

**Economic development and working conditions
in export processing zones:
A survey of trends**

by William Milberg
and
Matthew Amengual

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Foreword

An InFocus Initiative (IFI) on export processing zones (EPZs) was created in the context of the Office's Programme and Budget 2006–07. This followed an earlier request that the Office continue to examine the theme from the integrated perspective of all aspects of decent work and within a tripartite framework.¹ Based on tripartism and social dialogue, the IFI was placed under the responsibility of the Social Dialogue Sector, with a view to identifying the most appropriate “policy package” to encourage a steady improvement in the quality of production and employment in manufacturing sectors competing on global markets.

A task force was set up to coordinate implementation throughout the Office. The task force consists of representatives of each SECTOR IV units (ACT/EMP, ACTRAV, DIALOGUE and SECTOR) and may be enlarged to other ILO departments.

The report of the IFI to the ILO Governing Body at its March 2008 session on the latest trends and policy developments in EPZs was based on the present working paper, as well as country studies and round tables.²

The scope of this working paper was agreed among the task force in accordance with the IFI mandate. It is based on two studies, one focusing on macro-economic and trade issues as well as employment trends and the other on labour standards and working conditions in EPZs. Where possible the studies compare the situation within and outside EPZs. One important feature of the studies is the impact of EPZs on national markets and development strategies.

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¹ See ILO, *Report of the Committee on Employment and Social Policy*, 286th Session, GB/286/15 (Geneva, March 2003), para. 96 – *Record of decisions*, GB.286/205, para. 58.

² See ILO, *Report of the InFocus Initiative on export processing zones (EPZs): Latest trends and policy developments in EPZs*, 301st Session, GB.301/ESP/5.

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Introduction

Export processing zones (EPZs) are those regulatory spaces in a country aimed at attracting export-oriented companies by offering these companies special concessions on taxes, tariffs and regulations. Some of the typical special incentives offered under EPZs include:

- (a) exemption from some or all export taxes;
- (b) exemption from some or all duties on imports of raw materials or intermediate goods;
- (c) exemption from direct taxes such as profits taxes, municipal and property taxes;
- (d) exemption from indirect taxes such as VAT on domestic purchases;
- (e) exemption from national foreign exchange controls;
- (f) free profit repatriation for foreign companies;
- (g) provision of streamlined administrative services especially to facilitate import and export;
- (h) free provision of enhanced physical infrastructure for production, transport and logistics.

There are other, less transparent features of EPZs that are sometimes used to provide further incentives for firm investment and export. One is a relaxed regulatory environment, including with respect to the enforcement of labour rights and standards (notably the right to unionize), foreign ownership regulations and on the leasing or purchasing of land.¹ Another feature (although not available to all countries simultaneously) is an undervalued currency that renders costs lower (in foreign currency terms) and raises export competitiveness.

EPZs take a variety of names in different countries. Throughout this paper we will use the shorthand of export processing zone to designate a wide variety of regulatory frameworks that contain some or all of the special concession listed above. Singa (2007, p. 24) lists 32 different titles used for such zones around the world, each indicating slight differences in terms of concessions, subsidies and regulations. In manufacturing, EPZs range from “Special Economic Zones” that comprise entire provinces of China, offering reduced business taxes and foreign exchange controls and lax labour codes, to the classic “fenced-in” EPZs of Ireland, Malaysia, Mexico, Dominican Republic, Mauritius and Kenya that offer a 15-year tax exemption, relief from exchange controls, free profit repatriation and limits on trade union freedom, to enterprise zones such as those in Indonesia and Senegal focused on reviving depressed municipal areas through the development of small and medium enterprises. Thus EPZs may be of the traditional geographically self-contained variety or they may apply to single factories operating in different geographical locations.

EPZs have been extended from goods production and assembly to services, and thus include information processing zones in India and the Caribbean, that offer tariff

¹ On labour rights enforcement, see ILO (2003a). On foreign ownership and property issues, see Engman et al. (2007, p. 17).

exemptions on information technology required for services provision, and even financial services zones, such as those in Dubai, Turkey and the Cayman Islands, offering tax relief and free repatriation of profits to financial corporations.²

Over the past five years, EPZs have grown in terms of their number, in terms of the number of countries offering them, in terms of their size and in terms of the scope of industries they comprise. This expansion has occurred in the face of increasing economic and political opposition to EPZs at the global level. The Agreement on Textiles and Clothing ended the global quota system for apparel, which accounts for more EPZ output than any other. This has already resulted in enormous increases in China's share of global apparel exports, and huge declines in market share in other countries. With a growing world labour force and a spread of mass production technology, global productive capacity has greatly increased, not only in apparel, but also in electronics (the other main sector of EPZ-based production).³ As a result, world prices of these goods have fallen relative to other goods. This softness in the terms of trade of EPZ-intensive economies has created pressure on wages and labour standards as well as on the profit margins of EPZ-based companies.

Political sentiment has also moved against the expansion of EPZ-based production. The ILO, which has monitored and scrutinized the labour conditions in EPZs for almost 30 years, continues to be concerned about the lack of "decent work" created in such zones.⁴ NGO activity against sweatshop labour conditions has increased global awareness, spurring growing fair trade and ethical consumption movements that, while not only aimed exclusively at EPZ working conditions, certainly focus on them. World Bank and other economists have been sceptical of EPZs because of their distortionary nature, fearing that EPZs serve as safety valves that create some jobs and exports but allow a postponement of economy-wide liberalization.⁵ And the WTO Agreement on Subsidies and Countervailing Measures is a road map for developing countries to eliminate precisely those types of export subsidies that define EPZs (although the WTO recently agreed to effectively extend to 2015 exclusion from this ban for 19 developing countries). Regional trade agreements (RTAs) have expanded in number, with some RTAs excluding EPZ shipments from the agreement.

Despite this growing economic and political resistance to EPZs, developing country governments continue to expand their use of EPZs. Why? Most developing country governments embrace an export-led industrialization strategy to development, and they continue to see inward FDI as providing a crucial connection to the global economy through its global value chains. According to (Aggarwal, 2005, p. 4) "the adoption of export-led growth strategies by developing countries has led to a considerable increase in the number of EPZs across the world".

² Engman et al. (2007, p. 11).

³ On the expansion of global productive capacity, see Freeman (2005).

⁴ See ILO (2003) for evidence of this history. See ILO (2005) for a recent study on decent work within the context of EPZ employment.

⁵ The term safety valve is from Madani (1999, p. 17). Some examples of the economic theory perspective: "In the economic theory, EPZs are a second-best optimum, consisting in offsetting the removal of one distortion (a customs duty) with the introduction of another (a subsidy)", Cling et al. (2005, p. 785), or "An EPZ is not a first best policy choice. The best policy is one of overall liberalization of the economy", Madani (1999, p. 7); "In neoclassical theory therefore EPZs are considered as the second best policy choice consisting of compensating for one distortion (import duties) by introducing another (a subsidy)", Aggarwal (2005, p. 4).

EPZs, then, continue to offer a promise of providing access to world markets, raising industrial output, and upgrading production standards to world levels – at a point when domestic firms cannot accomplish this. Also, and this may be the most important political factor, developing country governments find the employment creation in EPZs to be essential for absorbing excess labour. Large corporations that govern global production chains continue to invest in and produce in EPZs, where the companies benefit from preferential trade and input price conditions, from liberal profit repatriation regulation, and from the relatively lax labour standards that allow greater control of the production process.

The debate over the costs and benefits of export processing zones in developing countries has raged almost since the zones were first established in the late 1950s. The immediate goal for countries running EPZs is to generate foreign direct investment, exports, foreign exchange, and employment that would not occur without the EPZ. For a number of countries these goals have been met, especially with respect to exports. In most cases EPZs do not account for a large percentage of total employment. And gains must be weighed against the cost of generating the benefits of EPZs, in particular the possible loss of tax and tariff revenue.

The ultimate purpose of EPZs must be to raise peoples' standard of living and to further economic development. EPZs can potentially contribute to this goal directly or indirectly. The direct channel is through backward linkages generated when EPZ firms raise demand for output in the rest of the economy, and through technological spill-overs which come as skills attained in EPZ-based production are passed on to the rest of the economy. Despite the presence of EPZs – for over 30 years in some cases – there are very few cases where EPZs have played an important role in accomplishing these direct developmental goals. And even in these cases – Korea, Taiwan, Mauritius, Madagascar and more recently China are often mentioned – there is considerable debate over the other economic, demographic and political factors that combine with EPZs to spur development. With EPZs now operating in 130 countries, this list of successes does not represent a large percentage. In this paper we find that the non-East Asian successes are at great risk, due in particular to competition from China, of losing a significant share of world export markets. Moreover, we argue below, explaining the dynamic growth and export competitiveness of many East Asian countries requires going beyond the issue of EPZs.

EPZs may, however, contribute to the goal of economic development indirectly by creating conditions in which pro-development policies can be implemented. In particular, simply by generating a supply of foreign exchange, EPZs can help provide governments the fiscal space or the purchasing power over foreign assets that ultimately promotes economic development. Here the evidence on EPZs is more positive, since there are some clear cases where aggregate net exports have risen because of EPZ activity.

Although working conditions and the application of labour standards in EPZs continue to be a highly contentious issue in debates over global labour standards, there is a paucity of high quality comparable data on working conditions in EPZs world-wide. Many of the studies that are available focus either on one country or one industry, and most studies do not employ comparable methods. In addition, of the few studies that provide cross-national data, many focus their attention on the implementation of so called “codes of conduct,” or labour standards developed by multinational corporations and non-governmental organizations (NGOs), not national or international legislation. Notwithstanding limitations in data, this report (Part II) provides an analysis of studies from a variety of sources employing different methods in order to offer a global picture of the trends in labour conditions.

Part I. Export processing zones, industrial upgrading and economic development

1. Trends in EPZ activity, 2002–07

According to the Singa (2007), the number of countries using EPZs increased to 130 in 2006, up from 116 in 2002 and 25 in 1975 (see table 1). These 130 countries operated 3500 EPZs, employing 66 million people. China has been by far the major country of expansion of EPZ activity. China is now estimated to have 40 million people working in EPZs or EPZ-like operations, an increase of 10 million since 2002. But China is not alone in its expansion of EPZ activity. Outside of China, employment in EPZs doubled between 2002 and 2006, from 13 to 26 million. By 2006, all of the regions of the world with the exception of South America had a fairly large presence of EPZs in terms of employment. The active use of EPZs in East Asia, Central America and the Caribbean has been widely known and studied since they were created in the 1970s and 1980s. Today there are over 90 EPZs in sub-Saharan Africa and in the transition economies of Eastern and Central Europe, including those accounting for a significant share of country exports in Gabon, Ghana, Kenya, Lesotho, Mali, Mozambique, Nigeria, Zimbabwe, the Czech Republic and Lithuania (ILO, 2007). Table 2 shows levels of EPZ employment by region in 2002 and 2006. China is at 40 million and the increase in Chinese employment in EPZs from 2002 accounts for almost half of the global expansion of EPZ employment in the period.

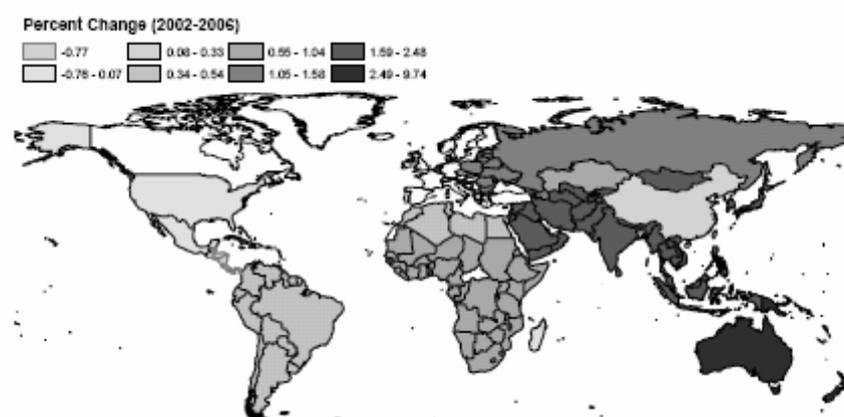
Table 1. The development of export processing zones, 1975–2006

	1975	1986	1995	1997	2002	2006
No. of countries with EPZs	29	47	73	93	116	130
No. of EPZs	79	176	500	845	3 000	3 500
Employment (millions)	n.a.	n.a.	n.a.	22.5	43	66
– of which China	n.a.	n.a.	n.a.	18	30	40
– other countries for which figures available	0.8	1.9	n.a.	4.5	13	26

Table 2. Change in EPZ employment by region, 2002–06

Region	2002	2006	Per cent change
North Africa	440 515	643 152	46.0
Sub-Saharan Africa	421 585	860 474	104.1
Indian Ocean	170 507	182 712	7.2
Middle East	328 932	1 043 597	217.3
Asia	7 710 543	14 741 147	91.2
China	30 000 000	40 000 000	33.3
Central America	4 490 757	5 252 216	16.9
South America	299 355	459 825	53.6
Caribbean	215 833	546 513	153.2
Eastern and Central Europe	543 269	1 400 379	157.8
Pacific	13 590	145 930	973.8

Source: OIT (2002)

Figure 1. Percentage change in EPZ employment by region, 2002–06

Source: ILO (2002), Singa (2007).

