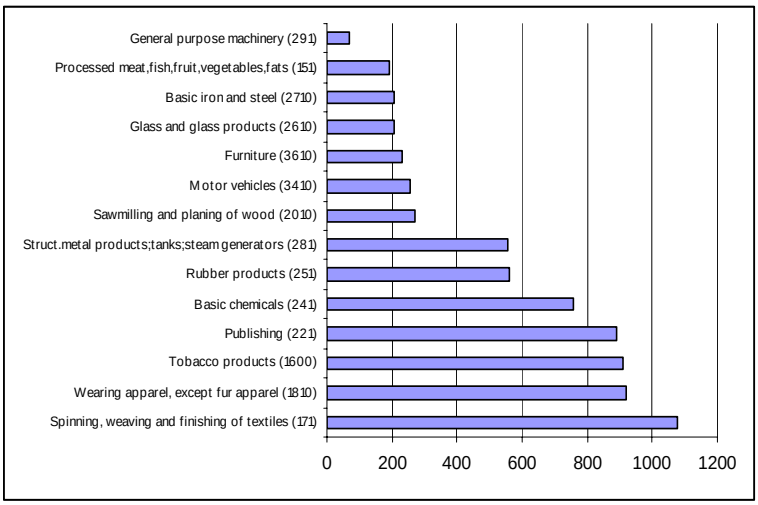
Textiles and clothing employment provides a major opportunity to receive a formal wage which is scarce in developing counties whose labour markets are dominated by informal employment. Further, three data sources (ILO, World Bank and UNIDO) suggest that textiles and clothing activities are not the least paid formal activities, though neither are they the best (appendices B and C).

We examined ILO data for Cambodia; Madagascar; Pakistan; India; El Salvador; Guatemala; Dominican Republic; China; Mauritius; and Mexico. Across all countries with the exception of Mauritius, wages paid to labourers within manufacturing are higher than those paid to labourers working within the agricultural sector. Wages paid to those working within T&C production are on the whole lower than the average of manufacturing industries, but in all countries T&C are not the lowest of manufacturing wages, and higher than agriculture wages.

In Cambodia, 90% of those employed in manufacturing are employed in T&C production, wages paid per month are just below the average when compared to other sectors such as the hospitality industry and health and social work, but above sectors such as glass and publishing (Appendix C). An ILO “better factories” work sheet

suggests that the garment factories pay more than the Cambodian minimum wage of US$45 a month, with the industry average US$61 a month, increasing recently to US$70. This compares to the average salary for a Cambodian civil servant at US$28 a month. In the countryside where many workers come from, the average monthly income for the whole household is US$40 a month. Chart 1 compares wages across manufacturing activities, and apparel wages are amongst the highest in Cambodia.

Chart 1 Annual wage per employee in Cambodia, US$ 2000,



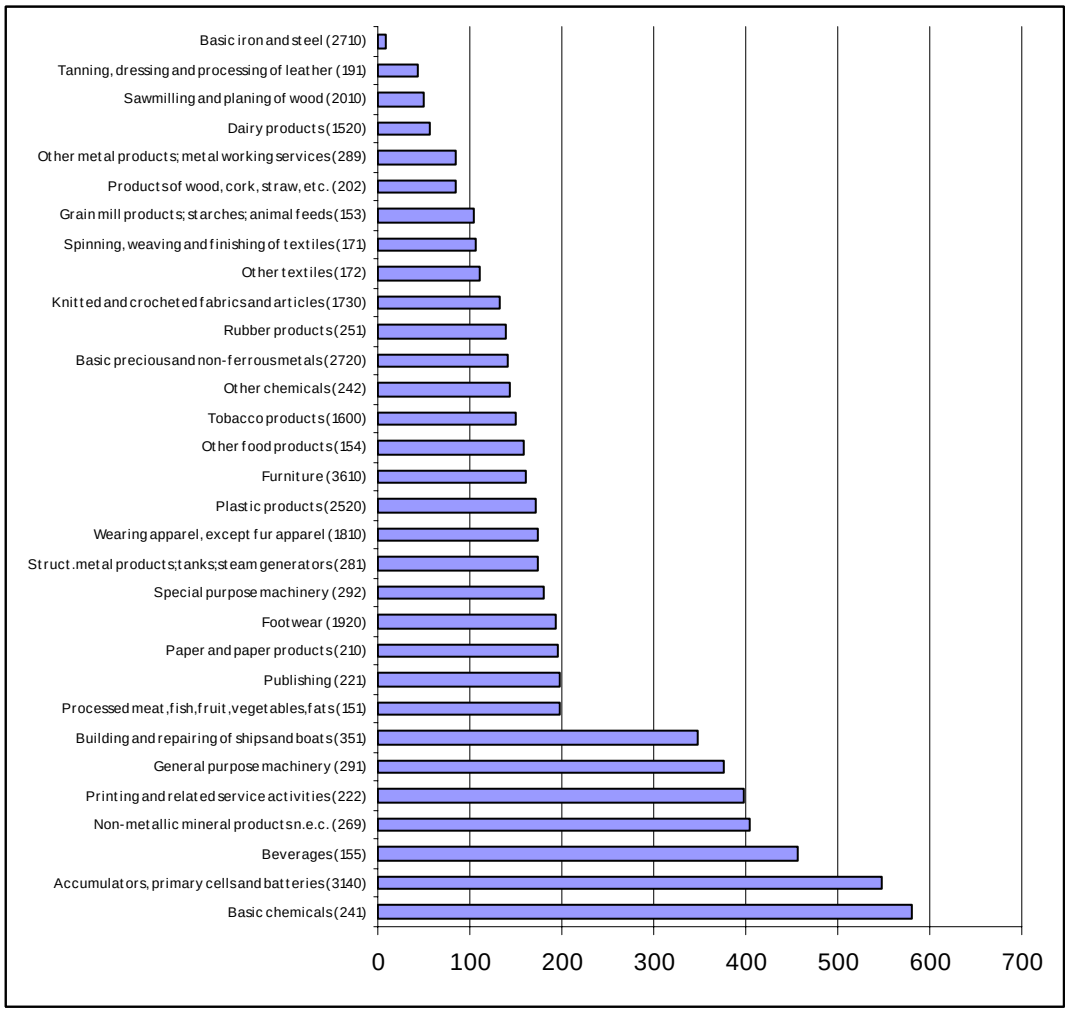
UNIDO, http://www.unido.org/index.php?id=o3474

A cross-check with the World Bank's Enterprise surveys for Cambodia suggests that in 2003, garment firms paid 75% more than firms in agro industry and construction and also more than the retail and hotel sectors.

Around 56% of those employed in manufacturing in Madagascar are employed in the T&C industry. The manufacturing sector on average pays more than twice as much an hour as agriculture and mining (appendices B and C). Wages paid to T&C workers are higher than in sectors such as dairy products, metals, leather, wood etc (see chart 2 below). The Government sets the minimum wage of approximately $25 (FMG 182,000) per month for the non-agricultural private sector.[7] The manufacturing industry pays on average around $45USD a month, over half of those employed in manufacturing in Madagascar are employed in the T&C industry.

[7] See US Department of State, Human Rights Report (2001) http://www.state.gov/g/drl/rls/hrrpt/2001/af/8389.htm

Chart 2 Annual wage per Employee in Madagascar, US$ (2004).

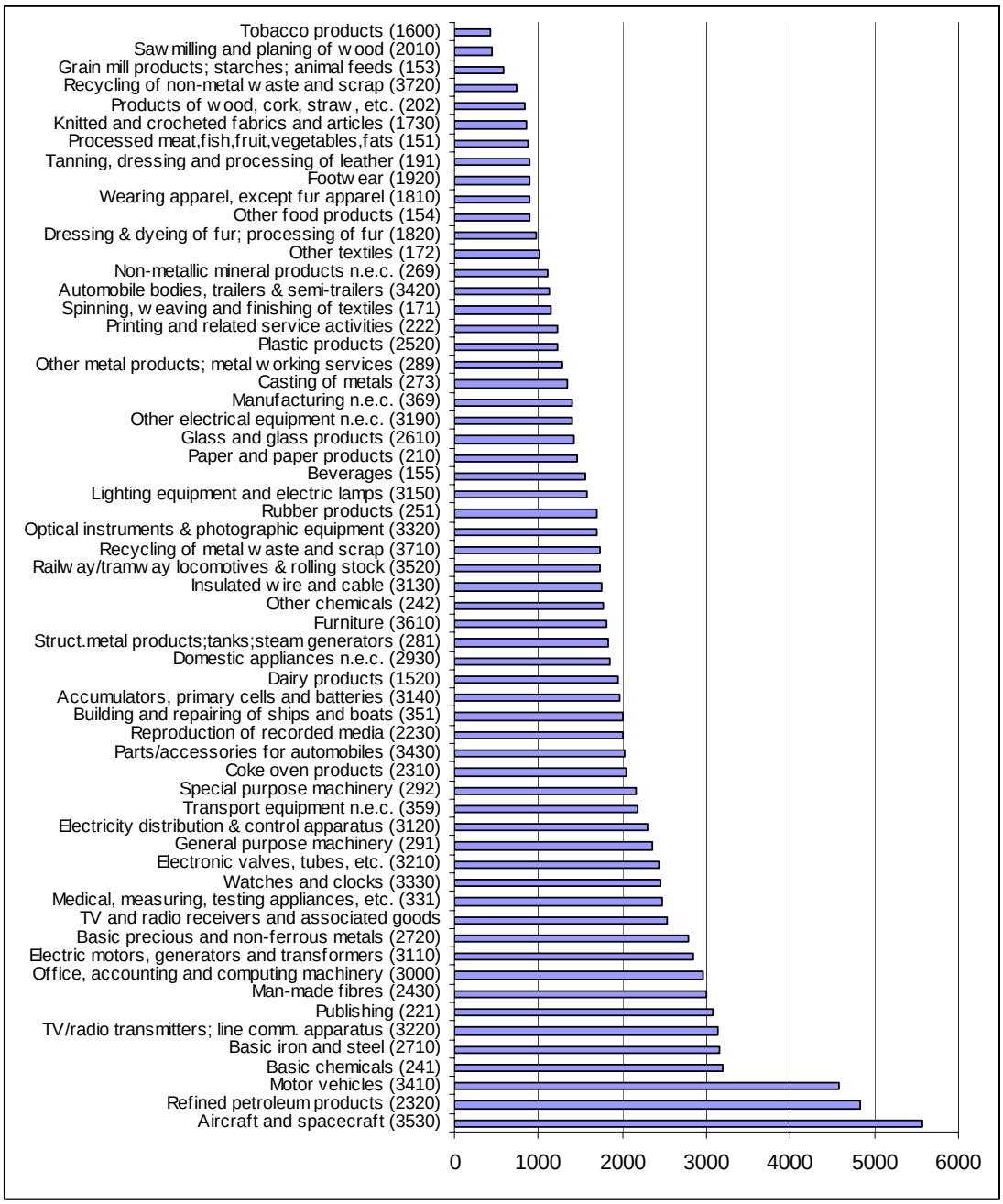


Source: UNIDO, http://www.unido.org/index.php?id=o3474

In Pakistan, the annual wage paid for those in the textile industry is almost twice as high as for those working in wearing apparel (appendices B and C). We would expect textile production to pay relatively higher wages than clothing or apparel manufacture – this is due to textile manufacturing being relatively more technology intensive and requiring to some extent a higher skill level. Wood, furniture and pottery paid lower average wages than textiles and garments (according to UNIDO data).

The share employed in the T&C industry in India is much lower than in Pakistan (around 21% compared to 44.3% in Pakistan). On average the wages paid to T&C labourers in India are around half the average wage across all manufacturing industries (see e.g. appendix C), but some manufacturing categories are paid less than T&C wages, such as processed meat, dressing, leather, sawmilling etc (see below).

Chart 3 Annual wage per Employee in US$ (2003), India



UNIDO, http://www.unido.org/index.php?id=o3474

Manufacturing wages are considerably higher than wages in the agricultural sector and fisheries for both men and women in El Salvador. Around 50% of people employed in the manufacturing sector in El Salvador are employed in T&C production. Average wages paid to T&C labourers are around 40% less than the average for all manufacturing industries. In 2001 minimum wages in El Salvador were $4.80 (42 colones) for commercial, industrial, construction, and service employees; $2.47 (22 colones) for agricultural workers; and $3.57 (31 colones) for

seasonal agriculture industry workers.[8] The average wage paid to workers in the T&C industry *in 1998* was around US$7.3 a day.[9]

Manufacturing in Guatemala pays almost twice as much as agriculture and substantially more than construction. Both the textile and clothing industries pay a similar annual wage. Excluding the contribution of petroleum refineries and rubber industries, the average wage paid to T&C labourers is considerably lower than the average across all manufacturing industries.

In Mauritius those employed in manufacturing get paid less, on average than agricultural labourers and those working with fisheries. This is interesting given that the T&C industry employs around 70% of the total manufacturing labour force. Financial intermediation pays the highest monthly wage out of all other sectors of the economy, followed by electricity. This result shows how Mauritius has diversified into other higher value added activities. However, it also shows that there is still a high dependence on the T&C industry for some workers with low wages. Nevertheless workers in the T&C industry are still paid more twice the national minimum wage. [10] See Appendix C for a graphical representation of wages across sectors and within the manufacturing industry, across countries.

3.1.2 Wage differentials between textile and clothing

There are key differences across countries according to the amount of T *and/or* C production, similarly regarding labour costs (ODI *et al*. 2002). For example, ILO (2001) notes that hourly labour costs are higher in textiles than for clothing. As a general rule wages in the textile industry tend to be higher than in the clothing (and footwear) industries. This is due to textile production being capital intensive, requiring higher skill and where the responsibility and productivity of the average worker managing technologically advanced machinery is higher than in other sectors (ILO, 2000a).

Primary capital to invest in new machinery with increased automation is crucial to sustaining competitiveness; both spinning and weaving require constant updating of machinery.[11] Quick access to quality textiles enables firms to substantially cut lead times. Local (sub-contracted) firms that invest in their textile industry in order to strengthen backward linkages pay higher wages due to the higher degree of technology and skill required.

If multinational firms are outsourcing their textile production or aspects of their textile production, such as new chemical processes, they are also transferring technology. The wage premium paid to workers within textile production may be less due to the levels of investment required being less, although training and adapting to the new technologies or processes may result in additional costs. Once labourers are trained to

[8] See US Department of State, Human Rights Report http://www.state.gov/g/drl/rls/hrrpt/2001/wha/8354.htm

[9] Calculation based on UNIDO data for 1998.

[10] Average wages paid to those in the T&C were around $242 a month (in 1998) compared to the legal minimum wage for an unskilled worker in the EPZ of $61.57 (1,847 rupees) per month, and minimum wage for an unskilled factory worker outside the EPZ approximately $83.71 (2,507 rupees) per month, see http://www.state.gov/g/drl/rls/hrrpt/2003/27739.htm

[11] CRPM (2005)

use new technologies and apply new skills, they also need to be retained which could result in additional wage premium.