Figure 1 shows the percentage change in EPZ employment at the regional level over the same period. Here we see the 33 per cent increase in China's EPZ employment and the great push in sub-Saharan Africa, rising by a greater percentage even than China. Whereas sub-Saharan African EPZ activity was mainly in Kenya, Madagascar, Mauritius and South Africa, it has now become more widely dispersed. Also showing a significant increase is South Asia and Central and Eastern Europe, including Russia. Note also that employment in Mexico's maquiladora programme was stagnant over recent years and South America continues to be less oriented towards EPZ activity than most other regions.

Table 3. EPZ intensity and foreign exchange reserve accumulation
(selected, countries, ranked by EPZ intensity)

Countries	Accumulated reserves 2002–06 (US\$ million)	EPZ intensity 2002 (%)
Mauritius	230.9	17.7
Hong Kong	9 296.2	10.4
Tunisia	2 435.9	8.9
Lithuania	3 189.9	7.1
Seychelles	-52.0	5.6
Dominican Republic	52.8	5.5
Honduras	663.8	4.7
China	852 152.9	4.1
Mexico	26 942.0	3.5
El Salvador	81.3	2.9
Philippines	6 280.1	2.7
South Africa	15 124.0	2.6
Costa Rica	558.6	2.1
Malaysia	46 370.8	2.1
Jamaica	483.4	1.9
Ukraine	19 060.1	2.0
Sri Lanka	-2 777.4	1.7
Panama	331.2	1.4
Saudi Arabia	8 377.7	1.1
Pakistan	7 666.1	1.1
Morocco	1 280.6	0.8
Venezuela	13 280.4	0.6
Egypt	6 367.9	0.6
Guatemala	1 713.1	0.4
Poland	13 290.0	0.4
Bolivia	1 544.4	0.3
Viet Nam	5 614.3	0.3
Chile	3 345.5	0.2
Indonesia	797.5	0.1
Colombia	4 177.6	0.1
Brazil	57 056.4	0.1

Note: EPZ Intensity is defined as employment in EPZs divided by total employment for the year 2002. Reserves are the summation of IMF annual data from line (79dad) in IMF (2007).

Sources: ILO (2002), Singa (2007), IMF (2007).

Despite this growth in EPZ activity over the past five years, EPZs still make up a relatively small percentage of the population in most countries. Table 3 shows “EPZ intensity” calculated as EPZ employment as a share of national employment for 2002. Because of data limitations we are able to calculate EPZ intensity for only 30 countries. The top six in terms of EPZ intensity are Mauritius (18 per cent), Hong Kong-China

(10 per cent), Tunisia (9 per cent), Lithuania (7 per cent), Seychelles (6 per cent) and Dominican Republic (6 per cent). The average level of EPZ intensity for our sample is less than three per cent, indicating that there are many countries in which EPZs play a small role in terms of employment.⁶ India, not in our sample, has 1 per cent of its employment in EPZs. Since 2000, however, the Indian Government has actively promoted Special Economic Zones, most successfully in services, but also for goods production. The “Special Economic Zones Act of 2005”⁷ went into effect in early 2006 and quickly led to approval for 181 new zones with applications pending for 200 more.⁸ This expansion, although in the context of low EPZ intensity, nonetheless faces domestic opposition from landowners who would lose their land for this expansion of EPZs.

In India as in many other countries with a large supply of higher skill workers, including China, Russia and other transition economies and to some extent Mexico, EPZs are seen as a means to capture new markets for business services, information technology (IT) and IT-enabled services made viable by digitalization and the rapid expansion of demand in this sector globally. Such zones are built on the traditional EPZ model of a business-friendly environment including tax holidays and free profit repatriation, contingent still on export performance. Nonetheless, these higher-tech zones are not particularly employment intensive and they often perform as innovative yet insulated enclaves in the larger economy.⁹

⁶ Engeman, et al. (2007) reports 2003 EPZ employment globally of 38.2 million, just 0.2 per cent of global employment.

⁷ Aggarwal (2005), p. 18.

⁸ Engman et al. (2007), p. 18.

⁹ Engman et al. (2007), pp. 18-21 discusses the enclave nature of Indian, Russian and Chinese technology zones.

2. Exports, employment and wages: Static cost-benefit analysis of EPZs

The benefits and costs of EPZs are often divided between the immediate impact on exports, employment, and foreign direct investment and the broader and longer-term developmental consequences. Here we refer to the former as static effects and the latter as the dynamic consequences of EPZ presence. In reality the two dimensions are linked and it is sometimes difficult to draw a line between the two. For example, foreign exchange earnings are normally considered a static benefit, but the use that a country makes of this easing of its foreign exchange constraint could have long-term developmental consequences. Nonetheless we take up the static effects in this section and consider dynamic effects in section IV.

2.1. EPZ export , 2002–06

In most countries in the sample – across Asia, Africa, Latin America and the Caribbean – exports from EPZs continue to contribute a major share of national exports. Table 4 shows EPZ exports as a share of national exports for 2002 and 2006. In many countries, EPZ exports continued in 2006 to account for 80 per cent or more of exports. A few countries experienced an increase in the EPZ share of exports from 2002 to 2006, including Sri Lanka, Bangladesh and the Maldives. While our focus is on the last few years, it is important to note that during the 1990s many countries expanded EPZ exports considerably to reach the levels seen in table 4. Costa Rica's EPZs accounted for 10 per cent of manufactured exports in 1990 and reached 50–52 per cent in the early 2000s.¹ Bangladesh saw its EPZ exports rise from 3.4 per cent in 1990 to 21.3 per cent in 2003.² And a number of countries had a decline in the EPZ share of exports, including Mexico, Philippines, Tunisia and Mauritius. In some cases this was the result of heightened competition in global apparel trade resulting from the phaseout of textile and apparel quotas. In Mexico another contributing factor was the expansion of non-EPZ based exports, in particular in electronics.

Table 4. Change in EPZ share of exports, selected economies (2002, 2006)

Country	2002	2006	Percentage change
Philippines	87.0	60.0	-31.0
Malaysia	83.0	83.0	0.0
Mexico	83.0	47.0	-43.0
Gabon	80.0	80.0	0.0
Macao, China	80.0	80.0	0.0
Zimbabwe	80.0	80.0	0.0
Viet Nam	80.0	80.0	0.0
Dominican Republic	80.0	80.0	0.0
Tunisia	80.0	52.0	-35.0
Kenya	80.0	86.9	9.0

¹ Engman et al. (2007) p. 26.

² Aggarwal (2005, table 7.6).

Country	2002	2006	Percentage change
Senegal	80.0	n.a.	n.a.
Mauritius	77.0	42.0	-45.0
Morocco	61.0	61.0	0.0
Bangladesh	60.0	75.6	26.0
Costa Rica	50.0	52.0	4.0
Haiti	50.0	50.0	0.0
Madagascar	38.0	80.0	111.0
Sri Lanka	33.0	38.0	15.0
Cameroon	32.0	33.0	3.0
Maldives	13.2	47.7	261.0
Colombia	9.3	40.0	330.0

Source: ILO (2002).

The aggregate figures do not show some sectoral shifts that have occurred in EPZ exports, and some have indicated that this export diversification is an important feature of EPZs. India (not reported table 4), had 5 per cent of its exports from EPZs in 2002. But in the 1990s zone exports shifted significantly from drugs and engineering goods to electronics (especially software) and gems and jewellery.³ Costa Rica continued to diversify its EPZ exports in the recent period, reducing its apparel export share and increasing its share of other manufactures, a category that includes pharmaceuticals and electronics. In a study of export diversification in EPZs in sub-Saharan Africa during the 1990s, Cling et al. (2005) found Madagascar to have made the most progress, increasing the number of different products with over US\$1 million in exports from 38 to 70. According to the authors of the study, diversification was important in making Madagascar's Zone Franche "the only successful EPZ in an African LDC...".

EPZ production in many countries continues to be in textiles and clothing, as we will see when we look at the composition of EPZ employment below. However, this is not necessarily an indication of a lack of dynamism. As we discuss below, industrial upgrading often occurs within a sector, with firms moving from assembly to more full package production, in which higher value added aspects of production are included in the process. Within the EPZ-based apparel sector a number of countries moved into or towards full package production.⁴

2.2. EPZ employment, 2002–06

As we saw above in the global and regional figures, EPZ employment has continued to climb globally in recent years. In our sample of countries, large increases occurred in the Maldives, Morocco, Madagascar, Viet Nam, Sri Lanka, Malaysia and the Philippines (see table 5).

³ Aggarwal (2005, tables 7.6, 7.9).

⁴ See, for example, Sanchez-Ancochea (1006) on the Dominican Republic move to full package production.

Table 5. EPZ employment in selected countries, 2002–06
(ranked by 2002 employment)

Country	2002	2006	Percentage change
Mexico	1 355 000	1 212 125	-11.0
Philippines	820 960	1 128 197	37.0
Tunisia	239 800	259 842	8.0
Malaysia	200 000	369 488	85.0
Dominican Republic	170 833	154 781	-9.0
Macao, China	131 010	131 010	0.0
Bangladesh	121 000	188 394	56.0
Sri Lanka	111 033	410 851	270.0
Viet Nam	107 000	950 000	788.0
Mauritius	87 607	65 512	-25.0
Madagascar	74 000	115 000	55.0
Morocco	71 315	145 000	103.0
Costa Rica	34 000	36 000	6.0
Kenya	27 148	38 851	43.0
Zimbabwe	22 000	22 000	0.0
Haiti	10 000	10 000	0.0
Cameroon	8 000	4 690	-41.0
Senegal	940	3 409	263.0
Gabon	791	791	0.0

Source: ILO (2002), Singa (2007).

Nonetheless, EPZs continue to be relatively insignificant as a share of total employment, accounting for just 0.2 per cent of global employment, which includes a range from 2.3 per cent in Asia/Pacific, 1.5 per cent in the Middle East and North Africa, 1.2 per cent in the Americas, 0.2 per cent in Sub-Saharan Africa and 0.001 per cent in Central and Eastern Europe.⁵

EPZ exports in many countries are concentrated in textiles and clothing and electronics. In 2003, Mauritius had 94 per cent of its EPZ workers in apparel and the Dominican Republic had 69 per cent. In the late 1990s, Tunisia was at 76 per cent and Sri Lanka 66 per cent. At the same time Malaysia had 65 per cent of employment in electronics, and Mexico 35 per cent in that sector.⁶ In India, EPZ employment surpassed 1 million people in 2005, but remained at about 1 per cent of manufacturing employment, the level attained in the mid-1990s. While the Indian textiles sector is still dominated by EPZs, EPZs also account for most production and employment and exports in leather goods, food and electronics software.

⁵ Engman et al. (2007), table 6.

⁶ These figures are from ILO (2005), Sanchez-Ancochea (2006), and Engeman et al. (2007, p. 27), and Aggarwal (2007, table 3).

2.3. Static costs and benefits of EPZs

The export and employment performance of EPZs are in some cases quite impressive. In addition, EPZs are expected to attract FDI, generate profits for domestic business and to generate foreign exchange earnings and some tax revenue. There is a growing body of research on the net effect of all these factors. Jayanthakumaran (2003) provides a summary of the literature on the costs and benefits of EPZs in six countries: South Korea, Philippines, Indonesia, Malaysia, Sri Lanka and China. All six countries have realized the expected benefits for employment and for taxes and other revenue, and most of the countries realized expected benefits of foreign exchange earnings, giving a positive net present value of EPZs in all countries except the Philippines. But in many of the categories analysed – most notably domestic purchases of machinery and raw materials and domestic profit – almost no country in the sample received the expected benefits.

Exports are a main focus of most EPZ studies, since they are a stated objective of EPZ policy and are of additional value to a country because they require the production of world class competitive output which, it is hoped, will spread to the rest of the economy. We consider these spill-overs below, but a more immediate and in some cases urgent benefit of export growth is the foreign exchange earnings it brings. Such earnings allow a country to import crucial capital goods, material imports and consumption goods that can be necessary to spur industrialization and maintain living standards. Given the major share of manufactured exports that emanate from EPZs, it would seem that EPZs are an important source of foreign exchange. EPZs tend to import most or all of their material inputs (see the discussion below of backward linkages), so it is important to net out imports in the calculation of EPZ contribution to foreign exchange reserves accumulation. That is, to the extent that EPZs directly generate positive net exports (export value minus the value of imports), they are on net a source of foreign exchange earnings.