A comparison of the average wages of T & C production across countries (appendix B) shows that in some countries the textile and clothing industries pay a similar wage, but in others, there is a considerable wage differential.

3.1.3 Wages paid to those working for foreign as compared to domestic producers

Deardoff *et al*. (2003), Harrison et al. (2003) and Te Velde and Morrissey (2002) review studies of wages paid by multinational firms to workers and find that contrary to expectations, multinational firms routinely pay higher wages and provide better working conditions than their local counterparts. In terms of the wages paid by foreign firms compared to local the following observations can be noted:

- most foreign owned and sub-contracting firms in manufacturing industries pay higher wages than domestic firms;
- wages for labourers are usually higher in EPZs;
- export orientated firms pay higher wages than those producing for the domestic market;
- overtime is often considered an attractive means to supplement basic income levels;
- non-income benefits (job security, promotional activities, paid holidays etc) also often accrue to labourers working for foreign affiliates.

Although most studies comparing wages paid according to firm-ownership are time and location specific, they generally conclude that, accounting for these factors, foreign firms pay higher wages.

Appendix F provides empirical evidence on the basis of detailed enterprise surveys. It shows average wages per employee for six countries (Pakistan, Bangladesh, Sri Lanka, Philippines, Thailand and Zambia) and two industries (garments and textiles). In almost all cases, foreign firms pay higher wages than domestic firms in both textiles and garments, and in the majority of cases exporting firms pay higher wages than non-exporting firms. Foreign-owned, exporting firms pay the highest wages in countries such as Bangladesh and Philippines.

3.1.4 Skills

The T&C industry provides a first step onto the manufacturing ladder in developing countries and is intensive in its use of unskilled labour in economic activities such as garment assembly. Comparative data on the skill and education profile of workers working within T&C production across countries is difficult to come by. Table 5 below presents a snapshot of the proportion of students receiving primary, secondary or tertiary education across developing country income classifications.

Table 5: Developing country education enrolments and T&C exports

	Primary (%)	Secondary (%)	Tertiary (%)	% of T&C exports as share of total manuf exports (2006)
LDC's				
Bangladesh	-	-	-	83.5
Cambodia	78.3	19.5	2.2	70.4
Lesotho	80.7	17.7	1.5	64.1
Haiti	-	-	-	85.2
Madagascar	83.4	13.5	3.1	56.4
Low income countries				
India	58.4	36.7	4.8	15.9
Pakistan	50.8	26.7	22.5	67.2
Vietnam	-	-	-	16.9
Lower middle income countries				
Honduras	-	-	-	57.5
El Salvador	60.2	31.2	8.6	42.6
Sri Lanka	19.3	64	16.6	47
Guatemala	73.5	11.9	4.7	28.8
Upper middle income countries				
Mauritius	39.2	51.4	9.4	39.1
Malaysia	-	-	-	2.7
Mexico	37.9	45.5	16.6	3.4
Romania	23.7	55.5	20.8	16.3

Source: WTO, ILO for education levels (nearest possible year) and UNESCO[12]

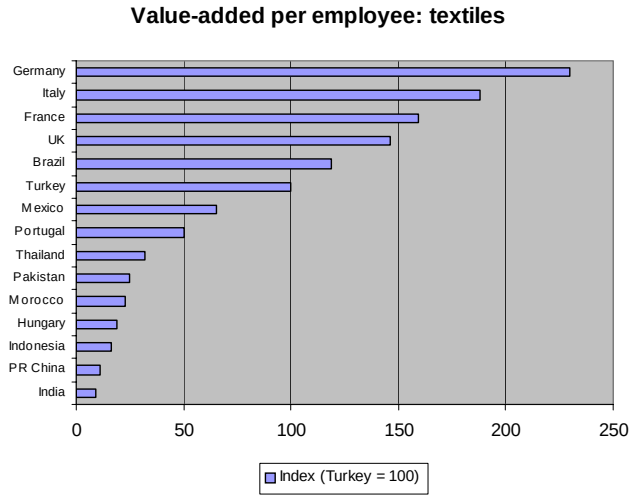
Countries with a higher share of their population receiving tertiary education also have a lower share of T&C exports as a share of total manufacture exports. Countries with a high proportion of primary enrolment rates compared to secondary and tertiary enrolments have a high share of T&C exports as a share of total manufactured exports (with the possible exception of Madagascar which has a lower share of T&C exports compared to Pakistan which has a higher share of students enrolling in tertiary education).

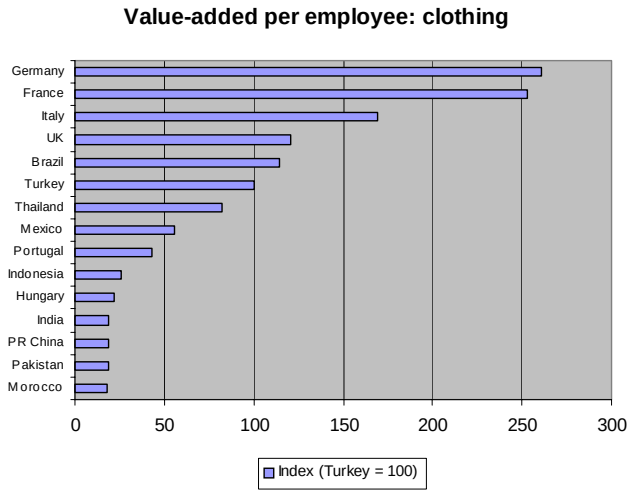
3.1.5 Unit labour costs and productivity

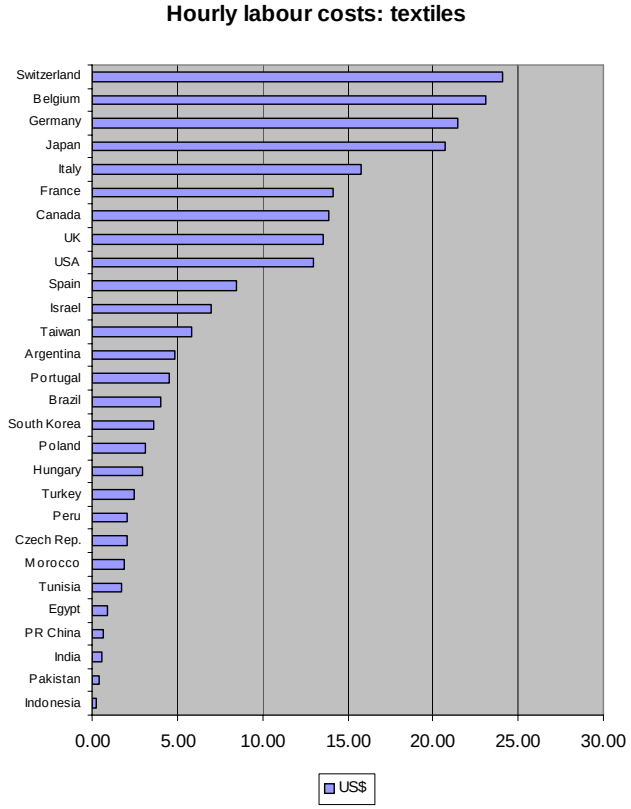
Hourly labour costs are higher in textiles than clothing (Chart 4), reflecting greater productivity and use of skills and capital. Hourly labour costs vary considerably across countries. India, China, Egypt and Pakistan have the lowest hourly wage rates in textiles and clothing, while European countries and the US have the highest rates. However, higher productivity (value added per employee) compensates partly for high wage rates. For instance, German textile (clothing) wage rates are 35 (45) times higher than those in China, but productivity in Germany is 21 (14) times higher than in China.

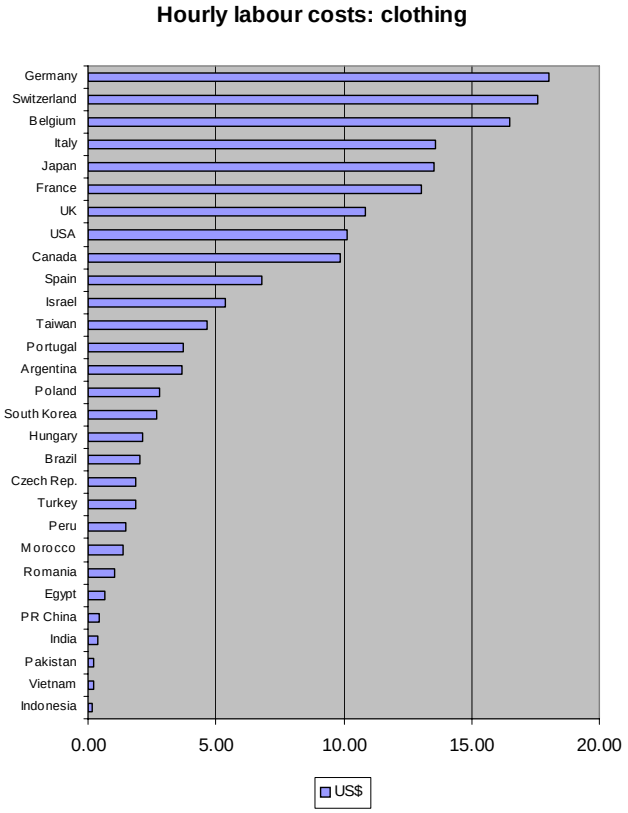
[12] Data is from ILO for the following countries: Pakistan (2006); Madagascar (2005); Sri Lanka (2005); Guatemala (2004); Mauritius (2006); Mexico (2006) and is taken from UNESCO. For all other countries, data is direct from UNESCO and is based on enrolment rates for 2005.

Chart 4 Productivity and Hourly Costs in the Textile and Clothing Industry, 1998 (source OETH, 2002)









3.2 Labour, health and environmental standards

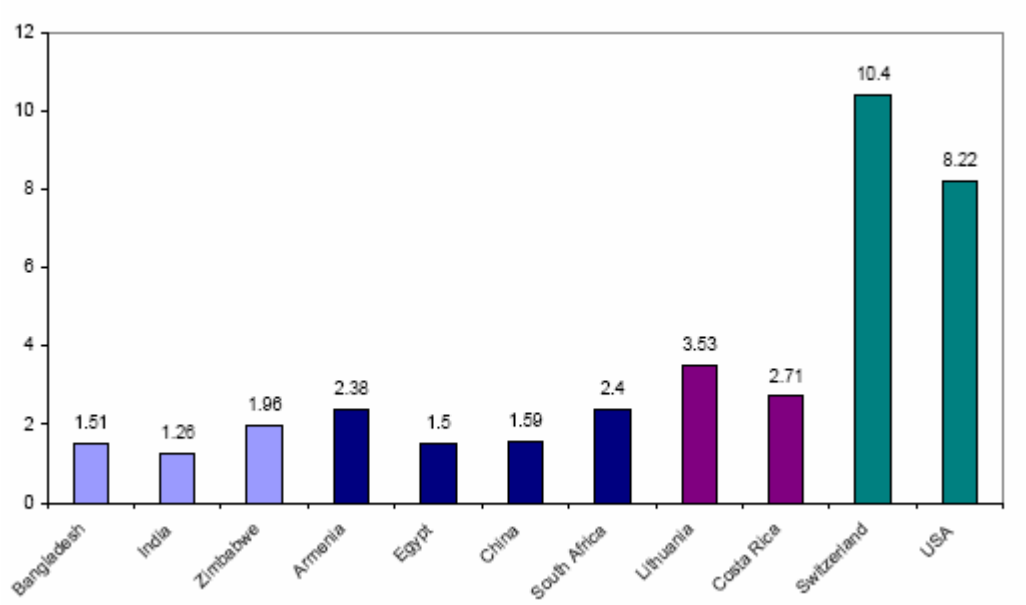
Key labour standards relate to the terms of employment, remuneration from employment, and working conditions. Some analysts argue that companies supplying the major buyers of garments are not complying by labour standards mostly defined as by the buyer company. One such standard is related to the concept of a living wage.

Economists suggest that firms pay their workers an hourly wage rate that is equal to the marginal product (the amount by which output would increase as a result of an increase in one more hour of work). However, some campaigners argue that this is not the appropriate basis for a minimum remuneration which instead should be based on a 'living' wage. But how does one define a 'living' wage? Anker (2005) notes that the living wage rate represents the hourly pay rate a full-time worker needs to earn to be able to support a small family of four at the poverty line. This indicates that the basis for determining what a living wage should be the national context. There is no methodology available for estimating cross-nationally comparable and comparable 'living' wages (Ankar, 2005). Similarly, members of the UK's Ethical Trading Initiative struggle both with the concept and the practicalities of implementation.

Campaigners make comparisons between final retail prices and wages paid in producer countries - this does not take into account additional costs of higher value added production processes such as processing, transportation, and distribution nor the structural factors of the labour market in terms of demand and supply and may therefore be misleading.

Ankar (2005) proposes a method for calculating living wage rates. Based on the poverty line estimates developed here, it suggests a living wage rate is expressed in terms of an hourly wage rate a full-time worker would need to earn so that her or his family is above the poverty line. The author notes that there is a need for more debate on what constitutes a living wage, particularly in countries where incomes from self employment and migrant remittances are important. Ankar's methodology for measuring national poverty is normative, using a nutritious low cost diet, and it is relevant to all countries in the world. It can be used for calculating national poverty lines and for making regional and global estimates.

Chart 5 Hourly living wage rate estimates (in PPPs)



Source: Ankar (2005) Data are for 2000 or 1999, except Zimbabwe (1998), Ecuador (1997) and Bangladesh (1996)

Deardorff *et al*. (2003) find that in terms of the argument made that multinationals should pay their labourers higher wages 'it is by no means clear exactly how this would be done and what would prevent companies from shifting their operations to locations with already higher wages and higher productivity' and 'the difficulty of paying higher wages would be even more pronounced if subcontracting firms were obliged to do so'.

In campaigns to increase the wages of unskilled labour in T&C manufacturing, the best intentions may sometimes leave workers worse off. Local (sub-contracted) firms may shift production into other areas with less stringent standards, and multinationals may similarly reconsider their medium to longer term investment and sourcing strategies. Since sub-contracting firms are generally independently owned, mandating higher wages for them in these circumstances would almost surely motivate them to search out less costly options, i.e. shift production. The conclusions reached by Deardoff *et al*. (2003) are that efforts to define and measure the living wage are fraught with insuperable difficulties and it is likely that the imposition of a living wage that exceeds existing market determined wage levels will result in employment shifts in developing countries that would be detrimental to economic efficiency and welfare.

In a few cases campaigns to increase the minimum wages across the board may bring about positive results. For example, in the case of Indonesia, Harrison *et al*. (2004) suggest that the more than doubling of the *real* value of the minimum wage resulted in a 35% increase in real wages for unskilled workers between 1990 and 1996. The research suggests that unskilled real wages increased by an additional 20% for exporters and multinational plants in industries such as textile, footwear and apparel. The combined effects of the minimum wage legislation and anti-sweatshop campaigns led to a 50% increase in real wages and a doubling of nominal wages for unskilled

workers at targeted exporting plants. The impact of these increases across the manufacturing sector was a 10% reduction in employment on the whole, though the reported effect on export orientated industries employment levels was minimal.

Labour standards are often applied within supply chains and driven by retailers responding to consumer demands. In some instances, labour standards are built into bi-lateral trade agreements (such as between the US and Cambodia)[13], but on the whole developing countries have rejected the possibility of labour standards in trade agreements fearing the abuse of standards for protectionist reasons. In some cases the adherence of production to labour standards is advertised and used to differentiate products, such as RugMark or Fair Trade, or is used to demonstrate a corporate commitment to driving up standards and opportunity to meet like minded businesses in a forum such as the Ethical Trading Initiative (ETI).

The Ethical Trading Initiative (ETI) encourages all UK based companies to adopt their base code and implement it in their supply chains. There is no penalty for non-compliance; firms do not attach a label to their product in order to advertise their compliance but may instead use their adherence to the ETI as a means through which to meet their corporate social responsibility targets.[14] Most suppliers signed up to the ETI are located in the upper tiers of supply chains (for example packers and assemblers and therefore not the suppliers of the raw materials).[15]

Barrientos *et al* (2006) note that members allocate comparatively few resources to raising awareness and providing direct support to workers and suppliers in sourcing countries. Suppliers in all countries have reported difficulties in improving labour practices in a context of downward pressures on price, shortening lead times and supply chain volatility: this has limited their ability to make improvements in labour practices. The structure of the supply chain was found to have been critical in determining impacts.[16] The potential for positive impacts on labour treatment is currently undermined by individual company approaches to code implementation and a lack of strategic co-ordination between ETI members and other stakeholders (Barrientos et al. 2006).

The ability of labour standards to positively influence supply chains and to have a developmental impact on producers is in part dependent on the governance structures

[13] Cambodia's high sales to the US initially resulted from a trade agreement whereby the US government rewarded good working conditions in the garment industry by reserving a portion of its imports specifically for garments made in Cambodia. The US awarded 9% of its import quota to Cambodia in 2002, 12 % in 2003 and 14% in 2004 (see ILO 2005).

[14] There are 9 main points of the base code including the following: 1. employment is freely chosen; 2. freedom of association and right to collective bargaining is respected; 3. working conditions are safe and hygienic; 4. child labour should not be used; 5. living wages are paid; 6. working hours are not excessive; 7. no discrimination is practiced; 8. regular employment is provided; 9.no harsh or inhumane treatment is allowed.

[15] The report on the ETI Impact Assessment 2006 notes that assessments were concentrated in China and the UK and impact assessment restricted to suppliers at first tier levels, such as packers.

[16] Direct and stable relationships between buying companies and suppliers increased the likelihood of change. ETI members were found to have less influence on suppliers in complex chains where much depended on the attitude of individual suppliers and/or agents. Although in some cases critical mass of buying companies working with suppliers towards code compliance acted as a counterweight to complexity within the chain, the use of individual common codes as opposed to one common code and a lack of co-ordination between buying companies undermines this potential.

and enforcement mechanisms of the standard but also the *legitimacy* the standard has in the producing country. Box 1 discusses the role of standards and textiles and clothing production.

Increasingly consumers are concerned about the amount of chemicals used in the production of clothing. Although this also relates to the health and safety of workers, arguably the primary objective is to reassure consumers that the clothing that they purchase does not contain harmful chemicals. The Oeko-Tex label is designed so as to enable consumers to recognise a garment and home textile which has been produced so as to pose no risk to health.[17]

Box 1 Labour Standards: beauty contest or race to the bottom?

Cambodia

In 2001, the US awarded Cambodia trade preferences in return for demonstrated improvement in factory conditions: with the assistance of the ILO provided in meeting these improvements. Although the quota system expired in 2005, employment levels have been maintained, volumes of exports to the US are increasing and factories are expanding. The ILO (2005) suggests this is because the projects success in implementing world class information and independent monitoring systems which is considered as transparent and credible to international buyers: Cambodia is now considered to have a comparative advantage in labour standards: good working conditions are a major factor in buyers sourcing decisions helping retailers to meet their CSR objectives and avoid negative publicity and Cambodia is the preferable source compared to Vietnam, Bangladesh, Thailand and China.

Almost 80% of buyers considered the continued monitoring of labour standards to be critical given the end of quotas in determining Cambodia's competitiveness in T&C export (ILO 2005). The reduced workplace accidents, improved productivity, product quality, lower worker turnover and less absenteeism all benefit are all good reasons for buyers to continue their sourcing strategies based in Cambodia. A niche market based on respect for labour standards has been developed.

Madagascar

Cling et al. (2007) note that since 2005 the average wages for labourers working within the Zone Franche have become lower than in the formal industrial sector. Although all other things being equal labour standards are higher than average they are being progressively reduced in a context of increased international competition. Comparison of wages in the formal industrial sector shows that the average income gap widens particularly as regards hourly wages to the detriment of Zone France employees. Hourly wages excluding bonuses posted a 40% difference in 2006 that is twice as much as in 1995 (though they were similar in both sectors in 1996).[1]

Zone Franche employees are more likely to receive payslips, are covered by written contracts and are paid on a fixed basis; employees enjoy significantly better benefits in this respect. There is also less gender discrimination, core labour standards are

[17] The label has been developed so as to ensure "confidence in textiles: tested for harmful substances".

better respected and trade unions are present. The characteristics of the firms in the EPZ (foreign owned, larger) could explain the better conditions, which have also spread to the domestic sector (Cling *et al*. 2007). However, since 2000 most benefits have been progressively reduced. Apart from low wages, working hours have increased. Integration has forced companies to tighten their labour management. Degradation in labour standards has also been observed in the rest of the economy, "as if after playing a leading role for social progress, the Zone Franche was (is) now contributing to social regression and to the process of informalisation of labour under international competitive pressure" (Ibid:17).

In other cases environmental concerns are incorporated into producer processes. For example, producers selling into the EU market are expected to adhere to ISO 14000 requirements which are equivalent to the Eco-Management and Audit Scheme (EMAS).[18] The standard itself does not specify environmental standards but instead governs the means through which a company makes its production activities environmentally sustainable. In order to access EU markets firms are expected to have in place either ISO 14000 or an Environmental Management Audit System (EMS), both equivalent.[19]

3.3 Gender

T&C contributes significantly to the empowerment of women. Job creation in the T&C sector has been particularly strong for women in poor countries who previously had no income opportunities other than the household or the informal sector (Nordas, 2004). Employment in global production is not inherently negative for women, as working in exports is better than working in the domestic economy, or being unemployed There are notable differences in the ratio of male to female employment in textile and clothing industries across countries and regions. This is due to the physical demands of textile production being greater than that of clothing production; and the context-specific nature of male and female relations and their roles within society.

ILO (2005) finds that overall the share of female workers in the T&C sector is average, but particularly high in the clothing industry. Women are often young, and many enter the industry without qualifications: the share is high in Asia, but lower in other regions. Barrientos *et al* (2004) summarise that women now represent more than one-third of the manufacturing labour force in developing countries, and up to one half in Asian countries.

As part of the industrialisation process, it is also noted by Barrientos *et al* (2004) that the percentage of females employed in manufacturing decreases over time, as countries grow richer and move into higher value added activities. The de-feminisation of the workforce in Japan for example, began from the 1970s onwards, where a shift from large-scale manufacturing into services occurred.

[18] See Conway (1996).

[19] While the GATT agreements allow companies to stop doing business with trading partners that fail to achieve ISO 9000 certification, refusing to do business with a company that failed to achieve ISO 14000 certification can still be considered an illegal restraint of trade under the GATT provisions. See http://www.referenceforbusiness.com/management/Int-Loc/International-Organization-for-Standardization.html

Table 6 shows the share of female employment in the T&C industries across a selection of developing countries. Although in Bangladesh and Sri Lanka the share of women employed in the in T&C is high, in India it is low. Although overall the share of women employed in the T&C industry decreases as we move down the country income classification, this does not appear to be the case in India or Botswana.

Table 6: Share of female labourers in the T&C sector in selected developing countries

Country	Female workers (%)
Less Developed Countries	
Bangladesh	90
Cambodia	90
Low Income Countries	
India	11
Lower middle income countries	
Sri Lanka	87
Philippines	72
Colombia	62
Peru	43
Upper middle income countries	
Costa Rica	58
Botswana	80
Mauritius	67
Ecuador	56
Mexico	57

Source: adapted from UNCTAD (2004:149)[20]

Some authors have noted that the gender wage gap can in some cases be used as a competitive advantage: that due to the gender wage gap, female employment helps to compete in the world market.[21] Other authors posit that export-orientated activities in the T&C industries have traditionally relied on cheap female labour whilst the upgrading of the industry usually makes use of male skills: women have few opportunities to be trained for higher skilled jobs (UNCTAD, 2004).

Women represent 90% of the total 1.8 million workers in this T&C sector in Bangladesh. Even though the wages paid to women are twice as high as those paid to agricultural labourers and construction workers, women are mainly employed at the low-skill end of production. UNCTAD (2004) notes that women have less of an opportunity to be promoted to higher skilled positions, they are often not trained to use higher technologies when introduced[22], simply being bypassed, and have less access to non-monetary benefits such as healthcare.

Women are paid considerably less per hour for similar work in the Madagascan manufacturing industry. Cling *et al* (2007) note that women appear to be subject to a form of wage discrimination earning 10-15% less in the industry. However, Zone

[20] Data is for the latest year available and is taken from ILO Yearbook of Labour Statistics.

[21] Some authors posit that trade liberalisation has lead to skill polarisation; a smaller number of skilled men and a larger number of unskilled female labourers employed in the T&C industry. In the case of Pakistan, this is due to a gendered access to education and technology, with women being disadvantaged (Siegmann, 2006)

[22] As a result, the largest growth in wages has been observed in the category of skilled workers – mostly men. Even after controlling for skills, the gender related wage gap was equivalent to 41% in 1997.

Franche companies still pay their employees more on average than the informal sector which is the main alternative for low-skilled female labour force.

Women employed in the textile industry have a relatively high level of education, but in most cases not as high as men; consequently men occupy skilled positions whilst women are stuck in lower job categories. Even after controlling for skills, male workers still receive 30% higher wages Almost half of the female workers are employed on a temporary or subcontracted basis, whilst most men occupy permanent salaried positions (UNCTAD, 2004) as a result women do not receive additional social benefits to which they should be entitled.

The Vietnamese T&C labour market is characterised by gender-related job segregation (UNCTAD, 2004). Female labour is concentrated in jobs such as weaving, spinning or hanging fibres, whilst men are employed mainly in more technical and skilled positions such as machine supervisors or fabric dyers. With the introduction of new technologies women's jobs such as weaving or spinning have been made redundant. Since men typically have a higher level of education necessary to operate introduced newly introduced technology there has been a shift towards a preference for male labour.

Men are thus more likely to be formally employed, paid more, and work in higher skill operations. Women are more likely to be informally employed, paid less, receive less non-monetary benefits, and work at the lower skill and value added sections of the T&C value chain.[23]

Although most studies on gender and equity in T&C production find a gender bias against women in both working conditions and financial remuneration, employment within the industry is in many countries favours women. It is usually better than other alternatives such as agriculture or domestic service in the amount of wages paid (Barrientos *et al*, 2004). The alternative for women in (urban) garment assembly firms in Bangladesh and Cambodia is seeking employment in rural areas which is dominated by men and where gender inequalities are higher. T&C activities offer women better employment opportunities than they would have had in the rural areas, and they pay twice the rate of domestic servants in Bangladesh (Kabeer and Mahmud, 2004).

[23] Gender inequality arises because men are more likely to be concentrated towards the formal end of the continuum and women towards the informal end (with some exceptions), see Barrientos et al. (2004).

3.4 Poverty Reduction Strategies

This section discusses how the T&C and garment industry is referred to in the most recent National Poverty Reduction Strategies (PRSP's) for the following developing countries and highly dependent T&C exporters: Bangladesh; Lesotho; Cambodia; Pakistan; Laos PDR and Madagascar (Appendix C). The industry is mentioned differently with respect to its expected contribution to poverty reduction:

- Less dependent countries such as Pakistan focus on increasing exports as a means to reducing poverty without specific mention of the T&C industries, thus indicating that diversification has already taken place;
- Strong support measures for the ready made garment sector as well as export diversification in Bangladesh;
- In countries such as Madagascar which have suffered due to the removal of quotas in the post-MFA world, the PRSP recommends diversifying into other sectors such as tourism and commodities (which have recently improved in their terms of trade vis-à-vis T&C exports);[24]
- Highly dependent countries such as Cambodia view improving labour standards (terms of employment, remuneration, working conditions) as the means through which the sector can contribute to poverty reduction; and
- In Laos, the development of labour-intensive manufacturing industries, particularly the textile and garment sub-sectors and natural resource-based industries, will enhance employment creation and income generation, including for the poor.

This quick overview suggests that PRSPs mention the importance of textiles and clothing in achieving development goals. But there are different views in different countries – in some countries improving T&C employment lies at the core of a development strategy for that country, while in other countries (that have already had T&C production which is now under threat) more emphasis is on export diversification.

[24] See Kaplinsky (2006)

4 The influence of trade and other policies

The pattern and effects of textiles and clothing industries in developing countries has been affected by trade and other economic policies. Countries with adequate public policies and private sectors have used the opportunities provided by temporary trade preferences for the T&C to move up the value added chain (Asian Tigers, Mauritius, Costa Rica); other countries have used the trade preferences to attract a very important part of their manufacturing base (e.g. Lesotho, Bangladesh, Malawi) but may still have to make full use of the opportunities offered to develop dynamically and diversify into other activities at a time they are faced with competition from other countries (e.g. China).

4.1 Trade policy

Multilateral liberalisation and regional and bilateral trade preferences affect the pattern of textiles and clothing industries.

WTO and the removal of the MFA quota system

The Multifibre Arrangement (MFA) governed trade in textiles and clothing from 1974 until the end of the Uruguay Round (1994) (see WTO, 2002). The MFA was a framework for bilateral and unilateral restrictions and quotas limiting imports into countries whose domestic industries were facing damage from rapidly increasing imports (EU, Norway, Canada, US). In 1995, the Agreement on Textiles and Clothing (ATC) replaced the MFA. The Agreement of Textiles and Clothing stipulated that quotas would be removed over 1995-2005. In the first phase (Jan 1995 -Dec 1997), a minimum of 16% of products will need to be brought under GATT rules, 17% in phase 2 (Jan 1998-Dec 2001), 18% in phase 3 (Jan 2002 -Dec 2004), and 49% in phase 4 (before Jan 2005). Some 30 countries were constrained by quotas under the ATC (see http://sigl.cec.eu.int/information) so that production had to be shifted to non-quota constrained countries in order to keep access in developed country markets.

Whilst quotas on T&C exports have been removed, there remain other barriers to contend with, such as the use of voluntary and other constraints on Chinese exports as well as complex systems of tariffs and rules of origin. Tariffs in the EU and US are relatively high for textiles and higher for clothing compared to other manufacturing products.