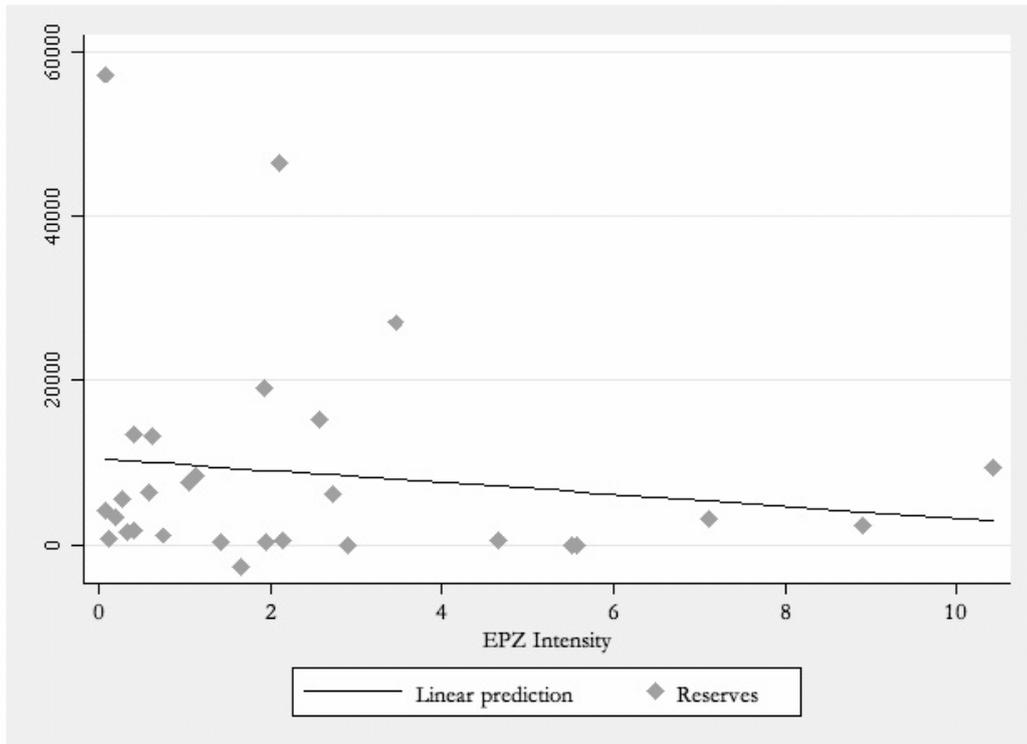
There is not adequate data on EPZ imports to make an exact calculation of EPZ contribution to the national stock of foreign exchange reserves. Sanchez-Ancochea (2006) compares Costa Rica and Dominican Republic in terms of export value added as a share of the total value of exports in the EPZ sectors in those countries. For Costa Rica the share rose from 17 per cent in 1988 to 26 per cent in 2002, with much volatility over the period. In the Dominican Republic the level is higher, but the increase over the period was less, from 33 per cent in 1986 to 39 per cent in 2002, and the volatility much lower than in Costa Rica. These both compare unfavourably to Korea's Masan EPZ in the 1970s, which saw the value added share of exports rise from 28 per cent in 1971 to 52 per cent in 1979.⁷

A broader issue, which links the static and the dynamic consequences of EPZs is the relation between EPZs and the generation of foreign exchange reserves. Without specifying a model of reserves accumulation, we looked at the relation between the employment intensity in 2002 and the accumulation of foreign exchange reserves in the five year period 2002–06, shown in the scatterplot presented in figure 2. The OLS regression line relating the two variables shows a downward slope which indicates that higher EPZ intensity in 2002 is associated with less accumulation of reserves.⁸

⁷ Reported in Jenkins et al. (1998).

⁸ The scatterplot and regression line exclude two outliers in our sample, China and Mauritius. China had an EPZ intensity of 4.1 per cent in 2002 and subsequently accumulated \$852.1 billion dollars of reserves over the period 2002–06. Mauritius, on the other hand, had by far the highest EPZ intensity in the sample at 17.7 per cent but reserves accumulation of only \$231 million dollars. If China is included in the sample (with or without Mauritius), the regression line shows a very slight upward slope, that is, a positive relation between EPZ intensity and reserves accumulation.

Figure 2. EPZ intensity (2002) and reserve accumulation (2002–06)



There are many possible explanations for this finding of a negative relationship between EPZs and reserves. The first issue is that many factors affect foreign exchange accumulation. The proper test would be to control for other determinants of reserves accumulation and thus to isolate the impact of EPZ intensity. Even this methodology is not straightforward, since some of the standard variables expected to influence outcomes might also be influenced by the presence of EPZs. For example, EPZ incentives could attract resources from the rest of the domestic economy, reducing export capacity there. Or, EPZ exports could lead to currency appreciation that dampens export activity outside the EPZ. In their oft-cited study of the catalytic effect of EPZs, Johansson and Nilsson (1997) provided one of the few fully specified models of EPZ contribution to national exports. They found a positive effect in the case of Malaysia and a negative effect for Mexico and the Dominican Republic, indicating that EPZs can influence national economic performance behaviour differently in different countries and that static benefits do not necessarily imply a positive impact on the rest of the economy's performance.

2.4. Wages and the feminization of employment in EPZs

Labour laws governing EPZs are often the same as in the rest of the country, although some countries have adopted special labour codes which give more flexibility to EPZ-based companies, have relatively weak labour inspection practices, and give fewer rights to EPZ workers (ILO, 2005, p. 26). "Even where labour laws are uniform nationally, there is evidence of more lax enforcement of labour law in EPZs and restrictions on trade union creation and actions, meaning that working hours are longer and the pace of work is faster; and trade unions are often forbidden (as was the case until recently in Bangladesh) or at least discouraged (hence the term sweatshops sometimes used in this regard)" (Cling et al. 2005, p. 786).

Most studies of wages in EPZs find that they are at about the same level as wages for equivalent work in the rest of the economy. Much of the wage research has been on the apparel sector. Focusing on Asian apparel EPZs, Romero (1995) and Kusago and Tzannatos (1998) found no significant difference between EPZ wages and wages in non-EPZ apparel firms. Cling et al. (2005) found that EPZ remuneration in Madagascar's EPZ was not significantly different than pay in the non-EPZ formal sector and greater than pay in the informal sector. They conclude that "being hired in the Zone Franche therefore improves a workers situation compared with previous employment, as concluded also by Nicita and Razzaz (2003)" (Cling et al. 2005, p. 799) Jenkins (2005), using evidence from a business survey, finds that "salaries paid by the great majority of EPZ firms are higher than the reported median salary paid in the Costa Rican local economy for the same occupation group" (Jenkins 2005, p. 22) and Aggarwal (2007), in a detailed cross-sectional study of Indian EPZs, finds that workers report average wages in the zone at about the same level or just slightly below factory wages outside the zones.

Thus despite the well-documented problem of a lack of enforcement of existing labour laws in the EPZs of many countries, and in some cases the existence of reduced standards within EPZs, wage rates in EPZs have been found not to be below those outside EPZs. One reason may be the relatively high productivity of labour in EPZs. Cling and Letilly (2001, p. 19) note that EPZs may also need to keep wages up in order to retain workers or to attract better ones.

The female intensity of EPZ employment has been well documented, with women accounting for over 70 per cent and sometimes over 90 per cent of EPZ jobs.⁹ EPZ-based companies in the Caribbean "have shown a strong preference for women workers, because they are cheaper to employ, less likely to unionize, and have greater patience for the tedious, monotonous work employed in assembly operations".¹⁰ Similar criteria dominate in EPZs around the globe.

But the feminization of EPZ employment appears to have peaked and may be in decline, although because of China's share of global EPZ employment, it is difficult to draw a conclusion without more detailed information on female intensity of EPZ work there. Past studies of the gender composition of employment in EPZs have tended to find female intensity higher where the skill intensity of production is low. When EPZ production shifts into higher-technology production, such as some aspects of electronics or business services, then the female intensity generally declines if women are, on average, lower skilled. According to Cling and Letilly (2001): The educational level of the women in host countries is a key determinant of the balance between men and women employees: whereas in Malaysia and Taiwan, many of the technicians are women, the situation is very different in poorer countries; rather than retrain the largely female labour force already employed when the technological content of the production is increased, EPZs in these countries prefer to hire better qualified men. (Cling and Letilly, 2001, p. 19).

⁹ Country details are reported in ILO (2003).

¹⁰ Safa (1994, p. 258), cited in Heron (2004).

3. Quota phaseout in clothing and textiles

Recent developments in EPZ activity cannot be adequately addressed without paying special attention to the apparel market. Apparel accounts for the largest share of EPZ exports by value and employment and this sector has undergone a radical policy shift over the past ten years with the phaseout of the Multifiber Arrangement (MFA).

As a result of the quotas on apparel products trade introduced in 1970 in the United States, Canada and Western Europe, over fifty countries had exported to these markets.¹ Many EPZs were established as a result of the MFA, as firms migrated globally to obtain quota shares in different countries as specified under the MFA.²

The phaseout of the quota system under the MFA occurred under the Agreement on Textiles and Clothing (ATC) of the Uruguay Round of multilateral trade negotiations. The phaseout took place over a ten-year period, with the ATC ending on 31 December 2004, but the bulk of the liberalization in fact took place at the very end of this period. So we now have just over two years of trade data showing the total effect on world trade patterns.

Table 6. World apparel trade by country, 1990-2006 (US\$ billions)

Country	1990	1995	2000	2006
North-East Asia				
China	10.2	24.0	36.1	95.4
Hong Kong	15.7	21.3	24.6	28.4
Korea, Republic of	7.9	5.0	5.0	2.2
Taiwan	4.2	3.5	3.5	n.a
South-East Asia				
Indonesia	1.6	3.4	4.7	5.7
Thailand	2.8	5.0	3.8	3.7
Viet Nam	0.1	0.9	1.8	3.5
Philippines	0.7	1.1	2.5	2.3
Malaysia	1.3	2.3	2.3	2.8
Cambodia	0.0	0.1	1.0	2.0
Singapore	1.6	1.5	1.8	1.7
South Asia				
India	2.5	4.1	6.2	6.6
Bangladesh	0.6	2.0	3.9	4.4
Pakistan	1.0	1.6	2.1	3.9
Sri Lanka	0.6	1.1	2.6	2.8

¹ Gereffi (2006), p. 22.

² Jayanthakumaran (2003), p. 63.

Country	1990	1995	2000	2006
Central and Eastern Europe				
Turkey	2.2	6.1	6.5	11.3
Romania	0.4	1.4	2.3	4.4
Poland	0.4	2.3	1.9	2.2
Bulgaria	0.1	0.4	0.7	n.a.
Africa and Middle East				
Tunisia	1.1	2.3	2.2	3.3
Morocco	0.7	0.8	2.4	3.2
Jordan	0.01	0.03	0.1	1.3
Mauritius	0.6	0.8	0.9	0.8
North America				
Mexico	0.0	2.7	8.6	6.3
Dominican Republic	n.a.	n.a.	0.01	0.01
Costa Rica	0.1	0.1	0.4	0.5
Haiti	0.1	0.0	n.a.	n.a.

Notes: For the following countries the most recent observation was 2005: Thailand, Viet Nam, Philippines, Cambodia, Singapore, India, Bangladesh, Sri Lanka, Poland, and Tunisia. Also note that n.a. denotes not available.

Source: UN COMTRADE Database, Gereffi (2006).

China has been by far the great beneficiary of the phaseout of textile and clothing quotas. Table 6 shows world exports of apparel for a number of developing countries. Since the quota phaseout began in 1995, Chinese apparel exports more than tripled by 2006, two years after the phaseout was completed. Chinese exports were \$95 billion, and are expected to rise by much more as the effect of the final phaseout works its way to completion. Already the major single-nation exporter of clothing in 2001, China's share of United States apparel imports doubled to 26 per cent in 2005, from 13 per cent in 2000. Hong Kong (China) also has made large gains, increasing exports by almost \$4 billion since 2000.

A number of countries have been able to retain or even expand their market shares even as China has captured the majority of world markets, including Viet Nam, Cambodia, Sri Lanka, and Turkey. They have succeeded either by having labour costs that are even lower than China or by actively seeking to raise productivity.

Other countries have clearly been devastated by Chinese competition. For those categories of apparel for which quotas ended in 2002, the Chinese share of United States imports rose to 65 per cent in 2006, from 21 per cent in 2002, while United States imports from Mexico and the Caribbean fell from a share of 16 per cent to just 4 per cent. Both the Dominican Republic and Costa Rica, for example, saw their shares of United States apparel imports shrink by 25 per cent and 66 per cent, respectively between 1998 and 2004, even before the final phaseout occurred. For those categories of clothing with quotas removed in 2005, the Chinese share of the United States market went from 11 per cent in 2001 to 46 per cent in 2006.³

³ National Council of Textile Organizations (2006).