Effect of China on competitors (World Bank Global Economic Prospect 2008)

China's exports of clothing soared 22 percent in 2005 and 32 percent in 2006, increasing its market share in those two years to 24 percent and 28 percent, respectively, but the impact on competitors has been less drastic than some had feared because overall demand has increased. In Bangladesh, where 1 million jobs were predicted to be lost, exports to the EU and the United States gained continuously between 2004 and the first four months of 2007. Some countries have seen a decline in their exports to the US and EU markets such as Swaziland and Taiwan. African exports to the EU and the United States fell by 7 percent in 2004 and 17 percent in

2005. Colombia, the Dominican Republic, Mauritius, Peru, and Sri Lanka are at risk in the EU market when China removes the final restrictions. In the U.S. market countries at risk include the Dominican Republic, India, and Sri Lanka.

The Global Economic Prospect suggests that the clothing sector still provides an opportunity for export diversification and the expansion of manufactured exports for low-wage countries, even in the face of competition from China: " The countries best able to expand their exports of clothing will be those that have a supportive business environment, low trade costs (efficient customs, ports, and transport infrastructure), and competitive firms that are flexible enough to meet the changing demands of the global buyers that now dominate the industry."

EBA/AGOA

The US and EU both have preference schemes but they operate differently. The EU operates the Everything but Arms (EBA) scheme which has allowed duty free and quota free access for all LDC products (except sugar and some other products) since 2001. In addition, the EU has a series of trade agreements with developing countries (e.g. with Mediterranean countries and ACP countries under Cotonou and now interim EPAs) that have allowed for duty free access for textiles and clothing exports. However, the rules of origin in these agreements limit the opportunities for these countries to import textiles from third countries, assemble in-country and export it to the EU.

The US's Africa Growth and Opportunity Act (AGOA) has more relaxed rules of origin and the tariff preferences have, despite the quota removal but thanks to high MFN tariffs for other countries, led to a quick export response in eligible African countries. The US removed restrictions on a broad list of products in 2001. Frazer and Van Biesebroeck (2007) find that AGOA has a large and robust impact on apparel imports into the U.S., as well as on the agricultural and manufactured products covered by AGOA. These import responses grew over time and were the largest in product categories where the tariffs removed were large. AGOA did not result in a decrease in exports to Europe in these product categories, suggesting that the US AGOA related imports were not merely diverted from elsewhere. The absolute export increase attributed to AGOA totals US$ 439mn, most of which is in apparel and amounts to approximately 0.15% of the AGOA countries' GDP in 2000.

4.2 Other economic policies

Investment policies and other economic policies also affect the patterns and types of textile and clothing production as well as the pattern of diversification. There are at least five groups of factors influencing domestic and foreign investment:

- economic policies for enhancing economic fundamentals;
- administrative and regulatory framework (investment climate);
- international factors;
- governance and institutional set-up; and
- specific investment policies and incentives.

Incentives

Several countries offer incentives to attract investment. For textiles and clothing producers these might include zero corporation and income taxes and zero import duties. Investment incentives are often aimed at overcoming other negative investment climate factors. However, while there are questions about their effectiveness in attracting or keeping footloose textile and clothing investment, they may also imply foregoing government revenue which competent governments could have used to promote growth and development in the country.

The successful examples of EPZs (e.g. Singapore, Dubai, and Ireland) suggest it is important to have fenced off areas with zone specific rules and regulations (e.g. help with customs clearance), infrastructure (purpose built infrastructure) and institutions (security organisations) which can be based on economies of scale and scope. Countries that do not have appropriate complementary factors in place will usually struggle to make incentives effective as a basis for attracting quality investment and development in the long-run.

EPZs are primarily established in developing countries in order to attract foreign capital and know-how, and generally specialise in the production of labour intensive consumer goods, mostly clothing (Cling et al. 2007). These zones or enclaves are typically provided with a host of concessions by local governments[25] including relaxing tax concessions, the supply of infrastructure, and other commercial policies including those related to the supply of low skilled labour, in order to attract foreign investment. If EPZs are no longer attractive to investors given the phase out of the MFA agreement, the challenge for host countries lucky enough to have achieved preferred supplier status at present, still remains that of the design and appropriate balance of incentives and appropriation mechanisms.[26]

One example is Malawi, where the government introduced an EPZ policy in 1995, creating tax havens for firms that produced solely for export. Very few firms were locating in EPZs in Malawi perhaps because exporting conditions in this landlocked country are difficult. Malawi only has 18 firms with EPZ status, of which 7 in textile and garments and the rest in mushroom production, macadamia nuts and horticulture. While EPZ firms provide little employment on a national scale, they provide a significant and increasing level of employment and investment in manufacturing (around 6000 jobs currently), and they provide around 10-15% of total exports of goods.

The incentives in such EPZ schemes are often not the key conditioning factors; e.g. for the garment factories it is the trade incentives offered through AGOA and regional trade agreements. On the other hand, there is no guarantee that without incentives

[25] See Jones et al. (1995) for a discussion of labour market aspects of enclave led growth. The term 'enclave' is often found within the literature on EPZ's which use domestic labour and foreign capital to produce exportables for the world market such as T&C, but to a greater extent clothing (given the characteristics of production, being more footloose than textile production).

[26] It has been noted by Brenton (2007) that it remains to be seen how relevant the role of EPZs in a global market dominated by buyer driven value chains will be in a post MFA world. This is a fair point, given that relations between major buyers and preferred suppliers will have mostly been consolidated in preparation. Nevertheless the relations between buyers and producers are dynamic.

these firms would still be operating and conversely, if the conditioning factors and incentives deteriorated much further, such companies would probably have to exit. The key thing to note is that such incentives alone are unlikely to move the country onto a higher development path and other policies are required.

Economic policies for upgrading and diversification

Several countries did manage to upgrade as part of textiles global value chains and move into other higher value added activities, but this has required pro-active upgrading policies. Some countries fared well under the buyer-driven system, with some Asian countries becoming OEM (original equipment manufacturing) producers and/or OBM (original brand manufacturing) producers. Such a movement requires a skilled workforce with appropriate design and marketing skills. The newly industrialised economies in East Asian became OEM producers partly through 'triangle manufacturing', whereby US buyers place an order with East Asian NIEs, who in turn shift part of the production to low-wage countries (China, Indonesia, Vietnam), and finished goods are shipped directly from that country to the US under the US quota system (in operation until the quotas of the MFA (Multi Fibre Arrangement) were phased out in 2005) which applies to the exporting country (Gereffi, 1999).

However, other countries are locked into the upstream part of the production chain with few incentives (from actors lower and further down the value chain) and few skills to upgrade to OEM production. It is thus important to keep upgrading and acquiring new skills, or otherwise risk being locked into the less value added parts of the chain with fewer dynamic effects on growth in developing countries, and less potential for economic diversification.

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Te Velde and Xenogiani (2007) discuss the relationship between upgrading, attracting investment and education policies in the case of Central America. Two relatively low skill countries Guatemala and Honduras have been able to attract some FDI but this coincided with weak developments in secondary education. There are several accounts of garments firms locating in these countries who use low labour costs, provide little training and who do not need highly skilled or well trained workers and who threaten to move on when wages rise. By contrast, Costa Rica, which used to be similarly poor, has followed consistent skill development policies, attracted garment assemblers but has since managed to attract higher value added, electronic investors who in turn, in co-ordination with local governments and institutes attempt to develop skills providing incentives throughout the whole education system. The government's policies and institutions are more in tune with strategies of the private sector and multinational enterprises (Mortimore, 2004). The examples of Costa Rica, several Asian countries and Mauritius (in Section 2) illustrate that countries that were once poor and used textiles and clothing to develop can subsequently attract high quality investment, upgrade and develop human resources as long as appropriate policies and institutions are in place.

Enhancing work productivity through skills training and technological upgrading is a key step towards diversifying production into higher value added garments such as the more fashion sensitive women's wear categories. In Sri Lanka the government has levied a garment tax to fund technological upgrading and skills enhancement in the

industry. The commercial minister of Sri Lanka has called for the introduction of design and product development professional courses for industry participants in the country's universities (UNCTAD 2005a). The Sri Lanka government has therefore recognised the cumulative and spillover effects that T&C production may bring to the economy and has acted to improve benefits.

5 The experience of the textile and clothing industries in selected countries

This section discusses the role of the T&C industry across a number of countries.

Bangladesh

The T&C industry in Bangladesh is the largest employer after agriculture, Bangladesh is particularly dependent on the export of ready made garments (Yang *et al* 2004). Several studies predicted the collapse of the T&C industry by 2004 due to the MFA phase out, but such predictions have not played out. On the contrary, major US and EU buyers have indicated that Bangladesh will remain a major supplier.

Foreign investors were instrumental in expanding clothing exports, attracted to the EPZ which were responsible for 10-12% of total exports in 2004, although over time the role of FDI has decreased due in part to government restrictions (Yang et al. 2004). Nordas (2004) finds that the import value of textiles in Bangladesh was about 60% of the export value of clothing in 1991 but had declined to about 40% by 2001 indicating that backward linkages have developed over time.

In restricting the role of FDI within the broader T&C industries, Bangladesh has forgone a number of FDI-related benefits such as superior technology and managerial skills. On the other hand they can still tap into global value chains which are often critical sources of product information and channels for export sales. Without such linkages, inadequate labour training, outdated equipment, poor infrastructure and relatively large quotas provide Bangladeshi exporters few incentives for product upgrading. Consolidation of larger manufacturers is now taking place through the pulling of factories into one location with larger and better facilities and management (Mlachila *et al*., 2004). Bangladesh produces at the low end of the market ("cut, make and trim") where value added and profit margins are low.

Kabeer and Mahmud (2004) argue that the industry has made a significant contribution not only to economic growth and export earnings in the country, but also to poverty reduction. The majority of its workers come from poorer households and the poorer districts of Bangladesh, have low levels of education and their families are often landless and in food deficit for some of the year. Kabeer and Mahmud (2004) further suggest that the wages women are able to earn in the garment industry are higher than in the available alternative forms of employment, which enable them to support themselves and one other adult at levels of living above the poverty line. The fact that many workers remit part of their income to the countryside suggests that it is indeed being used to support their families.

Mauritius

Mauritius has developed economically firstly on the basis of sugar followed by textile and clothing in the 1980s and subsequently tourism and other services. Whilst in general sub-Saharan Africa lags behind other developing regions of the world in terms

of T&C manufacturing due to inadequate transportation and communication infrastructure; shortage of low wage labour; difficult political environment etc.

Mauritius is an example of a successful T&C exporter which has flourished due to favourable external conditions and active government intervention. The reasons for success in T&C production and ability to move into increasing value added activities are multi-fold is due to preferential market access to the European market; productive labour, Indian migrants; foreign capital from East Asia (Hong Kong investors); political stability and favourable tax treatment. The disadvantages of location in cost terms were offset by a concentration on high unit value products such as 'Scottish' knitwear (Gereffi 2002).

From 1997 a large scale relocation of production took place from Mauritius to Madagascar - flying geese behaviour - due to increased relative wages in Mauritius which led all EU orientated apparel suppliers in Mauritius to increase the proportion of their output accounted for by long runs of basic clothing (Gibbon 2001). Although Mauritius has been able to diversify and move quickly into higher value added activities such as services, the T&C industry still generates around 9% of GDP (ILO 2005) and is estimated to provide indirect employment for around 250,000 people, and direct employment for around 78,000 people, 70% of total manufacturing employment. The competitiveness of the industry is under threat despite best efforts to diversify in preparation for a post-MFA period. The industry has already lost 40-50,000 workers in the first 5 years of the decade – absorbed by the service sectors.

Madagascar

Madagascar became the number two African clothing exporter in sub-Saharan Africa behind Mauritius (Cling et al 2007), in 2001. One of the key reasons for success in Madagascar was the strong push for outward orientation led by the government, generous tax breaks, combined with low wages and trade preferences. Most investors attracted to the Zone Franche scheme were French, Mauritian or Asian (labour costs in 2001 were around one third of that in Mauritius). Gereffi (2002:21) notes that the shift to lower cost production in Madagascar particularly from Mauritius is associated with a focus on making basic clothing items. Thus illustrates that standardised production is an easy entry point for developing countries in clothing chains, particularly in an assembly orientated production system (Ibid).

By 2002 political instability severely disrupted employment in EPZs of which T&C is the main industry. Instability caused a reduction in formal employment of 60%. Employment returned to pre-crisis levels by 2004, the speed at which investors were able to reduce export and related employment is particularly notable.

Since the abolishment of MFA quotas the government had to consider future prospects. One consideration put forward by the government is to vertically integrate cotton processing and processing, therefore reducing dependency on imports of raw materials (ILO, 2005). Whether this is enough to maintain the T&C industry in Madagascar and attractiveness of the Zone Franche to investors remains to be seen. Cling *et al*. (2007) note that export and employment growth in T&C has now come to a halt. They also argue that since the end of the clothing quotas, EPZs can no longer

be put at the core of development and employment policies in Africa, but that no alternative strategy has emerged yet.

Cambodia

Over the last decade Cambodia's garment industry has been a key source of export growth and formal employment contributing approximately 10% to the country's GDP (ODI 2005) and 12% currently, growing from a virtually non-existent base in the 1990s. Around two-thirds of Cambodia's exports now go to the US, with the remaining going to the EU. Cambodia and the US have a bilateral trade agreement within which ensuring adequate labour standards constitute specific market access criteria. Garments make up almost 80 per cent of Cambodia's exports and employ 65 per cent of its manufacturing workforce.

The garment industry employs 270,000 employees directly. Thousands more jobs have been created on the sidelines (food sales, other services, packaging etc). Some 85 to 90 per cent of garment factory workers are young women aged 18 to 25 years old.

ILO (2005) suggests Cambodia's factories have retained the loyalty of major buyers around the world by being low cost as well as keeping decent working conditions. A socially responsible strategy has therefore been adopted in order to increase competitiveness and differentiate from other T&C exporters within the region, which has mostly worked. The continuation of the 'high road' strategy of labour standards is seen by all industry actors as a useful way to retain buyers.

The Cambodian government continues to provide concessions to foreign investors. EPZs are located on the main roads into the coastal region of Silhanoukville. Wages remain low in Cambodia, good transport links exist between the two countries, and further infrastructure investments are planned within the Mekong Corridor linking Cambodia with Southern China.

Whilst foreign garment manufacturers have helped integration into the T&C GVC, Cambodia still operates at the downstream end of the chain, cutting and making yarns into finished garments, in which value added and profit margins are relatively low and reliance on imports are high. Cambodia's positioning within the Mekong growth corridor and links with East Asian investors mean that it is likely to remain attractive to Eastern investors. In 2002, the ASEAN countries and the Asian newly industrialised countries were the main investors in Cambodia, and they accounted for the lion's share of FDI flows and stock in the country.

6 Conclusions

This paper examined the role of textile and clothing industries in growth and development strategies in developing countries. Broadly, we suggested that textiles and clothing industries are important in economic and social terms, in the short-run by providing incomes, jobs, especially for women, and foreign currency receipts and in the long-run by providing countries the opportunity for sustained economic development in those countries with appropriate policies and institutions to enhance the dynamic effects of textiles and clothing.

The T&C industry is very important for a handful of countries, in terms of trade, GDP and employment and has contributed significantly in several other countries. The T&C industry provides opportunities for export diversification and expansion of manufactured exports for low-income countries that can exploit their labour cost advantages and fill emerging niches and meet increasing buyer demands. There are also dynamic effects of T&C and these effects are greater, the more linkages have been built up between the garment industry and local textile suppliers.

We reviewed key statistics at the macro level and suggest a number of ways in which the T&C industry affects growth in developing countries:

- T&C is a major contributor to incomes for selected countries. The contribution of T&C production to GDP differs by country but ranges from around 15% in Pakistan to around 5% in Sri Lanka and 1% in Mauritius.
- T&C are the dominant exports in certain countries. Low income and developing countries such as Cambodia, Bangladesh, Pakistan and Sri Lanka depend on T&C exports for more than 50% of total exports.
- The employment effects are also significant. Employment in T&C production for less developed and low income countries as a share of total employment in manufacturing ranges from 60% in selected developed countries (e.g. Lesotho, Bangladesh) and 35% for selected low income countries.

There are also considerable social aspects of the T&C industry. While wages in developing countries in some assembly activities are likely to be lower than wages in developed countries in downstream activities in the clothing same value chain, this misses the point in two accounts. Without appropriate policies and institutions, developing counties often do not have the skills to enter into higher value added activities such as design and marketing, and a better comparator is what workers would otherwise have earned had there been no textiles and clothing industries. Wages paid to T&C labourers are on average higher than those paid to agricultural labourers (with the exception of Mauritius), and half the average manufacturing wage suggesting that textiles and clothing is a first step up the value-added manufacturing ladder beyond agriculture but before other manufacturing and services activities. Foreign firms pay higher wages than local firms.

Although most studies on gender and equity in T&C production find a gender bias against women in both working conditions and financial remuneration, employment is often in favour of women (e.g. 90% of garment workers in Bangladesh are women). T&C employment is usually better (in terms of wages) than other alternatives such as

agriculture or domestic services. Further, a quick review of PRSPs suggests that they mention the importance of textiles and clothing in achieving development goals. But there are different views in different countries – in some countries improving T&C employment lies at the core of a development strategy for that country, while in other countries (that have already had T&C production which is now under threat) more emphasis is on export diversification.

The pattern and effects of textiles and clothing industries in developing countries has been affected by trade and other economic policies. Countries with adequate public policies and private sectors have used the opportunities provided by temporary trade preferences for the T&C to move up the value added chain (Asian Tigers, Mauritius, Costa Rica); other countries have used the trade preferences to attract a very important part of their manufacturing base (e.g. Lesotho, Bangladesh, Malawi) but may still have to make full use of the opportunities offered to develop dynamically and diversify into other activities at a time they are faced with competition from other countries (e.g. China). The potential of the textile and clothing to contribute to long-run growth and development will therefore depend not just on the attributes (desirable or otherwise) of the investor, but also on the quality and effectiveness of government policies and institutions in developing countries.

The importance of T&C production for growth and development and the role of policies were evident in a number of brief country case studies:

- The garment industry is the largest employer in Bangladesh after agriculture. It is the main source of manufacturing employment and exports.
- Mauritius diversified from sugar into textile and clothing in the 1980s and subsequently into tourism and other services. The T&C industry still generated around 9% of GDP, indirect employment for 250,000 people, and direct employment for around 78,000 people, 70% of total manufacturing employment, although this is now declining.
- Madagascar has benefited an important ways from the textiles and clothing industry. It benefited in particular from trade preferences and low labour costs, especially after job relocation away from higher costs Mauritius, though there are questions about sustainability in a post-MFA quota world.
- Growing from a virtually non-existent base in the 1990s, Cambodia's garment industry has become a key source of exports, formal employment and contributes approximately 10% to the country's GDP.

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Appendices

Appendix A Supporting data and charts(1)

Table A1: Top 20 Textile Exporters[27]

Economy	1990	2003	Economy	2006	Total world market share 2006 (%)
World	**112,666**	**185,596**	**World**	**218,594**	
EU-25	50,850	59,906	EU-25	71,208	32.6
China	7,219	27,176	China	48,683	22.3
Hong Kong	8,224	13,093	Hong Kong	13,910	6.4
United States	5,061,	10,884	United States	12,665	5.8
South Korea	6,084	10,777	South Korea	10,110	4.6
Taiwan	6,219	9,392	Taiwan	9,763	4.5
India	2,180	6,856	India	9,330	4.3
Japan	5,850	6,426	Turkey	7,593	3.5
Pakistan	2,663	6,030	Pakistan	7,469	3.4
Turkey	1,440	5,263	Japan	6,934	3.2
Indonesia	1,264	2,940	Indonesia	3,605	1.7
Canada	687	2,264	Thailand	2,877	1.3
Thailand	931	2,195	Canada	2,369	1.1
Mexico	342	2,097	Mexico	2,192	1.0
Czech Republic	-	1,727	UAE	1,893	0.9
Switzerland	2569	1,499	Switzerland	1,593	0.7
Poland	270	1,144	Malaysia	1,437	0.7
Brazil	799	1,120	Brazil	1,365	0.6
Malaysia	381	1,022	Singapore	911	0.4
Iran	529	793	Romania	839	0.4
Total	**98,501**	**172,604**		**216,746**	
% of total world exports	**87.4**	**93**		**99**	

Source: UNCTAD (2005) and WTO (2006)

Table A2: Top 20 clothing exporters[28]

Economy	1990	2003	Economy	2006	Total world market share 2006 (%)
World	**108,408**	**235,825**	**World**	**311,410**	
EU-25	39,968	60,721	China	95,388	30.6
China	9,669	52,162	EU-25	83,415	26.8
Hong Kong	15,406	23,246	Hong Kong	28,391	9.1
Turkey	3,331	9,963	Turkey	11,882	3.8
Mexico	587	7,343	India	10,192	3.3
India	2,533	6,641	Bangladesh	7,751[29]	2.5
United States	2,569	5,549	Mexico	6,325	2.0
Indonesia	1,666	4,151	Indonesia	5,699	1.8
Romania	429	4,069	US	4,876	1.6
Thailand	2,828	3,663	Vietnam	4,838[30]	1.6
South Korea	8,020	3,647	Romania	4,423	1.4
Bangladesh	643	3,365	Thailand	4,257	1.4
Pakistan	1,028	2,901	Pakistan	3,907	1.3
Morocco	722	2,847	Morocco	3,238	1.0
Tunisia	1,126	2,722	Tunisia	3,174	1.0
Sri Lanka	643	2,516	Sri Lanka	3,046	2.0
Vietnam	215	2,490	Malaysia	2,842	0.9
Philippines	681	2,287	Honduras	2,770	1.9
Taiwan	4,023	2,114	Cambodia	2,675	0.9
Poland	365	2,074	Philippines	2,604	0.8
Total	**95,954**	**204,471**		**291,693**	
% of total world exports	**88.5**	**86.7**		**93.6**	

Source: UNCTAD 2005 and WTO 2006

[27] Millions of dollars and percentage
[28] (millions of dollars and %) 2006 data calculated from WTO World Trade Statistics
[29] Data is for 2005 only.
[30] Ibid.

Table A3: Imports and Export Value and World Market Shares of Textiles

Country	Imports		Exports	
	Value 2006 (US billion)	Share in world imports 2006 (%)	Value 2006 (US billion)	Share in world exports 2006 (%)
EU-25	70.43	30.7	71.21	32.6
China	16.36	7.1	48.68	22.3
HK	13.97	6.1	13.91	6.4
HK of which retained	0.59	0.3	0.53	0.2
HK re-exports	-	-	13.38	6.1
US	23.50	10.2	12.67	5.8
South Korea	3.91	1.7	10.11	4.6
Taiwan	-	-	9.76	4.5
India	1.99	0.9	9.33	4.3
Turkey	4.69	2.0	7.59	3.5
Pakistan	-	-	7.47	3.4
Japan	6.18	2.7	6.93	3.2
Indonesia	-	-	3.61	1.6
Thailand	2.06	0.9	2.88	1.3
Canada	4.38	1.9	2.37	1.1
Mexico	5.95	2.6	2.19	1.0
UAE	3.30	1.4	1.89	0.9

Source: WTO (2006)

Table A4: Export Value and World Market Share of Clothing

Country	Imports		Country	Exports	
	Value in 2006 (US billion)	Share of world imports in 2006 (%)		Value in 2006 (US billion)	Share of world exports in 2006 (%)
EU-25			China	95.4	30.6
US	141.2	43.6	EU-25	83.4	26.8
Japan	83.0	25.6	HK	28.4	9.1
HK	23.9	7.4	HK domestic	6.7	2.2
HK retained	18.9	-	HK re-exports	21.7	7.0
Russia	-	-	Turkey	11.9	3.8
Canada	8.1	2.5	India	10.2	3.3
Switzerland	6.8	2.1	Bangladesh	7.8	2.8
South Korea	4.7	1.4	Mexico	6.3	2.0
Australia	3.7	1.2	Indonesia	5.7	1.8
Mexico	3.3	1.0	US	4.9	1.6
Singapore	2.5	0.8	Vietnam	4.8	1.7
Singapore retained	2.5	0.8	Romania	4.4	1.4
Turkey	0.7	0.2	Thailand	4.3	1.4
Norway	2.4	0.7	Pakistan	3.9	1.3
UAE	2.0	0.6	Morocco	3.2	1.0
China	2.0	0.6	Tunisia	3.2	1.0

Source: WTO (2006)

Table A5: Top 20 less developed countries with a high dependence on clothing exports[31]

Economy	Share in total merchandise exports 2000	Economy	Share in total merchandise exports 2006[32]
World	***3.2***	***World***	***2.6***
Haiti	76.9	Haiti	85.2
Bangladesh	75.8	Bangladesh	76.6
Lesotho	73.1	Cambodia	70.4
Macao China	72.8	Lesotho	64.1
Cambodia	69.8	Macao China	63.0
Mauritius	60.9	Honduras	57.5
El Salvador	56.9	Madagascar	56.4
Sri Lanka	51.8	Sri Lanka	44.8
Myanmar	48.6	El Salvador	42.6
Dominican Republic	44.5	Mauritius	35.5
Tunisia	38.1	Albania	28.4
Albania	37.6	Tunisia	27.6
Madagascar	37.4	Guatemala	25.8
Morocco	32.3	Dominican Republic	25.5
Macedonia	24.0	Jordan	24.3
Pakistan	23.8	Pakistan	23.1
Turkey	23.5	Macedonia	21.2
Romania	22.5	Moldova	19.1
Bulgaria	14.5	Vietnam	14.9

Source: UNCTAD (2005) and WTO (2006)

Table A6: Less developed countries with a high dependence on textiles exports

Economy	Share in total merchandise exports 2000	Economy	Share in total merchandise exports 2006[33]
World	**2.5**	**World**	**1.9**
Pakistan	50.2	Pakistan	44.1
Nepal	22.7	Nepal	16.2
India	13.3	Macao	9.5
Turkey	13.2	Turkey	8.9
Macao	10.7	India	7.6
Egypt	8.8	Bangladesh	6.9
Bangladesh	7.2	China	5.0
China	6.5	Mauritius	3.6
Belarus	5.6	Indonesia	3.5
Indonesia	5.4	Guatemala	3.0
Mauritius	5.2	Tunisia	2.9
Sri Lanka	4.5	Belarus	2.6
Syria	3.4	Egypt	2.6
Thailand	2.8	Romania	2.6
Iran	2.7	Syria	2.6
Tunisia	2.6	Bulgaria	2.4
Bulgaria	2.5	Sri Lanka	2.2
Vietnam	2.1	Vietnam	2.0
Colombia	2.1	Morocco	1.9
Guatemala	2.0	Colombia	1.6

Source: UNCTAD (2005) and WTO (2006)

[31] Share in country's total merchandise exports based on value in millions of dollars and %.
[32] Or nearest year, data taken from WTO 2006, World Trade Statistics
[33] Or nearest year, data taken from WTO 2006, World Trade Statistics

Table A7: Less developed countries - merchandise, manufacturing and textiles and clothing contribution to GDP

Country	MVA % GDP		T & C % MVA		Merchandise trade % GDP		Trade % GDP		GDP per capita (PPP current international prices)		GDP per capita yr on yr (%)	
	1990	2006	1990	2006	1990	2006	1990	2006	1990	2006	1990	2006
Bangladesh	13.1	17	38	30[34]	17.5	45.4	19.7	42	976.5	2,217	3.6	4.9
Cambodia	-	-	-	-	22.4	120.5	18.9	-	-	3,041.4	-	8.4
Cape Verde	8.2	4.78	-	-	41.9	49.48	56.4	90.85	2,683.7	6,225.55	-1.6	3.7
Haiti	-	-	9	-	17.2	47.4	37.5	-	1,742.8	1,711.5	-2	0.9
Lesotho	13.9	18.1	-	-	119.3	149.4	139.3	138.3	1,696.6	3,592	5	3.1
Madagascar	11.2	13.4	36	6	31.5	40.2	44.6	70.7	779.5	972	0.2	2.3
Nepal	6	7.75	31	19	24	35.52	31.7	56.28	845.8	1,596.56	2	-0.1
Lao PDR	10	-	-	-	30.5	60.82	36.5	-	865.7	2,328.86	3.5	5.7
Group average	10.4	12.2	28.5	8.7	38.0	68.6	48.1	79.6	1370.1	2710.6	1.8	3.6
Least developed countries[35]	11	11.7	-	-	30.2	60.28	34.6	53.54	859.2	1559.19	-1.3	6.8

Source: World Development Indicators unless otherwise noted.