While Mexico's export base is now quite diversified (apparel accounts for 5 per cent of exports and electronics is the dominant employer in the EPZs), its apparel exports are expected to fall by billions of dollars. Many other countries are heavily dependent on apparel exports for foreign exchange and employment, including a number of Caribbean, South Asian and North African countries. EPZ production is extremely vulnerable in Madagascar, Dominican Republic, Mauritius, Tunisia and Lesotho among others because most EPZ employment in those countries is in apparel production.⁴

With the phaseout of apparel quotas, regional trade agreements became less important as drivers of apparel trade. For example, the percentage of United States apparel imports that come under United States agreements with Latin America, South America and the Caribbean (NAFTA, CBPTA, DR-CAFTA and Andean requirements) fell from 23 per cent in 2002 to 18 per cent in 2006.⁵

A further consequence of MFA phaseout is that agreements related to the quota system are rendered ineffective. An example is the United States-Cambodia Agreement which links improved labour standards (as monitored by the ILO) to increases in Cambodia's apparel shipments to the United States. The Agreement had been lauded as a potential model for raising labour standards through a linkage to international trade— a “carrot” rather than a “stick.” (see Berik and Rogers, 2006). The Agreement has effectively become inoperative because there is no longer a quota to increase. With the Agreement's de facto demise given the ending of apparel quotas, there are reports of a collapse of the gains to labour rights and labour standards that had been made under the Agreement.⁶

The basis for China's great success in clothing exports is low unit costs. Figure 3 shows an international comparison of labour costs. Average hourly wages in China are \$0.90, compared to \$1.60 in South Africa, \$1.80 in Mexico and \$5.10 in Korea. Note that a number of countries have lower hourly wages than China (India, Sri Lanka, Indonesia and Pakistan in figure 3) and these are among the countries that have maintained export market shares under quota phaseout.

In addition to low wages, China has an abundance of both high-skill and low-skill workers, and a record of lax enforcement of labour standards. China benefits from an undervalued currency, and from an ability to operate at very large scale, allowing the capture of scale economies. All these dimensions are attractive to large transnational corporations, who have been additionally motivated by China's FDI-oriented EPZ policies. China's EPZs (Special Economic Zones or SEZs) were first established in 1980, but already in 1991, China removed any special privileges to foreign investors in the SEZs by establishing the same terms for all FDI into China as was previously granted only to FDI in the SEZs. Moreover, beginning in the late 1980s, production facilities in China could be fully foreign-owned as long as either at least half of the output was for export or the facility produced technologically advanced products, ones where incumbent or Chinese firms lacked the relevant technology.⁷ Chinese FDI increased slightly after 1986, then skyrocketed with the liberalization of FDI in 1991. At the same time (that is, 1991), not surprisingly, exports by foreign investment enterprises in China rose steadily in absolute

⁴ Cling and Leitilly (2001).

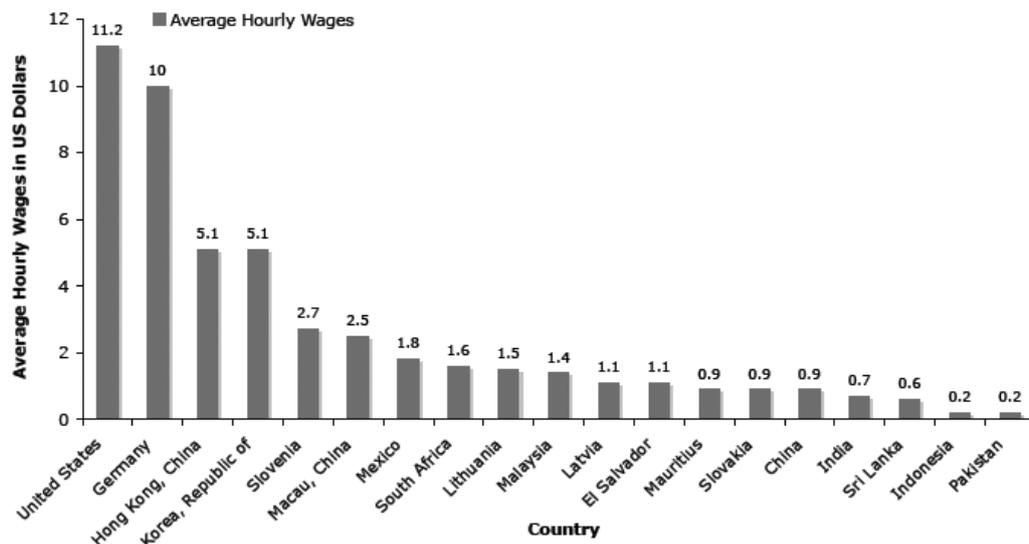
⁵ National Council of Textile Organizations (2007).

⁶ See ICFTU (2005).

⁷ Graham (2004), p. 90.

terms and most impressively as a share of total Chinese exports, reaching over 50 per cent in 2000 and continuing to grow thereafter.⁸

Figure 3. Labour costs in apparel production in 2000, selected countries
(US\$ per hour)



Source: UNCTAD (2005)

Apparel production is increasingly dominated by large TNCs, and the ability of China to host extremely large-scale operations is important to low-cost production – single factories with tens of thousands of workers are not unusual, with large plants employing 50,000 and even 80,000 workers.⁹ In this case, scale economies are both internal to large firms, and also external to any individual firm, the result of the creation of pools of specific resources, workers with specialized skills, local firms offering specialized services, etc.¹⁰ UNCTAD (2005, p. 19) correctly predicted that the phaseout of quotas would lead to a consolidation into even larger companies and a smaller number of supplying countries, mainly to leverage achievable economies of scale.

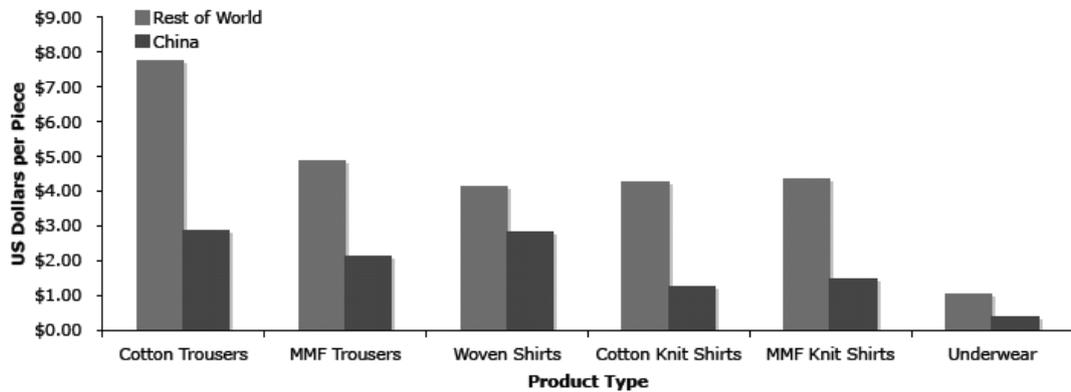
The result of such low cost and high scale production is apparel prices far below those in most of the rest of the world. Figure 4 presents comparative price data in the apparel sector. China's price advantage for these standard items ranges from 32 per cent for men's woven shirts to 70 per cent for cotton knit shirts. This constitutes a formidable price advantage and it supports those predictions that China's market share for items with quotas phased out at the end of 2004 will continue to rise to the high 60 per cent levels attained for items with earlier quota phaseout dates.

⁸ *ibid*, chart 3.

⁹ Kaplinsky (2005), p. 193.

¹⁰ Graham (2004), p. 96.

Figure 4. Prices for selected apparel products in 2003, China and “rest of world” (US\$ per piece)



Source: National Council of Textile Organizations (2007).

China’s multifaceted competitive prowess puts enormous pressure on other, non-Chinese producers, encouraging strict control of wages and labour standards and downward pressure also on profit margins. According to Gereffi (2006): China’s reliance on global buyers and its survival of the cheapest approach has created a production glut that places enormous pressures on wages, working conditions, and profit margins at the factory level. A typical export factory in southern China pays a salary of \$40 per month, which is 40 per cent less than the local minimum wage. Workers put in 18 hour days with poor workplace conditions, minimal training and continual pressure to boost output (Gereffi, 2006, p. 19).

3.1. Limits to Chinese market share growth

Outside of China, EPZ production of apparel will be at reduced levels in most countries, but there are a number of reasons why China may not be able to exceed the 60–65 per cent United States market share that it has attained in 2007 in most apparel products. One is that some countries have been able to keep unit costs low and competitive with China. Figure 3 shows that a number of countries have lower labour costs than China, including Sri Lanka and Pakistan, and they have continued to expand apparel exports through the phase-out period. In addition to low costs, an ability to keep productivity reasonably high will be crucial to future competitiveness, and Viet Nam, Sri Lanka and Cambodia among others have had success in this regard.

A second limit is the special textiles safeguards provision of the Chinese WTO accession agreement that lasts until 31 December 2008. The United States invoked this provision in December 2003 at which time it placed import quotas on five categories of Chinese exports which had been liberalized in 2002. The impact on trade is clear: The Chinese share of United States imports for apparel categories removed from quota control in 2002 has risen quickly to 65 per cent. Those categories removed from quota in just 2005 are already at about 55 per cent import share to China. For safeguarded apparel categories the Chinese market share is at about 15 per cent.¹¹

From 2009 to 2013, WTO members may also invoke standard WTO safeguard measures, but selectively against Chinese imports. The WTO Safeguards Agreement allows countries to restrict imports temporarily “if its domestic industry is injured or threatened with injury caused by a surge in imports.” Also, antidumping measures against

¹¹ National Council of Textile Organizations (2007).

Chinese imports can defer application of the unrestricted trade arrangement until December 2016.¹²

A third reason is that for some products, a part of market demand can only be met from close geographical proximity. So-called “lean retailing” or “mass customization” requires that firms be able to replenish or adjust stocks very quickly. Writing about the apparel supply chain, Abernathy et al. (2004, p. 44) note that, “elapsed time between order and delivery has become far more important as a competitive factor.” This generally means that some portion of sourcing will be done in close proximity to the market and be flexible enough to deliver “made-to-order products requiring short delivery times,” sometimes as short as 24 hours (Sargent and Matthews, 2004). Thus, for example, some Mexican and Caribbean and even domestic United States productive capacity will be needed to meet the United States retailers’ need for “fast fashion.” Sargent and Matthews (2004) find that a number of TNCs sourcing in China are also sourcing in Mexico, in spite of higher costs there, because of its proximity to the United States market. These firms have adopted a dual sourcing strategy:

To improve response time, the Chinese plant may be assigned to manufacture one million units and Reynosa [the Mexican location] will be used to produce anything above that number. Using this dual sourcing strategy, the parent company can take advantage of lower costs in China yet still keep inventories low and respond in a matter of days rather than months to the frequent rush orders placed by their very large, powerful and unforgiving customers (retailers such as Wal-Mart and Home Depot). (Sargent and Matthews, 2004, p. 2023).

Eastern European including Turkish EPZs have similar possibilities with respect to the EU market, in spite of costs well above Chinese levels, and have shown robust apparel exports in some cases even during the phaseout period.

A fourth issue is the riskiness of sourcing so completely in one country. Lead firms in the apparel supply chains are likely to seek some diversification of sourcing in an effort to reduce the risks of a major supply shock in the event of disruption to the production flow in China. Recent cases of unsafe product quality in Chinese shipments of food, pharmaceuticals, pet food and toys may spur a greater diversification of sourcing by lead firms.

Finally, at some point, Chinese labour markets are likely to tighten and Chinese labour standards likely to rise, rendering other countries more competitive with China. To date, there is anecdotal evidence of some upward pressure on Chinese wages, but there is little sign of a convergence of Chinese wages on those of industrialized countries. China, which has clearly made great progress on industrialization, does not yet appear to have begun the expected process of a convergence of its wages to those of the newly industrialized countries of East Asia. According to Hung (2007), “The high investment rate and low consumption rate in the Chinese economy stand in sharp contrast to the developmental pattern of Taiwan and Korea, which witnessed a fixed asset investment rate of about half of China’s current rate and a consumption rate of about double China’s current rate.”

China’s non-industrial labour force is enormous and during the 1990s, as state-owned enterprises were consolidated, manufacturing employment actually fell, further hampering the pace at which convergence occurs. Chinese employment in EPZs rose ten million between 2002 and 2006. That is the estimated number that jobs must be created annually in order to absorb the expanding labour force there.

¹² See UNCTAD (2005), p. 24.

4. Linkages to the domestic economy

It has been recognized for decades that for EPZs to contribute to sustained economic development they would have to be linked to the rest of the economy. Jenkins (2005, p. 24) puts it succinctly: “The strength of the linkages between EPZs and the rest of the domestic economy seems to play an essential role in determining whether, and to what extent, the host nation benefits from opening EPZs.”