[34] WDI notes that T&C contribution to MVA was 40% in 1998, and 30% in the period 1998-1999 as noted by the Centre for Policy Dialogue (CPD, 2002)
[35] UN classification

Table A8: Comparison of the contribution of manufacturing to GDP across some low income countries

Country	MVA % GDP		T & C % MVA		Merchandise trade % GDP		Trade % GDP		GDP per capita (PPP current international prices)		GDP per capita growth (annual %)	
	1990	2006	1990	2006	1990	2006	1990	2006	1990	2006	1990	2006
El Salvador	22.1	22.3	26.3 (2003)	29.2 (2004)	38.4	60.7	49.8	73.7	2,938.9	5,525	3.0	2.2
India	17.1	16.1	15.2	24.4 (2003)	13.11	32.5	15.71	43.6 (2005)	1,350.9	3,827	3.7	7.7
Pakistan	17.4	18.4	27.5	91.7 (2004)	32.6	36.3	38.9	39.9	1,333.8	2,552.6	1.8	4.1
Vietnam	12.7	20.7	-	-	79.7	138	81.3	145 (2005)	940.5	3,383.9	2.8	6.9
Group average	17.3	19.4	17.7	36.3	41	66.9	46.4	75.6	1641	3822.1	2.8	5.2
Low Income countries	15.35	15.26	-	-	23.4	44.51	28.9	-	1,144.0	2,729.62	2.2	7.99

Source: World Development Indicators

Table A9: Comparison of the contribution of manufacturing to GDP across some lower middle income countries

Country	MVA % GDP		T & C % MVA		Merchandise trade % GDP		Trade % GDP		GDP per capita (PPP current international prices)		GDP per capita growth (annual %)	
	1990	2006	1990	2006	1990	2006	1990	2006	1990	2006	1990	2006
Belarus	37.7	39.2	-	-	37.3	113.9	89.6	121	4,340	9,035.3	-1.25	10.8
China	32.9	30.9	14.8	10 (2003)	32.6	66	34.8	69.7	1,326.8	7,659.7	2.3	10.1
Colombia	20.6	14.4	15.3	18.5 (2004)	30.7	37.2	35.4	40.7	4,546	7,966.8	4	18.8 (2005)
Dominican republic	18	12.7	7 (2002)	8 (2004)	73.2	57.5	77.5	77	3,505.5	8,813.4	-7	9
Egypt	17.8	32	15.5	12.4 (1996)	36.8	31.9	52.8	65	2,284.8	4,663.7	3.5	4.9
Guatemala	15.1	12.6	2.6 (1994)	7.9 (2004)	36.8	50.9	45.9	48.2	2,771	4,801.6	0.8	2.12
Honduras	16.3	20.9 (2005)	10.3	9.9(2004)	57.9	79.6	77.2	107.8	2,238.8	3,667.9	-2.85	3.9
Indonesia	20.7	28.4 (2003)	14.6	13.4 (2003	41.5	50	49	58.8	1,814.8	4,130.4	7.1	4.3
Macedonia	35.7	18.6	26.4	-	103.82 (1992)	99	61.7	117	5,701	7,612.3	-6.8	2.9

Morocco	18.4	62.6	17.3	18.3 (2001)	43.3	18.3 (2001)	58.3	82.1	2,725.9	5,028.5	2	6
Philippines	24.8	23.6	10.7	8.5 (2004)	47.8	84.7	60.8	93.6	3,022	5,473	0.7	3.5
Sri Lanka	14.8	15.1	24.3	33 (2001)	57.3	63.4	67.3	75.7	1,992.6	5,080.6	5.2	6.6
Syria	21.5	7.3 (2004)	28.8	41.8	53.7	52.8	56.3	66.5 (2004)	2,057.7	4,046	4.3	2.6
Thailand	27.2	34.6	30	14 (2002)	65.8	125.7	75.8	141.6	3,751	9,331	9.6	4.2
Tunisia	-21.9	17.4	20.3	11.5 (2004)	73.5	87.1	94.2	108.7	3,782.1	8,975.7	5.4	4.1
Group average	20	24.7	15.9	13.8	52.8	67.9	62.4	80.5	3057.3	6419.1	1.8	6.3
Lower middle Income Countries	26.6	27.4	-	-	40.2	66.4	45.2	75.3	2,074.5	7,018.4	2.2	7.9

Source: World Development Indicators

Table A10: Comparison of the contribution of manufacturing to GDP across some upper middle income countries

Country	MVA % GDP		T & C % MVA		Merchandise trade % GDP		Trade % GDP		GDP per capita (PPP current international prices)		GDP per capita growth (annual %)	
	1990	2006	1990	2006	1990	2006	1990	2006	1990	2006	1990	2006
Bulgaria	23.5 (1996)	19.9	12.3 (1997)	19.7 (2003)	48.9	121	69.9	147	5,448.1	10,127.8	-7.5	6.7
Mauritius	24.7	19.1	45.7	5.4 (2004)	118	90.2	135.6	128.3	5,315.5	13,446.1	5	2.7
Malaysia	24.2	30.6	6.5	3.3 (2003)	133.4	195.8	147	211	4,537.9	11,674.7	6.2	4.2
Mexico	20.8	18	4.8	3.9 (2000)	32.1	61.8	38.3	65.1	6,324.8	11,531.6	3.1	3.6
Romania	33.8	25.5	18.3	11.9 (1993)	32.8	68.8	42.9	78.5	5,522.4	10,090.6	-5.8	8.2
Turkey	19.5	14	14.9	18.8 (2004)	23.4	55.2	30.9	62.1	4,460.9	9,072.9	6.8	4.8
Group average	24.4	21.2	17.1	10.5	64.8	98.8	77.4	115.3	5268.3	10990.6	1.3	5.0
Upper middle Income Countries	22.35	22.99	-	-	60.26	61.56	67.18	67.26	7,319.27	8,059.27	6.47	7.2

Source: World Development Indicators

Appendix B Supporting data and charts (2)

Table B1: Employment within manufacturing and T&C, wages and share of wages in MVA								
Country	**Year**	**Share of employment in industry (%)**	**Number employed in manufacturing ('000s)**	**Share of employment in T&C (%)**	**Number employed in T&C ('000s)**	**Average wages in T&C (US$)**	**Share of T&C wages in MVA (%)**	**Value added per employee in T&C production (US$ Million)**
LDCs								
Bangladesh	1998	-	2,104,247	76.9	1,620,464	422.3	39.3	1,406
Cambodia	2000	25	436,626 (2004)	90	392,161 (2007)	498.5	19	1,105
Haiti	1997	10.7	22,513	25.3	5,666	-	-	-
Lesotho	2006	3.5	27,224	89	24,276	-	-	-
Madagascar	2004	13	495,957	56	279,824	130.8	48.5	84
Nepal	2002	-	170, 308	28.3	48,155	552.3	34.3	73
Lao PDR	1999	-	31,951	48.5	15,488	-	-	14
			Group average	**59.1**	**340,862**	**401**	**35.3**	**536.4**
Low Income Countries								
El Salvador	2006, 1998	47	423,418 (2006)	50.2	62,192	2,675	41	369
India	2003	-	7,754,000	21	1,620,000	980	36.3	4,588
Pakistan	1996	38	561,921	44.3	248,859	1647	28.5	1,463
Vietnam	2000	35	1,541, 076	22	338,340	691.8	49.8	576
			Group average	**34.4**	**567,348**	**1,498.5**	**38.9**	**1,749**
Lower Middle Income Countries								
China	2003	41	48,838,000	16	7,844,000	-	-	14,916
Colombia	2000, 2006	25	2,312,186 (2006)	22.1	99,738	3,245.8	23	1,229
Dominican Republic	2001, 2005	39	486, 728 (2005)	25.9	126,000	-	-	-
Honduras	2006	43	356,027	76	76,079	976	67.5	119
Morocco	2004	38	495,863	40	197,624	3,854.3	62	1,042
Philippines	2003	29	983,600	18.5	182,400	1,820.7	37.3	740
Sri Lanka	2001	75	11,182	46.4	200,282	661.5	26	273
Syria	2004	38	105,827	28.8	30,410	12915	-	-
Tunisia	2003	-	398,889	47.5	189,593	1,939	34.5	1,219
			Group average	**35.7**	**994,014**	**3093.3**	**41.7**	**2,791.1**

Upper Middle Income Countries								
Bulgaria	2004	68	606,767	29.5	178,650	1567.5	42	525
Mauritius	2002	63	111,017	70.2	77,977	2900.5	49.5	416
Malaysia	2003	62	1,490,400	7.3	110,800	3820.3	42.5	860
Mexico	2000	49	1,476,309	10.4	152,770	4780.8	37	2,033
Romania	2004	60	1,669, 145	19	349,052	2623	68.5	1,374
Turkey	2001	40	1,091, 994	34	371,056	3229.5	20.3	5,872
Group average				**28.4**	**206,718**	**3153.6**	**43.3**	**1,846.7**

Source: UNIDO Industrial Statistics, World Development Indicators, and ILO Labour stats. All data taken from UNIDO with the exception of the share of employment in industry which is taken from WDI and for the period 2000-2005, with the exception of Colombia, Dominican Republic, Haiti and Lesotho for which ILO data has been utilised. Numbers employed in manufacturing have been taken from UNIDO with exceptions of Colombia, Dominican Republic and El Salvador. Unfortunately lack of data meant this exercise could not be completed for Cape Verde or Guatemala

Tables B2: Cambodia - relative wages of manufacturing compared to other sectors

	Cambodia (2001) ISIC Rev 3	Wage (riel) per month	US$ equivalent
A	Agriculture	-	-
B	Fishing	-	-
C	Mining and Quarrying	-	-
D	Manufacturing	243000	62
E	Electricity	283500	72.5
F	Construction	324000	83
G	Wholesale and retail trade	270000	69
H	Hotels and Restaurants	200000	51
I	Transport	270000	69
J	Financial Intermediation	486000	124
K	Real Estate	229500	59
M	Education	297000	76
N	Health and Social work	189000	48
O	Community, social and personal services	270000	69
Average monthly wage all sectors		278363.6	71.3

Source: ILO http://laborsta.ilo.org/

Tables B3: Cambodia - relative wages across manufacturing industries

Industry, ISIC Rev 3	Annual wage per Employee in US$ (2000)
Processed meat, fish, fruit, vegetables ,fats (151)	735
Tobacco products (1600)	548
Spinning, weaving and finishing of textiles (171)	587
Wearing apparel, except fur apparel (1810)	532
Sawmilling and planing of wood (2010)	3,039
Publishing (221)	507
Basic chemicals (241)	770
Rubber products (251)	608
Glass and glass products (2610)	355
Basic iron and steel (2710)	684
Struct.metal products;tanks;steam generators (281)	575
General purpose machinery (291)	...
Electric motors, generators and transformers (3110)	...
Motor vehicles (3410)	...
Furniture (3610)	308
Average wage Total T&C (171+1810)	559.5
Average manufacturing wage	817.3

Source: UNIDO http://www.unido.org/doc/3474

Table B4: Madagascar – relative wages of manufacturing compared to other sectors

		Wage (per hour/ Franc) (2005)		US$ equivalent (average wage)	Hours of Work a week			
	Madagascar (2005) ISIC Rev 3	Male	Female		Male	Female	Average work week	Average weekly wage
A	Agriculture, hunting and fishery	1291	920	0.1	36	31	33.5	3.4
B	Fishing	3799	1533	0.14	44	34	39	5.5
C	Mining and Quarrying	2106	1224	0.28	42	34	38	10.6
D	Manufacturing	2581	1794	0.22	49	49	49 0	0.0 0.0
E	Electricity and gas supply	3021	2952	0.29	41	42	41.5	12.0
F	Construction	1689	1839	0.32	53	33	43	13.8
G	Wholesale and retail	1882	2216	0.2	48	47	47.5	9.5

	trade							
H	Hotels and restaurants	2178	2550	0.24	47	53	50	12.0
I	Transport, storage and communications	7404	2971	0.24	55	51	0	0.0
J	Financial intermediation	5245	3913	0.67	45	44	44.5	29.8
L	Public administration and defence	2225	3738	0.51	42	36	39	19.9
M	Education	6058	2438	0.25	39	33	36	9.0
N	Health and social work	1819	2201	0.43	44	47	45.5	19.6
O	Other community activities	1025	1380	0.17	47	38	42.5	7.2
Average hourly wage across sectors		2883.3	2168.7	0.23	41.8	40.3	41.05	9.4

Source: ILO http://laborsta.ilo.org/

Table B5: Madagascar – relative wages across manufacturing industries

Industry (ISIC Rev 3)	Annual wage per Employee in US$ (2004)
Processed meat,fish,fruit,vegetables,fats (151)	197
Dairy products (1520)	56
Grain mill products; starches; animal feeds (153)	105
Other food products (154)	158
Beverages (155)	457
Tobacco products (1600)	151
Spinning, weaving and finishing of textiles (171)	106
Other textiles (172)	111
Knitted and crocheted fabrics and articles (1730)	133
Wearing apparel, except fur apparel (1810)	173
Tanning, dressing and processing of leather (191)	44
Footwear (1920)	193
Sawmilling and planing of wood (2010)	49
Products of wood, cork, straw, etc. (202)	85
Paper and paper products (210)	195
Publishing (221)	197
Printing and related service activities (222)	398
Basic chemicals (241)	580
Other chemicals (242)	144
Rubber products (251)	140
Plastic products (2520)	171
Non-metallic mineral products n.e.c. (269)	405
Basic iron and steel (2710)	8
Basic precious and non-ferrous metals (2720)	142
Struct.metal products;tanks;steam generators (281)	174
Other metal products; metal working services (289)	84
General purpose machinery (291)	376
Special purpose machinery (292)	180
Accumulators, primary cells and batteries (3140)	548
Building and repairing of ships and boats (351)	347
Furniture (3610)	160
Manufacturing n.e.c. (369)	661
Average wage T&C (171+172+1730+1810)	130.75
Average wage across all manufacturing industries	216.5

Source: UNIDO http://www.unido.org/doc/3474

Table B6: Pakistan - relative wages of T&C compared to other industries

Pakistan (2002) rupee	Wage (per month)	US$ equivalent
Manufacturing	4113.74	66

Source: ILO http://laborsta.ilo.org/

Table B7: Pakistan - relative wages across manufacturing industries

Industry (ISIC Rev 2)	Annual wage per Employee in US$ (1996)
Food products (311)	2052
Beverages (313)	1809
Tobacco (314)	2207
Textiles (321)	2064
Wearing apparel,except footwear (322)	1411
Leather products (323)	1883
Footwear,except rubber or plastic (324)	1542
Wood products,except furniture (331)	2134
Furniture,except metal (332)	1005
Paper and products (341)	1141
Printing and publishing (342)	1727
Industrial chemicals (351)	2293
Other chemicals (352)	3696
Petroleum refineries (353)	3451
Rubber products (355)	8845
Plastic products (356)	1603
Pottery,china,earthenware (361)	1783
Glass and products (362)	1054
Other non-metallic mineral prod. (369)	1736
Iron and steel (371)	3384
Non-ferrous metals (372)	3653
Fabricated metal products (381)	1306
Machinery,except electrical (382)	2019
Machinery electric (383)	2663
Transport equipment (384)	2705
Professional & scientific equipm. (385)	2793
Other manufactured products (390)	1792
Average wage T&C (321+322)	1737.5
Average wage across all manufacturing industries	2361.2

Source: UNIDO http://www.unido.org/doc/3474

Table B8: India – relative wages of T&C compared to other sectors

India	Wage (rupee) per month	US$ equivalent	Hours of Work	
			Men	Women
Manufacturing	1731.8	43	46.9	46.7

Source: ILO http://laborsta.ilo.org/

Table B9: India – relative wages across manufacturing industries

Industry (ISIC Rev 2)	Annual wage per Employee in US$ (2003)
Processed meat,fish,fruit,vegetables,fats (151)	882
Dairy products (1520)	1940
Grain mill products; starches; animal feeds (153)	589
Other food products (154)	903
Beverages (155)	1554
Tobacco products (1600)	421
Spinning, weaving and finishing of textiles (171)	1143
Other textiles (172)	1014
Knitted and crocheted fabrics and articles (1730)	865
Wearing apparel, except fur apparel (1810)	898
Dressing & dyeing of fur; processing of fur (1820)	974
Tanning, dressing and processing of leather (191)	887
Footwear (1920)	893
Sawmilling and planing of wood (2010)	445