The problem has always been that by their nature, EPZs resist such links. For one, EPZs are generally created precisely to attract foreign firms because domestic firms are not competitive internationally and are not able to generate foreign exchange.¹ Thus, from the start, domestic firms are generally behind in their capacity to provide low-cost, high-quality inputs to production in EPZ. Second, EPZs are generally defined by an allowance of duty-free imports of material inputs. Non-EPZ firms cannot import inputs duty free.² This puts domestic firms at a cost disadvantage in input production. According to Madani (1999, p. 28) “... the tariff free inputs for the firms in the zone act as import subsidies competing against domestic input production and discouraging creation of backward linkages.”³

Add to this factor that EPZs are dominated by foreign firms with well-established relations with foreign input producers. It is not surprising, then, that most research from the 1990s finds very little evidence of backward or forward linkage creation. In this section we look more closely at this issue and consider those factors that seem to be correlated with better EPZ performance.

4.1. Backward linkages

The economic development consequences of EPZs are said to hinge on their direct effects on employment, exports and foreign investment, but also on their longer-term effects on the economy, that is the backward and forward linkages they generate. Since EPZs are geared for the export market, the likelihood of forward linkages (sales of EPZ output to the domestic market) are minimal. Thus it is backward linkages – the purchase of inputs from the domestic market and the subcontracting by EPZ enterprises to domestic firms – that are often the focus in the analysis of development.

While EPZs vary in terms of their importance overall for developing country economies, these special zones have in most cases been in operation long enough to have had time to spill over into the non-EPZ economy. Nonetheless, most studies of the amount of backward linkages find them to be minimal, with domestic orders remaining at a very low level and technology spill-overs rare. There are some important exceptions, including South Korea, where the share of inputs purchased from the domestic economy rose from 13 per cent in 1972 to 32 per cent in 1978 and remained at that high level through the

¹ Schrank (2001) notes that EPZs reconcile the disparate interests of governments seeking to promote jobs and exports, foreign firms seeking profitable production conditions and domestic firms who are not internationally competitive.

² Thus to protect domestic producers, a number of countries (Kenya and United Republic of Tanzania, for example) limit the amount that EPZ-based firms can sell to the domestic economy.

³ Heron (2004) makes this argument for the case of Caribbean exporting companies operating under the US\$ 9802.00 tariff scheme that provides tariff- and duty-free treatment only for products made from United States components. The African Growth and Opportunity Act (AGOA) suspended rules of origin stipulations on low-income countries. See Gibbon and Ponte (2005).

1980s (Kusago and Tzannatos, 1998). The Korean EPZs were established to attract foreign investment and promote the electronics sector. Thus the level of integration is particularly impressive given that about 80 per cent of investment in the EPZs was foreign. The state played an important role in fostering the linkage by providing duty drawbacks to non-EPZ firms in its “equal footing policy.”⁴ Taiwan experienced a similar transformation, with domestic inputs accounting for only 5 per cent of inputs in 1967 and rising to 27 per cent by 1978.⁵ In Mauritius EPZs, 41 per cent of material inputs were purchased domestically (Willmore, 1995). Domestic Mauritian firms have invested in EPZs at higher rates than in most countries, introducing stability in the EPZ sector and creating the foundation for technology and knowledge internalization.⁶

The Korean, Taiwan and Mauritius examples of considerable linkage between the EPZs and the rest of the economy are exceptional. More common is the range of 3 per cent to 9 per cent of inputs purchased domestically, reported for Sri Lanka, Philippines, Guatemala and El Salvador in the mid to late 1990s. In the Dominican Republic in 2004, after 30 years of EPZ presence and robust growth in EPZ exports and employment, EPZs purchased 0.0001 per cent of material inputs from the domestic market.⁷

Evidence of technology spillovers is also rare, as the low-skill assembly type production so common in EPZs is simply not conducive to technology transfer. And the higher skill-intensive EPZs, such as those involving software or other business services are often enclaves and de-linked from the rest of the economy except for its high-skill labour force.⁸

There are numerous practical reasons for the failure of EPZs to generate the hoped-for backward linkages to the domestic economy beyond the structural ones described above. For one, EPZ firms are engaged mainly export and thus require low-cost inputs at a level of quality required for successful global competition. Domestic firms may not be able to supply this. Second, the domestic economy may simply lack the raw materials needed for production. Third, the lack of technological spillovers to the domestic economy results from the fact that most EPZ production is low-skill intensive. The technology is embodied in imported capital and the knowledge is embodied in management. Evidence shows, for example in the case again of South Korea in the mid-1980s, that knowledge transfers increase when the skill intensity of production rises.⁹

Researchers in the 1990s sought to shift the notion of backward linkages to capture insights from the new growth theories. Johansson (1994) and Johansson and Nilsson (1997) in particular argued that these new theories captured the importance of externalities in the area of human capital accumulation, including learning-by-doing and on-the-job training that could pass into the rest of the economy, raising productivity there. But there remains little evidence for this view with respect to EPZs. Johansson and Nilsson found such a catalytic effect in the case of Malaysia, but found negative externality effects in

⁴ Engman et al. (2007), p. 39.

⁵ Cited in Heron (2004), pp. 220–221.

⁶ Baissac (2003), p. 72.

⁷ Engman et al. (2007, pp. 34–35).

⁸ Most studies of EPZs address this issue in some way. See, for example, Heron (2004) on Jamaica, Armas and Sadni Jallab (2002) on Mexico, Aggarwal (2007) on India and ILO (2005) on Madagascar.

⁹ Engman et al. (2007).

Mexico and the Dominican Republic. They hypothesized that the existence of EPZs in these countries had allowed the building of anticompetitive protections in the rest of the economy, leading to a net negative effect on exports.

4.2. Correlates of EPZ success

Rather than listing the usual reasons for the lack of backward linkages and technological spill-overs, a more useful approach to this important issue is to consider linkages and spill-overs from EPZs as contingent. In other words, countries with similar intensity and duration of EPZs have had very different development experiences. Consider South Korea and the Dominican Republic, both of which first instituted EPZs over 30 years ago. Korea was able to upgrade, raise education and skill levels and to build a diverse industrial base outside of EPZs. In the Dominican Republic, EPZs generate very little backward linkage despite their long-standing presence and their success in generating exports. Such a comparison raises the likelihood that it is institutions and activities outside the EPZs that account for the differences. Research on EPZs and economic development offers a few possible correlates of EPZ success. Case studies show that these linkages are found to be greater under certain conditions, including:

- (1) when EPZ activity focuses on more high-tech sectors such as electronics rather than low tech sectors such as apparel. This insight draws from the East Asian experience with EPZs, where a number of countries used electronics production in EPZs to slowly build exports and linkages to the domestic economy;
- (2) when the domestic market is larger. Size implies not just the presence of a domestic market, but also an ability to support large-scale production and a large infrastructure. Schrank (2001) emphasizes this factor in discussing Mexico's export success and to elaborate the difficulties of building links to the domestic economy when that economy is small and lacks the potential for diversity that linkages can bring;
- (3) when the baseline level of industrial development of the economy is higher;
- (4) when the state is more activist and focused on economic development within the customs area that is outside the EPZs. This point emerges not only in the discussion of the East Asian NICs but also in the cases of Dominican Republic, Costa Rica and Mauritius. In each case, even when there was heavy reliance on EPZs, the state actively pursued an industrial policy that involved careful management of EPZs and gradual development of domestic absorptive capacity. Baissac (2003), for example, in an analysis of Mauritius, emphasizes not only management of the domestic economy, but also careful administration of the EPZ itself. The Mauritian state capably managed EPZ costs and encouraged domestic ownership of EPZ firms, which created greater integration of the EPZ and non-EPZ economy.

Thus the more of these features are present, the more likely is the prospect for the creation of spillovers and backward linkages. There is of course a common characteristic of these correlates of EPZ success: it is that the success of EPZs is not related to how many or large the EPZs are, but to the degree of state capacity, domestic entrepreneurship, educational attainment and absorptive capacity outside the EPZ. To some extent, then, the focus on explaining why some countries have succeeded with EPZs and others not, requires an analysis of conditions beyond the EPZ itself.

Another feature of this list of correlates of EPZ success is the tautological sounding one that the economy must have already achieved some success – in terms of technological upgrading or industrial development – in order for EPZs to be successful, as indicated in points (1) and (3) above. Madani (1999) distinguishes between those countries that sought to implement EPZs as engines of growth and those countries, such as South Korea, Taiwan and even the United States, that introduced EPZs only after they had fairly advanced

manufacturing sectors with export success (Madani, 1999, p. 18). In Taiwan, for example, manufacturers accounted for half of exports before FTZs were introduced in the 1960s (Rhee, 1990, p. 43). In such cases, it is much easier for policy to move past the EPZ phase, and implement a nationwide industrial policy. According to Gereffi, “Many early exporters, such as Korea, Mexico and Taiwan (China), dispensed with the EPZ model relatively quickly, and allowed generalized export incentives to all companies located in their economies.”¹⁰

Point (4) is perhaps the most contentious of the four correlates of EPZ success, since it begs the large question of the role of the state in economic development. There is a strong line of scholarship that sees EPZs as having been crucial as a “greenhouse” for reform in East Asia, spanning from South Korea, Hong Kong and Singapore in the 1960s and 1970s to China in the 1990s and 2000s. In this view, EPZs are a positive first step that encourages the state, domestic entrepreneurs and foreign TNCs to push for a broader liberalization.¹¹ This is relevant to the Chinese case. EPZs in China were originally set up in limited fashion as enclaves to attract FDI and only then spread more broadly across cities and then across the country. Graham (2004) argues that SEZs in China in the 1980s constituted a political compromise between pro- and anti-reformers, and that the experience with SEZs and foreign investment in the 1980s provided experience for the government and foreign firms that both led to the great expansion of FDI and exports in the 1990s and 2000s and that would not have been gained had there been a more blanket liberalization at an earlier point in time.

These arguments have been forcefully rebutted by those claiming that the key was the coherence and power of state-led industrial policy, what Robert Wade refers to as “governing the market.” Amsden (1989) focuses on the Korean state’s capacity to provide subsidies for export promotion and productive investment (what she terms intentionally getting prices “wrong”) and at the same time to impose a system of “reciprocal control,” whereby cost control is achieved not just through the suppression of wages and labour rights, but also through the imposition of performance standards on domestic entrepreneurs as a condition for continuation of protective state subsidies.

Schrank (2005), focusing on the case of the Dominican Republic, argues that the EPZ-as-first-step view and the developmental-state-governing-the-market view both may overstate the claims for development policy. He points instead to the role of a broader, developmental community that often emerges not from central governments (be they liberal or interventionist), but from provincial elites, that is domestic entrepreneurs (often located outside historical industrial centres) who ally with foreign investors to promote impressive export expansion. He cites examples from the Cibao Valley in Dominican Republic, the machine tool industry in Penang Malaysia, the varied manufactured exports from Chihuahua, Mexico as well as various provincial efforts in China.¹²

It is beyond the scope of this survey paper to reconcile these views on the role of the state in managing EPZs in economic development. Instead, we turn to a discussion of some global economic and then political forces that pose a challenge to EPZ-oriented development strategies.

¹⁰ Gereffi (2006), p. 10.

¹¹ See Radelet and Sachs (1997), Radelet (1999) on Korea, Ge (1999) and Graham (2004) on China.

¹² Wong and Tang (2005, p. 309) note that there have been 3,837 development zones in China, among which only 6 per cent are approved by the State Council and the rest are approved by provincial governments or those below the provincial level.

5. Structural challenges to EPZ success

Our list of correlates of EPZ success ignores the global economic forces at work independent of any single nation's policies or entrepreneurship. It is important to recognize these forces as we consider further the possibility of using EPZs to begin the process of raising production and living standards. We start with the notion of industrial upgrading in global value chains and look at it from a global perspective before turning back to the question of EPZs and national performance.

5.1. Upgrading in global supply chains

In the absence of clearly identifiable backward linkages, EPZ activity could still produce benefits for the rest of the economy through industrial upgrading. Such upgrading is typically defined as moving into higher-technology and higher value added activities along a given supply chain. Upgrading is characterized as the move into more and more sophisticated aspects of the production process. Firms begin with assembly operations, putting together parts imported from elsewhere. In this stage, the main source of value added is labour. With learning, these firms move into the sourcing of raw materials locally and manufacturing products following buyer specifications, so-called original equipment manufacture. With even greater knowledge of technology, design and marketing, firms then can move into original brand-name manufacturing, or OBM, in which the entire value added from production accrues to the firm.¹

There are a number of cases of successful upgrading, some of which used EPZ arrangements. Most of these are the East Asian NICs. Others have been less successful in upgrading, including Mauritius, even before the phase-out of quotas and the disruption of its Madagascar-based production as a result of the violence and economic disruption due to the political crisis there. Despite an unfavourable cost structure, Mauritian firms succeeded with high productivity and high quality production, as well as preferential access to the EU market through the Lome convention and access to the United States market through its MFA quota share. Gibbon and Ponte (2005, p. 91) report that efforts to move into own-design and own-brand clothing was costly and unsuccessful, as it moved Mauritian firms away from their core competence: "Mauritian companies were simply too far from end markets to set, or even closely follow, fashion trends". These firms shifted back to a strategy of horizontal expansion based on large-scale, and including overseas, production.²

In much of the analysis of industrial upgrading, it is assumed that higher-technology production also is higher-value added, and that higher value added translates to higher wages and better work conditions. There are two possible points of slippage here. One is the question of whether upgrading technology necessarily raises value added. The other is the question of whether industrial upgrading necessarily brings social upgrading, where we define the latter as better pay, benefits, standards and rights for workers.

Preliminary evidence brings some scepticism on both issues. While developing countries have had great success over the past twenty years in expanding their share of global exports of manufacturers, they have not been nearly as successful in capturing the share of global value added. Table 7 shows the growth in these two measures since 1980. If we define "upgrading" as that where the percentage increase in the share of

¹ See Gibbon and Ponte (2005) chapter 3 for an overview of the upgrading literature.

² See also Nathan Associates (2003).

manufacturing value added rises by 30 per cent or more of the increase in the percentage increase in the share of manufacturers exports, then we find that from 1980 to 2004 “upgrading” occurred only in a few cases, and most of those were in East Asia – Hong Kong, Korea, Malaysia, Singapore, Thailand, China. The only others that meet this threshold for upgrading were India, Chile, and Columbia.

Table 7. Exports, value added, and industrial upgrading 1980-2004, selected countries

	Growth of share in world manufacturing exports 1980-2004	Growth of share in world manufacturing Value added 1980-2004	Industrial upgrading
	(1)	(2)	(2)/(1)
Latin America			
Argentina	6	-25	-3.98
Bolivia	129	-14	-0.11
Brazil	-29	-23	0.79
Chile	122	40	0.33
Colombia	37	11	0.30
Costa Rica	526	41	0.08
Ecuador	87	-12	-0.14
El Salvador	163	13 0	0.08
Guatemala	101	-3	-0.03
Honduras	364	30 0	0.08
Mexico	672	5 0	0.01
Nicaragua	147	-53	-0.36
Panama	17	-7	-0.40
Paraguay	85	0	0.00
Peru	-31	-21	0.69
Uruguay	-53	-42	0.78
Venezuela	95	-16	-0.17
Asia			
Hong Kong SAR	117	42	0.36
Indonesia	703	111	0.16
Korea, Republic of	69	176	0.16
Malaysia	480	173	0.36
Philippines	510	-13	-0.02
Singapore	156	106	0.68
Thailand	521	202	0.39
China	723	446	0.62
India	83	110	1.34

Source: Milberg and von Arnim (2007).

The evidence shows that developing countries have very successfully expanded their share of world exports of manufactured goods. But in general their share of manufacturing value added has not increased proportionally. As a result, most developing countries, and in particular all of the sample Latin American countries, cannot be described as having

upgraded. Mexico is a particularly extreme case, having seen a more than six-fold export share expansion and effectively no increase in its manufacturing value added share.³ Korea and India, by contrast, experienced “superupgrading”, as their share of world manufacturing value added rose by more than their share of world exports of manufacturers. Note that China had massive expansion of both its manufacturing export share (723 per cent) and its share of manufacturing value added (446 per cent).

The second issue we raised above about upgrading was the degree to which higher value added production has led to social upgrading. The issue here is about the distribution of the value added in EPZ production. A main difficulty here is that in most countries EPZ production is, by construction, dominated by foreign firms. These firms receive long tax holidays on profits taxes and are usually free to repatriate profits. There is very little data available on profits from EPZ production. Recent studies indicate that profits are often repatriated, and thus an important source of value for reinvestment or social upgrading is channelled away from the domestic economy. In a comparative study of Costa Rica and the Dominican Republic experience with EPZ-intensive export growth strategies, Sanchez-Ancochea (2006) describes Costa Rica’s success in moving from apparel to more high-technology exports, driven most notably by the \$300 million investment by semiconductor producer Intel, which employs over 3,000 people and is the country’s largest exporter. But because most value added went into TNC profits, the bulk of which were repatriated, the move to higher value added EPZ production did not in that case lead an expected developmental push. Sanchez writes that the new export sectors still lack sufficient linkages to the rest of the economy and most of their value added goes into profits for transnational corporations.

Jayamthakumaran (2003) finds that most of the six countries she studied did not realize their expectation in terms of EPZ generation of domestic profits, and that this might be a crucial factor in future support for EPZs:

The zones have provided an efficient means of absorbing surplus labour in the initial stages. However, as industrial development proceeds, the expectation is that the gap between market and national interest in the EPZs will tend to disappear. National interest may hold only if the zones generate private profit to domestic shareholders.(Jayamthakumaran, 2003, p. 63)

5.2. Export-led industrialization and the fallacy of composition

Export-led industrialization hinges on the capture of foreign demand to induce resources to non-traditional and higher-productivity sectors, allowing an increase in productivity to translate into higher living standards with a potential cumulative effect in which export revenues also ignite income growth through the foreign trade multiplier. EPZs, envisioned as an export platform, are often perceived as in the vanguard of a country’s export-oriented growth strategy. Liberalization, it is hoped, will bring inward direct investment from globally competitive firms and boost foreign market access. Cling and Letilly (2001, p. 2) write that “The adoption of export-led growth strategies by developing countries is directly responsible for the considerable expansion of export processing zones in recent years”.

³ Similar findings on Mexico are reported in Moreno-Brid (2005).

The simultaneous pursuit of net export growth by many countries around the world has revealed a weakness at the global level, sometimes referred to as a “fallacy of composition” problem. That is, while it may be advantageous for one country if it alone achieves exporter status in a particular industry or even in aggregate, but there are systemic issues when many countries at once pursue growth through export markets. First there is the adding up problem: on a global scale imports are, by definition, equal to exports. That is, not all countries can at once achieve positive net exports. The large United States trade deficit over the past ten years (\$765 billion in 2006) has allowed many countries to achieve positive net exports. But if the United States position were to adjust to a smaller deficit or to balance, that would put a significant damper on net exports outside the United States.

A second aspect of the fallacy of composition problem with export-led industrialization is the dampening effects on the terms of trade brought by massive entry into export markets, especially for relatively low value added and homogenous products, as found often in the apparel and consumer electronics areas. Continual entry by countries expanding EPZs or starting new ones, so common even in the past five years, and despite existing global excess capacity, has led to a steady decline in the terms of trade of medium and low-technology manufactures, dampening export revenues for competing countries, and putting pressure on profit markups, on wages and on labour conditions.⁴ Thus the picture on upgrading provided here is supported by data on trends in the terms of trade faced by many developing countries. The situation would appear to be a contemporary version of the Prebisch-Singer dilemma. In the contemporary context, developing country firms have made the transition to manufacturing exports, yet are again suffering the terms of trade stagnation predicted by Prebisch-Singer in earlier years.⁵

Finally, even successful export competition by developing countries raises certain problems, since it is necessarily accompanied by capital outflows. Traditionally, capital flows from the industrialized to the industrializing countries was considered essential to provide the credit and embodied knowledge. Today, the flow of capital is in precisely the other direction, with developing countries sending hundreds of billions of dollars to the industrialized countries in 2006 alone.

⁴ See Mayer (2001) and Blecker and Razvi (2005) for empirical evidence of this phenomenon.

⁵ For a review of the evidence on the terms of trade, see Kaplinsky (2005).

6. Implications of WTO and regional trade agreements for EPZs

We discussed above the implications for world trade of the ending of the WTO Agreement on Textiles and Clothing. But there are broader implications of WTO regulation for the future of export processing zones. To the extent that EPZs provide export subsidies, they are considered WTO-incompatible. Export subsidies – say a tax or import tariff exemption contingent on export performance – constitute a distortion from the perspective of the WTO principle of equal treatment, since exporters from EPZs would have a special advantage over those firms not operating in EPZs.¹

EPZs are not mentioned explicitly in any WTO Agreement, but export subsidies are in violation of the Agreement on Subsidies and Countervailing Measures (SCM) of the Marrakesh Agreement establishing the WTO. Developed countries had agreed to a prohibition on export subsidies in the Tokyo Round SCM Agreement in the GATT concluded in 1979. Domestic content subsidies were regulated for developed countries in Article III of the 1947 GATT. New to the WTO SCM Agreement was a phase-out provision for developing countries. There are also some implications for EPZs in the GATS and the TRIMS. This section reviews the SCM Agreement, its definition of a subsidy and the recent developments on the extension of exclusions from the Agreement. We then briefly discuss the GATS and the TRIMS Agreements with respect to EPZs. Finally, we consider the implications of regional trade agreements for the status of EPZs.

6.1. Export subsidies under the agreement on subsidies and countervailing measures

The various concessional conditions offered under EPZs are generally governed by the WTO Agreement on Subsidies and Countervailing Measures (SCM). An export subsidy is defined in the Agreement “a financial contribution by a government or any public body within the territory of a [WTO] Member which confers a benefit.”² The Agreement identifies two categories of prohibited subsidies: Export subsidies are subsidies contingent (in law or in fact) on export performance. Local content subsidies are subsidies contingent on the use of domestic over imported goods. Some export subsidies are not prohibited, in particular some agreed-upon agricultural subsidies. Other export subsidies that are not prohibited may nonetheless be actionable, that is subject to challenge in the WTO dispute resolution mechanism. This mechanism is not invoked automatically but is contingent on one (or more) WTO members filing a complaint against another WTO member.

6.2. Exclusion from export subsidy ban extended to 2015

Article 27.4 of the Agreement on SCM provided for an eight-year period by the end of which (January 1st, 2003) most developing countries would be required to eliminate their export subsidies, including preferential tax treatment, duty-free treatment of imported inputs, and any subsidies to utilities and transport. Article 27.4 stipulates that some

¹ This perspective on EPZs also informs the overall World Bank skepticism towards EPZs as distortionary, following the economists.

² WTO/Subsidies and Countervailing Measures overview, downloaded July 15, 2007.

countries are eligible for an extension to the exclusion from the subsidy ban. These countries are WTO members with GNP per capita below \$1,000 per year (so-called “Annex VII (b) countries”, since they are listed in Annex VII (b) of the Agreement) as well as an additional 22 countries who have sought exclusion and who satisfy a number of other criteria, including world merchandise export market share not greater than 0.1 per cent, and national income for the year 2000 below US\$20 billion.³ These countries have registered or otherwise indicated their intention to exercise their right to seek exclusion. Countries that have sought extensions since 2003 are: Antigua and Barbuda, Barbados, Belize, Costa Rica, Dominica, Dominican Republic, El Salvador, Fiji, Grenada, Guatemala, Jordan, Panama, Papua New Guinea, St. Lucia, St. Kitts and Nevis, St. Vincent and the Grenadines and Uruguay.

Four countries – Sri Lanka, Bolivia, Honduras and Kenya – who have not yet “graduated” from the Annex VII(b) list (because they have not achieved the three consecutive years of US\$1,000 per capita which is required to move out of Annex VII(b) status) have reserved their right to utilize the new procedures but are not yet in a position to do so. If Sri Lanka, for example, were to graduate (most likely this will not occur until 2011) then they could use the procedures which Barbados and other countries have negotiated and are currently using in order to continue to receive an exclusion. Under the Doha mandate, Article 27.4 countries were allowed extend their exemptions from the SCM Agreement until 2007. These countries included all countries listed on Annex VII plus the others who had received special permission for exemption.⁴

In July 2007, the WTO General Council adopted the decision of the Committee on Subsidies and Countervailing Measures to allow annual extensions of exemption from the SCM Agreement until 2015 for the 22 countries listed above.⁵ Annex VII countries that had not notified the WTO of the desire to an extension back in 2001 are likely not to have the possibility of seeking extensions in the future, although this has not been resolved definitively.

Officially the end date for the extension is year-end 2013, but the Agreement also keeps in place a final two-year phase-out, which effectively moves the final export subsidy elimination date to 31 December 2015.

Extension is not unconditional or automatic. Members receiving a continuation of the extension must undergo an annual review by the SCM committee. The main purpose of the review is to “verify that the transparency and standstill requirements ... are being fulfilled.”⁶ Transparency is the condition requiring that governments provide a description of all export subsidy programs in operation. The standstill mechanism stipulates that the subsidy cannot be modified to be made more “favourable” to subsidy recipients than it was non September 1st, 2001. For the annual updating reviews in 2010, WTO members receiving the continued extension must file a special “action plan for eliminating export subsidies.”⁷

³ WTO (2001, G/SCM/39).