Products of wood, cork, straw, etc. (202)	833
Paper and paper products (210)	1465
Publishing (221)	3086
Printing and related service activities (222)	1219
Reproduction of recorded media (2230)	2005
Coke oven products (2310)	2046
Refined petroleum products (2320)	4824
Basic chemicals (241)	3186
Other chemicals (242)	1769
Man-made fibres (2430)	3005
Rubber products (251)	1687
Plastic products (2520)	1231
Glass and glass products (2610)	1426
Non-metallic mineral products n.e.c. (269)	1103
Basic iron and steel (2710)	3150
Basic precious and non-ferrous metals (2720)	2787
Casting of metals (273)	1346
Struct.metal products;tanks;steam generators (281)	1838
Other metal products; metal working services (289)	1279
General purpose machinery (291)	2359
Special purpose machinery (292)	2165
Domestic appliances n.e.c. (2930)	1846
Office, accounting and computing machinery (3000)	2953
Electric motors, generators and transformers (3110)	2851
Electricity distribution & control apparatus (3120)	2298
Insulated wire and cable (3130)	1751
Accumulators, primary cells and batteries (3140)	1972
Lighting equipment and electric lamps (3150)	1586
Other electrical equipment n.e.c. (3190)	1410
Electronic valves, tubes, etc. (3210)	2429
TV/radio transmitters; line comm. apparatus (3220)	3146
TV and radio receivers and associated goods (3230)	2528
Medical, measuring, testing appliances, etc. (331)	2474
Optical instruments & photographic equipment (3320)	1700
Watches and clocks (3330)	2463
Motor vehicles (3410)	4575
Automobile bodies, trailers & semi-trailers (3420)	1129
Parts/accessories for automobiles (3430)	2032
Building and repairing of ships and boats (351)	2000
Railway/tramway locomotives & rolling stock (3520)	1739
Aircraft and spacecraft (3530)	5563
Transport equipment n.e.c. (359)	2182
Furniture (3610)	1818
Manufacturing n.e.c. (369)	1407
Recycling of metal waste and scrap (3710)	1735
Recycling of non-metal waste and scrap (3720)	744
Average wage T&C (171+172+1730+1810)	980
Average wage across all manufacturing industries	1892.5

Source: UNIDO http://www.unido.org/doc/3474

Table B10: El Salvador - relative wages of T&C compared to other sectors

	El Salvador (2005)	Wage (US$ per month)		Hours of work	
		Men	Women	Men	Women
A	Agriculture	101.8	104.6	44	44
B	Fishing	194.1	139.1	-	-
C	Mining and Quarrying	216.89	217	-	-
D	Manufacturing	261.75	162.54	49	47
E	Electricity	431.08	419.26	-	-

F	Construction	218.57	328.12	-	-
H	Hotels and restaurants	286.34	207.52	-	-
I	Transport	348.98	377.05	-	-
J	Financial Intermediation	283.78	350.74	-	-
L	Public administration	407.4	512.43	-	-
M	Education	413.77	355.99	-	-
N	Health and Social work	-	-	-	-
O	Community, social and personal services	301.92	221.22	-	-
P	Private households with employed persons	138.95	90.92	-	-
Q	Extra territorial organisations and bodies	342.91	275	-	-
Average wage across sectors		282	268.7		

Source: ILO http://laborsta.ilo.org/

Table B11: El Salvador - relative wages across manufacturing industries

Industry (ISIC Rev 2)	Wages per Employee in US$ (1998)
Total manufacturing (300)	3596
Food products (311)	4630
Beverages (313)	6567
Tobacco (314)	...
Textiles (321)	2876
Wearing apparel,except footwear (322)	2474
Leather products (323)	3354
Footwear,except rubber or plastic (324)	2867
Wood products,except furniture (331)	2262
Furniture,except metal (332)	3298
Paper and products (341)	4703
Printing and publishing (342)	4596
Industrial chemicals (351)	4860
Other chemicals (352)	5746
Petroleum refineries (353)	27398
Misc. petroleum and coal products (354)	1518
Rubber products (355)	3603
Plastic products (356)	4145
Pottery,china,earthenware (361)	2190
Glass and products (362)	2499
Other non-metallic mineral prod. (369)	5622
Iron and steel (371)	3492
Fabricated metal products (381)	3484
Machinery,except electrical (382)	3361
Machinery electric (383)	3180
Transport equipment (384)	7391
Professional & scientific equipm. (385)	4806
Average wage in T&C (321+322)	2675
Average wage across all sectors	4611.8

Source: UNIDO http://www.unido.org/doc/3474

Table B12: Guatemala – relative wages of T&C compared to other sectors

	Sector ISIC Rev 2 (2002)	Wages (per month) Quetzal	US$ equivalent
00	Activities not defined	-	
01	Agriculture	1074.88	140
02	Mining and Quarrying	3552.63	462
03	Manufacturing	1837.32	239
04	Electricity, Gas and water	3371.77	438
05	Construction	1390.43	181
06	Retail trade	2258.46	294
07	Transport and storage	2536.61	329
08	Finance	-	
09	Community, social and personal services	2255.62	293
Average wage across sectors		2284.7	297.1

Source : ILO http ://laborsta.ilo.org/

Table B13: Guatemala – relative wages across manufacturing industries

Industry (ISIC Rev 2)	Wages per Employee in US$ (1998)
Food products (311)	937
Beverages (313)	1123
Tobacco (314)	2454
Textiles (321)	750
Wearing apparel,except footwear (322)	754
Leather products (323)	1335
Footwear,except rubber or plastic (324)	1071
Wood products,except furniture (331)	867
Furniture,except metal (332)	1060
Paper and products (341)	1037
Printing and publishing (342)	1243
Industrial chemicals (351)	2969
Other chemicals (352)	2056
Petroleum refineries (353)	4116
Misc. petroleum and coal products (354)	1390
Rubber products (355)	4106
Plastic products (356)	1037
Pottery,china,earthenware (361)	799
Glass and products (362)	2677
Other non-metallic mineral prod. (369)	2035
Iron and steel (371)	841
Non-ferrous metals (372)	2146
Fabricated metal products (381)	1156
Machinery,except electrical (382)	986
Machinery electric (383)	1352
Transport equipment (384)	791
Professional & scientific equipm. (385)	1491
Average wage in T&C (321+322)	752
Average wage in manufacturing	1577

Source: UNIDO http://www.unido.org/doc/3474

Table B14: Dominican Republic – relative wages of manufacturing compared to other sectors

	Dominican Republic (2004) ISIC rev 3	Wage per hour (peso)	US$ equivalent	Hours of Work	
				Men	Women
A	Agriculture	-	-	-	-
C	Mining and Quarrying	26.06	0.77	45.2	20
D	Manufacturing	50.81	1.50	45.5	41.8
E	Electricity	39.36	1.16	44.7	42
F	Construction	73.38	2.16	44	42
G	Whole sale and retail trade	51.55	1.52	45.9	38.2
H	Hotels and restaurants	41.54	1.22	46	39.3
I	Transport	34.95	1.03	47.6	42.1
J	Financial Intermediation	48.18	1.42	43.3	40.5
K	Real estate	69.14	2.04	43.3	36.8
L	Public administration	45.48	1.34	40.5	36.9
Average wage across sectors		48.1	1.43	44.6	38

Source : ILO http ://laborsta.ilo.org/

Table B15: China – relative wages of manufacturing compared to other sectors

	China (2006) ISIC Rev 3	Wages per month yuan (2006)
A-B	Agriculture, hunting forestry and fishing	785.6
C	Mining and quarrying	2027.92
D	Manufacturing	1497.17
E	Electricity, gas and water supply	2397.08
F	Construction	1367.17
G-H	Wholesale and retail trade, hotels	1478

	and restaurants	
I	Transport storage and communication	2051.92
J	Financial intermediation	3273.33
K	Real estate	1881.5
L	Public administration	1906.92
M	Education	1761.17
Average wage across sectors		1857.1

Source: UNIDO http://www.unido.org/doc/3474

Table B16: Mauritius – relative wages compared to other sectors

	Mauritius (2006) ISIC rev 3	Wages (rupee) per month (2006)	Wages US$	Hours worked (2006)	
				Men	Women
A	Agriculture	9874	363	-	-
B	Fishing	13,233	487	-	-
C	Mining and Quarrying	5744	211	40.7	-
D	Manufacturing	8208	302	43.9	42
E	Electricity	22,056	811	44.1	35.3
F	Construction	13,047	480	41	36.5
G	Whole sale and retail trade	13,547	498	37.9	41
H	Hotels and restaurants	10,560	388	42.3	39.1
I	Transport	16,664	613	46.4	38.7
J	Financial Intermediation	22,692	834	43.3	36.4
K	Real estate	13,447	495	39.2	37.9
L	Public administration	14,535	535	49.3	33.2
M	Education	16,216	596	40.6	25
N	Health and Social work	16,500	607	30.4	38.2
O	Community, social and personal services	12,298	452	42.9	34.5
P	Private households with employed persons	-	-	39.2	24.9
Q	Extra-territorial organisations and bodies	-	-	38.5	-
Average wage across sectors		13908.1	511.5	41.3	30.8

Source : ILO http ://laborsta.ilo.org/

Table B17: Mauritius – relative wages across manufacturing industries

Industry (ISIC Rev 2)	Wages per Employee in US$ (1998)
Processed meat,fish,fruit,vegetables,fats (151)	4194
Beverages (155)	6490
Spinning, weaving and finishing of textiles (171)	2967
Wearing apparel, except fur apparel (1810)	2834
Tanning, dressing and processing of leather (191)	2488
Sawmilling and planing of wood (2010)	3604
Paper and paper products (210)	3517
Publishing (221)	5462
Coke oven products (2310)	5424
Rubber products (251)	5466
Basic iron and steel (2710)	4962
Struct.metal products;tanks;steam generators (281)	4641
General purpose machinery (291)	6101
Electric motors, generators and transformers (3110)	3026
Medical, measuring, testing appliances, etc. (331)	1867
Motor vehicles (3410)	4284
Furniture (3610)	12116
Manufacturing n.e.c. (369)	...
Average wage in T&C (171+1810)	2900.5
Average wage in manufacturing industries	4673.1

Source: UNIDO http://www.unido.org/doc/3474

Table B18 : Mexico – relative wages compared to other sectors

	Mexico ISIC Rev 3 (2003)	Wages per hour (2003)		Wages per hour (2003)		Hours worked per week (2006)	
		Men (peso)	US $ equivalent	Women (peso)	US $ equivalent	Men	Women
A	Agriculture	11	1.05	11.3	1.1	41.6	35.2
B	Fishing	17.7	1.69	19.2	1.8	49.7	27.6
C	Mining and Quarrying	36.47	3.48	36.7	3.5	48.9	40.6
D	Manufacturing	21.17	2.02	15.7	1.5	45.3	42.6
E	Electricity	36.47	3.48	36.7	3.5	42.2	39
F	Construction	17.63	1.68	34.0	3.3	45.1	42.5
G	Whole sale and retail trade	18.38	1.75	15.3	1.5	47.5	41.8
H	Hotels and restaurants	-	-	-	-	47.6	44.5
I	Transport	19.38	1.85	29.4	2.9	52.9	41.4
J	Financial Intermediation	-	-	-	-	43.2	40.3
K	Real estate	-	-	-	-	49.3	40.8
L	Public administration	-	-	-	-	48.3	38.7
M	Education	-	-	-	-	32.9	29.8
N	Health and Social work	24.77	2.36	21.8	2.1	41.6	38.5
O	Community, social and personal services	-	-	-	-	43.6	40.8
P	Private households with employed persons	-	-	-	-	44.9	35
Q	Extra-territorial organisations and bodies	25.84	2.47	31.2	3.0	0	0
X	Not classifiable by economic activity	71.37	6.81	59.2	5.7	-	-
Average wage across sectors		27.3	2.60	28.2	2.7	45.3	38.7

Source : ILO http ://laborsta.ilo.org/

Table B19: Mexico – relative wages across manufacturing industries

Industry (ISIC Rev 3)	Wages per Employee in US$ (2004)
Processed meat,fish,fruit,vegetables,fats (151)	5612
Dairy products (1520)	6967
Grain mill products; starches; animal feeds (153)	8459
Other food products (154)	8423
Beverages (155)	7511
Tobacco products (1600)	13684
Spinning, weaving and finishing of textiles (171)	5292
Other textiles (172)	5217
Knitted and crocheted fabrics and articles (1730)	4807
Wearing apparel, except fur apparel (1810)	3807
Tanning, dressing and processing of leather (191)	4414
Footwear (1920)	4307
Products of wood, cork, straw, etc. (202)	3966
Paper and paper products (210)	7433
Publishing (221)	9413
Printing and related service activities (222)	7725
Reproduction of recorded media (2230)	15535
Coke oven products (2310)	10583
Refined petroleum products (2320)	11473
Basic chemicals (241)	13393
Other chemicals (242)	13891
Man-made fibres (2430)	10312
Rubber products (251)	10629
Plastic products (2520)	6164
Glass and glass products (2610)	8444
Non-metallic mineral products n.e.c. (269)	8034
Basic iron and steel (2710)	10932
Basic precious and non-ferrous metals (2720)	7690
Casting of metals (273)	6103
Struct.metal products;tanks;steam generators (281)	6357

Other metal products; metal working services (289)	7714
General purpose machinery (291)	7640
Special purpose machinery (292)	9353
Domestic appliances n.e.c. (2930)	5784
Office, accounting and computing machinery (3000)	8044
Electric motors, generators and transformers (3110)	8510
Insulated wire and cable (3130)	7196
Accumulators, primary cells and batteries (3140)	7466
Lighting equipment and electric lamps (3150)	7251
Other electrical equipment n.e.c. (3190)	6298
Electronic valves, tubes, etc. (3210)	5529
TV/radio transmitters; line comm. apparatus (3220)	15154
TV and radio receivers and associated goods (3230)	4907
Medical, measuring, testing appliances, etc. (331)	5482
Optical instruments & photographic equipment (3320)	6912
Motor vehicles (3410)	11748
Automobile bodies, trailers & semi-trailers (3420)	5633
Parts/accessories for automobiles (3430)	8279
Building and repairing of ships and boats (351)	7359
Railway/tramway locomotives & rolling stock (3520)	13224
Transport equipment n.e.c. (359)	4645
Furniture (3610)	4607
Manufacturing n.e.c. (369)	5598
Average wage in T&C (171+172+1730+1810)	4780.75
Average wage across manufacturing industries	7941.7