⁴ WTO press release, 13 July 2007.

⁵ WTO (2007, G/SCM/120).

⁶ WTO (2007, G/SCM/120).

⁷ *ibid.*

6.3. EPZs in the context of GATS and TRIMS

The SCM Agreement is not the only aspect of WTO regulation that affects the operation of EPZs, although it is of the most immediate relevance.⁸ EPZ concessions also potentially come under the regulation of the General Agreement on Trade in Services (GATS) and the Agreement on Trade Related Investment Measures (TRIMS). The GATS Article II reiterates the most-favoured nation principle for the case of services. Since EPZs offer concessions to only certain companies, this may imply differential treatment of countries depending on whether they have investments in the EPZ or not. Such a principle has not yet been tested with a complaint, and there is no explicit treatment of export subsidies in the GATS. A potential conflict also arises with the national treatment clause of the GATS (Article XVII), although this article generally has some flexibility for subsidies for cases in which prior commitments to national companies industry have been made.

The TRIMS agreement also does not refer explicitly to EPZs, but it would seem that EPZs do in fact constitute a trade-related investment measure and would thus come under the jurisdiction of the TRIMS agreement. The Agreement would rule out domestic content requirements and foreign exchange restrictions (including on a company's trade balance), as they would be in violation of Article 5.1 of the TRIMS agreement. But since 1995 there have been no notifications issued. Engman et al. (2007) identify a few recent EPZ developments that may constitute WTO-incompatible trade related investment measures. An Indian law requires firms in a new round of EPZs to be net earners of foreign exchange over a five-year period, leading companies to favour domestic over foreign inputs. Another measure (in a different, unnamed country) links the ability of EPZ firms to sell in the domestic market to the domestic content of production. These would likely be inconsistent with the TRIMS Agreement.

6.4. The status of EPZs in regional trade agreements

EPZs pose a particular dilemma for their treatment under regional trade agreements (RTAs). RTAs are aimed at reducing trade and investment barriers between signatory countries. EPZs are not considered part of the national customs area. The inclusion of EPZs in the RTA creates a likelihood of "trade circumvention" whereby non-members of an RTA who produce in the EPZ of an RTA member would gain access to the favourable conditions for trade under the RTA. Trade circumvention, as Granados (2003, p. 5) describes it, is the case of goods "slipping through the back door without paying tariffs." An additional problem with trade circumvention is that it puts local firms in RTA member countries at a disadvantage vis-à-vis EPZ firms in another country since the latter would be importing inputs duty free in the EPZ. The risk is that EPZs will lead to the establishment of regional export platforms, what Granados (2003, p. 10) describes as "insular mechanisms through which preferential conditions are exploited to place in the other market goods that pay no tariffs or taxes in the first market."

As a result of the possible distortionary and unfair role of EPZs within RTAs, some RTAs have been quite restrictive in attempting to eliminate the likelihood of an export platform as described above. Others are less restrictive, and some acknowledge the issues but have no explicit limitations on the treatment of EPZs in RTAs. Granados (2003) ranks Western Hemisphere RTAs in terms of degree of restrictiveness with respect to RTAs. MERCOSUR is most restrictive. NAFTA is somewhat restrictive. NAFTA included a commitment by Mexico to end special duty withdrawal privileges to non-member companies after 2001. In anticipation of this, Mexico implemented the sectoral promotion

⁸ This section draws on Engman et al. (2007, pp. 49–50).

program (PROSEC), which granted MFN tariff preference for 5,000 products used as inputs in 22 different sectors. RTAs that are not explicit about EPZs include the Andean Community, Panama-Dominican Republic and Dominican Republic-Caricom Agreements.

CAFTA–DR is a regional trade and investment liberalization agreement between the United States and its Latin American and Caribbean trading partners. The Agreement extends product coverage for duty free status into the United States as established in the Caribbean Basin Initiative, which was renewed in 2000 under the Caribbean Basin Trade Partnership Act of 2000, also known as the “NAFTA parity” Agreement. CAFTA–DR does not require any changes to EPZ regulatory practices, except for an explicitly requirement to comply with broader WTO obligations, such as those discussed above regarding subsidies and countervailing measures.⁹

EPZ activity may in fact be spurred by CAFTA–DR, for two reasons. For one, the Agreement calls for free trade in goods produced in EPZs as long as they satisfy rule of origin requirements. Second, and in particular with respect to textiles and apparel which are often produced in EPZs, the rule of origin standards have been made more flexible to include inputs made from any of the parties of the agreement as well as Mexico and Canada. Less restrictive rules of origin were negotiated for selected textile and apparel products¹⁰ and de minimis origin levels were raised from 7 per cent under CBI to 10 per cent. Regarding labour and environmental standards, CAFTA–DR requires each signatory country to enforce its own domestic laws and regulations. In principle, then, lax enforcement of labour laws and regulations in EPZs could be a target for dispute under the Agreement. According to the World Bank (2005, p. 48) “the obligations under DR–CAFTA are unlikely to require significant changes in current legislation but are likely to lead to pressures to upgrade enforcement, particularly in export sectors.” The CAFTA–DR Agreement indirectly affects EPZ activity because of its changes regarding textiles and apparel as described above. Outside of EPZ regulation, the main domestic regulatory change required by adoption of CAFTA–DR will be for Costa Rica to liberalize its regulation of telecommunications and insurance industries.

Because the promise of RTAs in some cases outweighs that of EPZs, some countries are committing to reduce EPZs over time in order to satisfy RTA (and WTO) stipulations on export subsidies. Thus Costa Rica had begun a process of removing export and investment subsidies in EPZs, including a harmonization of income tax rates across domestic and foreign firms, although the process stopped when its Free Zone Regime and Inward Processing Regime were allowed to continue under the WTO SCM Committee Agreement.

⁹ See World Bank (2005, pp. 45, 50).

¹⁰ See World Bank (2005, p. 40).

Part II. Labour standards and working conditions in EPZs

1. Overview of global trends

This section contains an overview of studies and reports that provide a worldwide assessment of working conditions in EPZs, distilling the detailed country data presented below and bringing in additional information from other countries. The section begins with a discussion of labour law and enforcement in EPZs. The remainder is then organized along salient issues that reoccur in many studies of working conditions in EPZs, namely, freedom of association and social dialogue, working time, health and safety, and wages and benefits.

There remains a broad consensus that many countries simply lack the resources to enforce labour laws in many export processing zones.¹ One recent report from the World Bank summed up the problems in EPZs as follows: “Even in cases where workers’ rights are legally mandated, there may be poor enforcement. Workers’ rights organizations provide a long list of anecdotes involving violent repression of free association, gender discrimination, excess hours of work and significant health and safety concerns. In some cases, poor conditions of work in EPZs are similar to those in the economy proper and, thus, are not directly attributable to the laws allowing EPZs to come into existence”.² This finding is largely consistent with a recent International Confederation of Free Trade Zone Unions (ICFTU) report that, in a few countries, laws are still different in EPZs than the rest of the country—for example in Togo, EPZ firms are exempt from regulations on hiring and firing. However, this situation appears to apply to a smaller list of countries than it has in the past, with countries like Bangladesh now providing laws to protect freedom of association in EPZs for the first time.³ However, improvements in actual working conditions have not always followed legal changes.

Despite the consensus that many countries lack the will or ability to enforce laws in EPZs, there are very few studies on government capacity to regulate conditions in EPZs. Broadly speaking, the existing evidence suggests that there is wide variation in the resources available to labour inspectorates throughout the world, with many lacking adequate resources, funding, staff, and transportation resources.⁴

1.1. Freedom of association and social dialogue

Despite changes in policies of some countries, there are continued reports of systematic violations of freedom of association in EPZs throughout the world. A recent ILO report summarizes this problem, stating: “Under the assumption that union-free zones would attract greater investment, some EPZ-operating countries have, under their laws, either deprived EPZ workers of their right to organize themselves or placed severe

¹ See, for example, Graham and Woods, 2006.

² Brown (2007), p. 16.

³ Gopalakrisnan, 2007.

⁴ International Labour Organization, 2006.

limitations on the free exercise of this right”.⁵ Some nations, such as Pakistan, China, and Nigeria, still have legal restrictions that limit freedom of association.⁶ However, other countries, such as Bangladesh, have taken in steps to change the legal environment for unions in EPZs.

Even when national legislation is strong, implementation of freedom of association is often inadequate. For instance, the ICFTU report cites action by the Mexican government to protect maquiladoras from collective action and preventing unions, despite claims by the government to the contrary.⁷ In addition, the report finds that trade unions are often denied entry to EPZs and workers often dismissed for union activity. The evidence of continued discrimination against unions is widespread, including studies that have found suppression of freedom of association in the Dominican Republic,⁸ Jamaica,⁹ Sri Lanka,¹⁰ and Guatemala.¹¹ Moreover, in many countries, there are reports that firms close when unions form only to open elsewhere, and in multiple cases union repression has been violent.¹²

These findings are largely congruent with those of a recent ILO report, that finds that “even when there are no such limitations under the law, EPZ workers in many countries are unable to effectively exercise their freedom of association on account of the anti-union discriminatory practices adopted by employers against EPZ workers engaged in trade union activities. These include the unjust dismissal, suspension, transfer and blacklisting of trade union officials and members. Employers in EPZ enterprises sometimes even resort to physical violence to prevent workers from forming and joining trade unions of their choosing. The problem is accentuated when there is a lack of effective enforcement of laws in the zones, as is often the case.”¹³

Despite some positive changes, such as changes in the legal environment in Bangladesh and international pressure focused on Central America and the Caribbean,¹⁴ the overall trend does not indicate that substantial improvements have been made in freedom of association or social dialogue.¹⁵ Moreover, freedom of association is consistently seen as one area in which corporate social responsibility initiatives have not

⁵ Gopalakrisnan, 2007, p. 1.

⁶ *ibid.*

⁷ International Confederation of Free Trade Unions, 2004.

⁸ Gopalakrisnan, 2007.

⁹ Russell-Brown, 2002.

¹⁰ Best, 2005.

¹¹ Rodriguez-Garavito, 2005.

¹² International Confederation of Free Trade Unions, 2004.

¹³ Gopalakrisnan, 2007.

¹⁴ Ross, 2005; Frundt, 1998.

¹⁵ This finding is supported repeatedly in the country studies and cross-national studies of corporate social responsibility detailed below.

made progress in improving compliance with labour standards (see the third section of this report).¹⁶

1.2. Working time

Long working hours, often in violation of national law, continue to be endemic in EPZs throughout the world. In nearly all of the country studies below, there is evidence that overtime continues to be a major problem.¹⁷ For example, in Sri Lanka, one study found that many workers report mandatory overtime over the legal limit.¹⁸ In Cambodia, the vast majority of firms were found out of compliance with exceptional overtime regulations.¹⁹ In Madagascar, EPZ workers as a whole work longer hours than workers outside the EPZs.²⁰ There are less systematic studies that report excessive overtime in places like Viet Nam²¹ and Turkey.²² A study of extensive overtime in many EPZs in China's apparel sector demonstrates consistent excessive overtime.²³ This study found that the primary reason workers worked overtime was to earn additional income.²⁴ This additional income was considered by the workers as an important part of their total income. As evidence of workers' low wages, the survey found that 45 per cent of factories paid illegally low wages, demonstrating the relationship between low wages and worker motivation to work overtime.²⁵ However, workers are putting in more overtime hours than they want, with the majority of workers said they wanted to work 20 hours of overtime or less per week. The survey found that 35 per cent of the employees said that the factory management expects that they work overtime, and while it is not mandatory, workers have limited choice.

These findings are supported by the ICFTU report, which also finds excessive overtime in EPZs across the world, often in violation of countries' own legislation.²⁶ Overall, excessive overtime is tied to the nature of many industries in EPZs, especially apparel and footwear, that require rigid shipping deadlines and have seasonal demand peaks. On the one hand, this structural problem has made it difficult for even the most focused efforts to control overtime. On the other hand, consultative approaches to

¹⁶ Mamic, 2003; Wang, 2005; Barrientos and Smith, 2006.

¹⁷ The study of Honduras is one exception.

¹⁸ Jayaweera, 2003.

¹⁹ International Labour Organization, 2007a.

²⁰ Glick and Roubaud, 2006.

²¹ Smith, 2006; Wang, 2005.

²² Jo-In, 2005.

²³ For example, see: Verité, 2004.

²⁴ *ibid.*

²⁵ Still, overtime wages were also illegally low in 72 per cent of the factories. Therefore, workers may be putting in extra hours but not be compensated for it.