Source: UNIDO http://www.unido.org/doc/3474

Appendix C Wages by broad economic sector

Chart C1: Wages across sectors, Madagascar

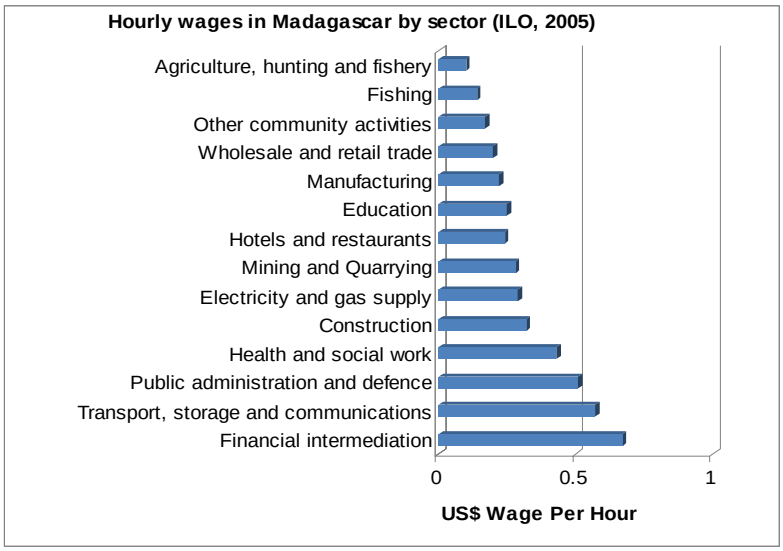


Chart C2: Wages across sectors, Cambodia

Chart C3: Wages across sectors, Guatemala

Chart C4: Wages across sectors, El Salvador

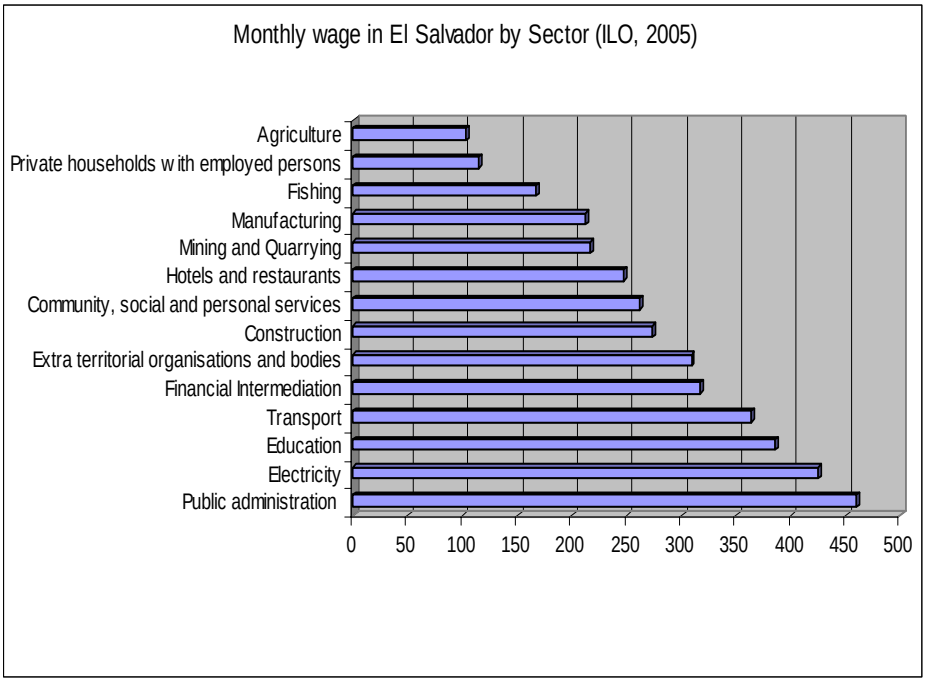


Chart C5: Wages across sectors, Mexico

Appendix D Textiles and Clothing in PRSPs

Bangladesh 2005

Supporting the Ready Made Garment (RMG) sector is noted in Section 5 under 'Future Strategies and Actions', and following 'Trade policy and Poverty'.

Supporting the RMG Sector: The Government of Bangladesh has played an instrumental role in facilitating the private sector driven growth of RMG exports by providing a range of generous support policies such as back-to-back LCs, and bonded warehouse facility. It is committed to continuing with such a supportive strategy so that RMG can maintain the momentum. From 2005-06 the Government has decided to pay 5 percent cash assistance to export oriented domestic textiles sector replacing the existing duty bond and duty draw back system. The Ministry of Commerce has designed a Post-MFA Action Programme (PMAP) to mitigate the negative effects emanating from a possible export shock after the expiry of the ATC and to help reposition the RMG sector. The PMAP will be implemented at a cost of $40 million in a period of 5 years.

Supporting the Primary Textile Sector: Primary textile sector (PTS) can emerge as a self reliant sector to supply textile products to meet the fast growing demand for domestic consumption and export. The Ministry of Textile and Jute is expected to play the role of a facilitator for overall development of PTS and provide policy support and other facilities to make the sector a strong base for backward linkage to RMG.

Promoting Export Diversification: To help promote export diversification, the Government is offering a number of attractive incentives. The Export Policy (2003-06) has identified 5 products, viz. (1) software and ICT products, (2) agro-products and agro-processed goods, (3) light engineering products (including auto-parts and bicycles), (4) leather goods, and (5) high-value ready-made garments, to be considered as sectors with the highest priority. Sectors with the highest priority and under special development programmes are to receive various generous facilities that include, amongst others: (1) project loans at lower interest, (2) income tax rebate, (3) cash support, (4) export credit on easy terms and reduced interest rates, (5) reduced costs for air cargo, (6) duty drawbacks, (7) infrastructural development support, (8) expansion of institutional and technical facilities for product quality, (9) providing support for marketing of products, (10) to support market search activities abroad, and (11) to help attract foreign investment.

Source: IMF (2005) http://www.imf.org/external/pubs/ft/scr/2005/cr05410.pdf

Lesotho 2006

The T&C industry of Lesotho is mentioned indirectly and in relation to infrastructure development. The proposed strategy is to develop water resources in order to ensure the further growth of wet industries (textiles) and maintain job creation. Backward linkages between the clothing and textile industry are therefore being fostered in order to increase the competitiveness of the industry. Water needs are mentioned most prominently as the institutional capacity to assess, monitor and manage water resources will be improved, together with water storage, delivery and distribution systems.

Source: See IMF (2006) http://www.imf.org/external/pubs/ft/scr/2006/cr06143.pdf

Cambodia 2006

The garment industry is mentioned several times in the PRSP being the top income earner after tourism for Cambodia. In terms of strategies to support and enhance the poverty reducing impact of the industry on the economy, the following points are noted.

The four pillars of 'Private Sector Development and Employment Generation' are: *(a) strengthening the private sector and attracting investments; (b) promotion of SMEs; (c) job creation and better working conditions; and (d) social safety net for workers.*

In relation to employment creation and better working conditions the main objectives are: create gainful employment opportunities in both formal and informal sectors; improve supply of qualified labour; and eliminate worst forms of child labour. It is noted that the garment industry, growing at a very fast rate, has transformed the urban employment situation by creating and sustaining labour-intensive employment mainly for young women.

Very closely linked to and as an integral part of employment is ensuring safe, proper and hygienic workplace conditions and fair and just contractual terms for the labour force. The government of Cambodia government is seeking to address such issues through setting minimum wage and holidays, reducing inequality in wages between men and women, resolution of disputes and disagreements through peaceful means without causing disruption to production and loss of wages to employees.

Priorities include: vigorously enforce the labour law and international conventions related to the role of trade unions to protect the rights and obligations of workers, employees and employers; improve working conditions of workers and employees, including displaced workers both inside and outside the country workers and pregnant workers; continue and strengthen efforts to reduce the proportion of working children (child labour); strengthen the implementation of the Law on Social Security; create a "National Social Security Fund"; examine feasible options for creation of pension funds especially for disabled persons and dependents, and insurance for work accidents as stipulated in the Labour Law.

Source: See IMF (2006) http://www.imf.org/external/pubs/ft/scr/2006/cr06266.pdf

Pakistan 2004

Sustaining export performance is a key priority, the government is making a concerted effort to diversify and is extending EPZ's. As examples, the export strategy focuses on the following areas: i) reducing the cost of doing business; ii) increasing market access;, iii) technology and skills upgrading; iv) region-specific strategy; v) encouraging export orientated foreign investment. The freight subsidy for product diversification and geographic expansion is also set to continue.[1]

Source: See IMF (2004) http://www.imf.org/external/pubs/ft/scr/2004/cr0424.pdf

Madagascar 2007

No direct mention of the T&C industry in contributing to achieving the stated goals of 10% p.a. economic growth by 2012. The PRSP focuses on laying the foundations for a high growth economy including: macroeconomic stability; increasing foreign direct investment; promoting full employment; reforming the banking; strengthening domestic industries, SME's and Handicraft industries; enhancing international trade competitiveness; intensively developing the mining sector; intensely promoting and developing the tourism sector; exploiting regional opportunities; developing economic diplomacy.

Source: See IMF (2007) http://www.imf.org/external/pubs/ft/scr/2007/cr0759.pdf

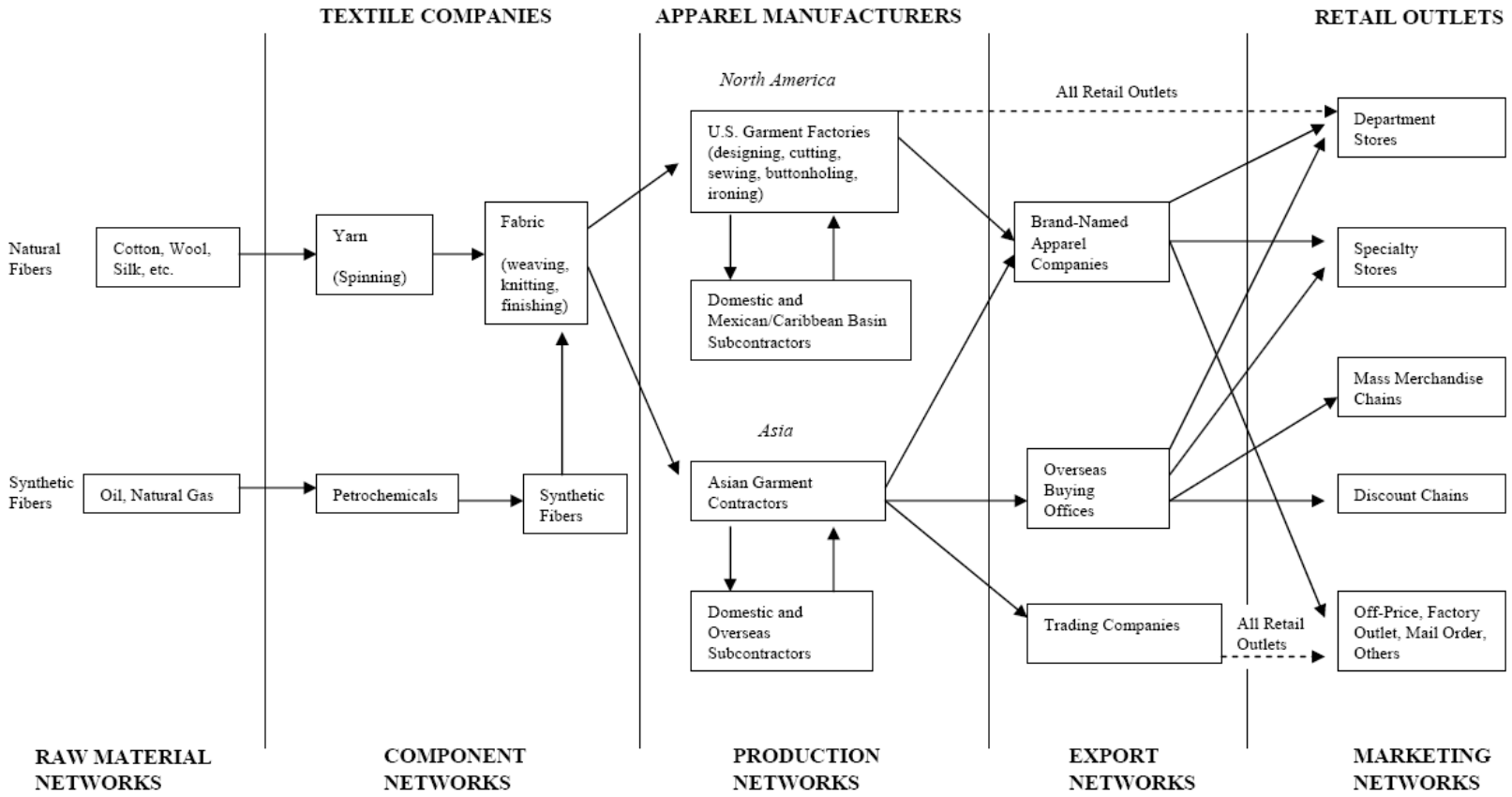
Laos PDR 2004

Garments are included within Chapter 5 on the 'Industrialisation and Modernisation: Vital Role of the Supporting Sectors' as a major manufacturing sub-sector.

It is noted that the government favours a mix of industries and activities. The development of labour-intensive manufacturing industries, particularly the textile and garment sub-sectors and natural resource-based industries, will enhance employment creation and income generation, including for the poor**.** The Government attaches great importance to the development of small and medium-scale enterprises, and of village crafts. These enterprises will be encouraged to develop export markets and possible import-substitution products; the latter is constrained by the small size of the domestic market. Special attention will be paid to the functional and technical challenges facing Lao enterprises. These challenges include lack of information, obsolete production equipment, low level of competitiveness, and limited production capacity and need to be responded to in a more market-based economic system.

Source: See IMF (2004) http://www.imf.org/external/pubs/ft/scr/2004/cr04393.pdf

Appendix E: The Apparel Value Chain



Source: Gereffi (2002)

Appendix F: Wages in foreign-owned and exporting enterprises

Table F1 Average wages per employee for garments and textiles industries in selected countries, by ownership and exporting status, expressed in '000 of local currency units per employee

Pakistan 2002				**Bangladesh 2002**				**Sri Lanka 2004**			
Textiles		Foreign	Domestic	Textiles		Foreign	Domestic	Textiles		Foreign	Domestic
	Exporter		102491		Exporter	24	41		Exporter	163	135
	Non-Exporter	50000	60936		Non-Exporter	92	35		Non-Exporter	74	76
Garments		Foreign	Domestic	Garments		Foreign	Domestic	Garments		Foreign	Domestic
	Exporter		79145		Exporter	37	32		Exporter	92	83
	Non-Exporter	146286	62013		Non-Exporter		31		Non-Exporter	95	67
Philippines 2003				Thailand 2004				Zambia 2002			
Textiles		Foreign	Domestic	Textiles		Foreign	Domestic	Textiles		Foreign	Domestic
	Exporter	202	114		Exporter	130	80		Exporter	3923	4867
	Non-Exporter	99	72		Non-Exporter	127	96		Non-Exporter	4504	3352
Garments		Foreign	Domestic	Garments		Foreign	Domestic	Garments		Foreign	Domestic
	Exporter	132	191		Exporter	87	80		Exporter	87	80
	Non-Exporter	111	68		Non-Exporter	88	62		Non-Exporter	88	62

Source: World Bank Enterprise Surveys used for background research in Qureshi and Te Velde (2007)