²⁶ International Confederation of Free Trade Unions, 2004.

improving production systems have shown potential for reducing excessive overtime, demonstrating that progress can be made in this area.²⁷

1.3. Health and safety

Trends of health and safety in EPZs are less clear than with working time and freedom of association. Many workplaces in EPZs throughout the world still fail to provide safe environments. The ICFTU report finds that many firms in EPZs have poor health and safety conditions – ranging from eight of ten firms in Guatemala failing to comply with national working condition standards, to workers being locked in factories that subsequently caught on fire on multiple occasions in Bangladesh, to lack of health and safety equipment in Mexico.²⁸ In addition, a systematic study of health outcomes among workers in the Dominican Republic, that will be discussed in detail below, finds that women EPZ workers that are heads of households have higher rates of hospitalization than non-EPZ workers (see below for a more detailed discussion of this finding).²⁹ However, health and safety appears to be an area in which efforts to improve working conditions are making progress. The ILO's Better Factories Cambodia has made considerable progress in getting factories to implement the health and safety suggestions of inspectors.³⁰ In addition, health and safety improvements were broadly found in a cross-national study of implementation of codes of conduct.³¹ In sum, problems persist in health and safety conditions in EPZs throughout the world, but there is evidence that some improvements may have occurred.

1.4. Wages and benefits

Wages and benefits appear to be one of the few labour standards where compliance appears to be improving in many countries. The country studies below indicate that in Bangladesh, Madagascar, Costa Rica, Honduras, and Sri Lanka wages tend to be higher in EPZs than outside of them. This is consistent with previous reports that find that wages are generally better in EPZs.³² There is evidence that legal minimum wages are being respected in EPZs for some workers, but, like in Cambodia³³ and Turkey,³⁴ compliance of minimum wage laws are lower for casual workers. Similar to wages, reports of benefits generally show that EPZs are more likely to provide benefits, such as health care and social security, than other sectors of the economy. This is especially the case when EPZ employment is compared with the informal sector, as shown in the studies of Madagascar and the Dominican Republic below. However, the generally higher wages in EPZs, and reports of compliance with minimum wage laws, do not necessarily mean that wages are “livable.”

²⁷ Anh, Lam, B-Holm, Pedersen, Bodwell and Mamic, 2005.

²⁸ International Confederation of Free Trade Unions, 2004.

²⁹ Liberato and Fennell, 2007.

³⁰ Polaski, 2006.

³¹ Barrientos and Smith, 2006.

³² Madani, 1999.

³³ International Labour Organization, 2007a.

³⁴ Jo-In, 2005.

2. Country studies

This section provides reviews of a series of country studies that focus on a variety of labour conditions in EPZs. The research drawn on for these studies employ different methodologies and focus on different aspects of employment. Moreover, each study uses a different “control group”, comparing conditions in EPZs to different groups in the broader economy of the country. Conclusions drawn from these studies are highly sensitive to which comparison group is used. Notwithstanding these limitations, there are a number of congruent findings that are supported by these heterogeneous studies in a wide range of national contexts.

2.1. Bangladesh

EPZ employment has grown substantially in the past four year in Bangladesh, increasing from 121,000 to 188,000 workers.¹ EPZ employment is dominated by the garment industry, which in 2001, accounted for 68 per cent of all Bangladesh exports.² The vast majority of workers employed in the Bangladeshi garment industry are women. For all workers in Bangladesh (inside and outside of EPZs), there are only 113 labour inspectors, leaving labour administration understaffed.³ Common problems found in the garment industry in Bangladesh are lack of awareness of workers of their rights, long working hours, mandatory overtime, gender discrimination with relation to wages, employment insecurity, lack of childcare and maternity leave, low levels of health and safety, overcrowding of the workplace and poor working conditions.⁴

A 2001 survey of over 1,300 women workers in and around Dhaka provides a detailed view of the differences between working conditions and wages inside and outside of the EPZs.⁵ The survey breaks women workers down into four categories: workers in the EPZs around Dhaka, workers in the export garment sector of the city of Dhaka (not in EPZs), self-employed workers in the domestic sector, and wage workers in Dhaka. The results of this survey demonstrate significant differences between women workers in the EPZs compared with those in Dhaka in terms of socio-economic status, wages, work hours, formalization of employment, and overall working conditions – each of these detailed aspects of working conditions will be discussed in the following paragraphs.

The survey finds that, like many EPZs throughout the world, workers in the Bangladeshi EPZs are generally young, unmarried, and have relatively fewer children than similar groups. In Dhaka, EPZ workers, on average, come from backgrounds of higher socioeconomic status than other Dhaka garment workers, generally being better educated and coming from families with more education. The economic characteristics of EPZ garment workers reflect this difference, and EPZ workers demonstrate significantly lower levels of poverty when compared with other workers. Whereas 23 per cent of Dhaka garment workers, 28 per cent of self-employed workers, and 34 per cent of other wage

¹ Milberg, 2007.

² Barrientos, 2007.

³ Bangladesh Department of Inspection for Factories and Establishments, 2003.

⁴ Barrientos, 2007

⁵ Kabeer and Mahmud, 2004.

workers experienced a food shortage in the past year – only 4 per cent of EPZ garment workers report experiencing a food shortage. In addition, EPZ workers report higher wages, on average, when compared with all three comparison groups. EPZ garment workers reported average monthly wages 4.14 times the government determined poverty line. In relative terms, EPZ wages are much higher than other workers: Dhaka garment workers reported wages 2.35 the poverty line, self-employed workers reported wages 2.35 times the poverty line, and other wages workers reported wages only 1.26 times the poverty line. In terms of poverty alleviation, the study found that EPZ workers are more likely to have the ability to save than other workers.

EPZ workers also report having more formal working conditions and enjoying more benefits than all three comparison groups. Notably, 64 per cent of EPZ workers compared with 1 per cent of Dhaka garment workers received a contract letter. In addition, EPZ workers report receiving benefits at a much higher level than other workers. For example, 76 per cent of EPZ workers compared with 37 per cent of workers in the Dhaka garment sector enjoy paid leave; 91 per cent of EPZ workers compared with 63 per cent of those employed in the Dhaka garment sector enjoy medical care; and 97 per cent of EPZ workers compared with 83 per cent of Dhaka workers report getting overtime pay. Similar results were found in the survey with regard to maternity leave, child care facilities, and transport facilities. Also, EPZ workers are more likely to know how overtime is calculated and earn wages on a regular basis than the other groups. Lastly, many fewer EPZ workers report working more than ten hours a day than other Dhaka garment workers – 30 per cent compared with 72 per cent. Tempering the generally better conditions reported by EPZ workers, overall, the survey found little evidence of trade unions in any of the four groups of workers. Moreover, workers report knowing little about labour laws (although garment workers in the EPZs are much more likely to report hearing about laws than other wage workers).

The results of this survey are congruent with findings from a ICFTU case study of working conditions in Bangladesh's EPZs, which finds that generally conditions are better inside the EPZs than outside. However, the ICFTU report argues that this finding does not indicate that EPZ conditions are a "great achievement," stating that "life for workers is generally better in the EPZs compared to conditions elsewhere because many companies outside the zones force their employees to work in dangerous, medieval conditions that lead to many accidents, a situation resulting from a virtually universal violation of Bangladeshi labour legislation."⁶ This argument demonstrates the importance of control groups in many of the comparative studies of labour conditions inside and outside EPZs. The conclusions drawn from these studies, even when they derived from statistically representative samples of workers, are largely shaped by the chosen control group.

2.2. Cambodia

The ILO's Better Factories Cambodia programme provides data on labour conditions in Cambodia's EPZs over time. For being a latecomer in the apparel industry, Cambodia was not part of the international quota system that for 40 years governed the international trade in the apparel and textile production. Taking advantage of this situation, the Cambodian apparel industry grew rapidly. From virtually no apparel exports in 1994, exports had grown to almost half a billion dollars in value by 1998.⁷ The share going to the United States increased rapidly, to the point that in 1998 the domestic United States

⁶ International Confederation of Free Trade Unions, 2004, p. 19.

⁷ Polaski, 2006.

textile and apparel industries called for import restraints. Between 2001 and 2006, investments in the garment industry have increased seven fold.⁸

In 1999, the Governments of Cambodia and the United States signed a three-year trade agreement on textile and apparel.⁹ The agreement awarded Cambodia higher garment export quotas into the United States market in return for improved working conditions and labour regulations. In 2000 and 2001, the United States Government granted Cambodia a 9 per cent increase in quotas. The agreement was then extended for three more years, from 2002 through 2004, and quota bonuses of 9 per cent, 12 per cent, and 18 per cent were awarded for those years. The trade agreement has continued even after the expiration of the global garment quota system at the end of 2004. An innovative, and essential, feature of the project is the monitoring role of the ILO. The results of the ILO monitors are published in reports that detail compliance or non-compliance by the factories with national labour laws and international core labour standards. The ILO monitors issue a “synthesis report” that summarizes the main problems in the sector without naming firms. After granting a period of time for remediation, the ILO monitors re-inspect the same factories, and factories that did not remediate violations of national labour laws or international core labour standards (that were found on the first visit) are identified by name in a second report. Based on these reports, the United States Government makes the decision on the quota bonus. Moreover, since the ILO reports are public, buyers too could use them when making outsourcing decisions, creating an additional incentive for factories to be in compliance.¹⁰

As described above, ILO monitors perform a first visit to a sample of factories, during which they assess 156 compliance items. After a period for remediation of the problems found, the monitors return to each factory to check which issues have been remediated. While these data provide the most detailed information on labour conditions in EPZs across a wide number of factories, these data are conditioned by the ILO’s monitoring method. Some issues, such as harassment, freedom of association, and discrimination, are extremely difficult to find during monitoring visits. Other compliance issues, such as wages, work hours, and health and safety standards, are much easier to identify because they either involve documentation or physical aspects of a plant that are discoverable.

Notwithstanding these limitations, conclusions can be drawn from the data gathered by the monitors. The results of the monitoring show that upon the first visit by monitors, firms have mixed levels of compliance. In the first 5 years of the project (1999–2004), the monitors did not find any violations to two fundamental labour standards – child labour and gender discrimination. Once again, these issues are extremely difficult to find, and the monitoring reports acknowledge the difficulty in detecting child labour due to the lack of a universal birth registration system in the country and the falsification of documents that allow for age verification.¹¹ Furthermore, data from the 1999–2004 period reveal that, upon the first visit, the large majority of the factories had problems with excessive and

⁸ International Monetary Fund, 2007.

⁹ This section draws on Polaski, 2006.

¹⁰ *ibid.*

¹¹ To check for underage workers, monitors usually perform a visual check for workers that look younger than 15, and they also do random checks of employment records. If employment records seem reliable, no further investigation is requested; otherwise, monitors request such documentation from the same workers. However, workers can obtain false age-verifying documents through bribes or can use valid document of someone else of legal age. In these cases, it is very hard for monitors to detect violations.

non-voluntary overtime, and incorrect payment of wages.¹² Problems with health and safety violations were also common and were found in most factories. On the other hand, problems with freedom of association were found in a small number of factories (although the issues were sometimes serious). By 2004, a number of factories that had been previously inspected were systematically re-inspected. From these follow-up visits, some improvements were evident: 61 per cent had implemented between one-third and two-thirds of the ILO's suggestions, and a small group of factories came into full compliance. The greatest progress was made in payment of wages, where 95 per cent of firms had adopted some or all of the ILO's suggestions. With regards to safety and health, 95 per cent of factories adopted some remediation, but none was in full compliance. On the other hand, only 41 per cent of factories were in full compliance with legal hours of work and overtime, or had remediated after the first visit, but 33 per cent did not remediate any of the problems. Finally, 76 per cent factories had taken some actions for remediation in freedom of association, but the remaining 24 per cent did not come into compliance on this issue.

The most recent ILO report, the Eighteenth Synthesis Report published in April 2007, shows continual improvement in some areas.¹³ The following table summarizes the distribution of issues that monitors found in the six months prior to the 2007 report.

Table 8. Compliance with selected working conditions in Cambodia's garment industry¹⁴

Legal requirement	Percentage of factories in compliance
Correct overtime rate for regular workers	99
Correct overtime rate for piece-rate workers	97
Minimum wage for regular workers	96
Minimum wage for piece-rate workers	90
Correct overtime rate for casual workers	87
18 days of annual leave	86
Payment for maternity leave	83
Minimum wage for casual workers	61
Voluntary overtime	60
Paid sick leave	58
Provide personal protective equipment	49
Install needle guards on sewing machines	42
Overtime limited to two hours per day	31
Exceptional overtime	15

¹² Polaski, 2006.

¹³ International Labour Organization, 2007b.

¹⁴ International Labour Organization, 2007a.

These data demonstrate that compliance is unevenly distributed—with some requirements being commonly complied, such as minimum wage, and others, such as overtime hours and wages for casual workers, having much lower levels of compliance. The 2007 report finds very few violations of fundamental rights of work – such as child labour, forced labour, and discrimination – but these issues are difficult to find in the monitoring process, as described above.

In the six month period before the 2007 report, there were a number of areas that demonstrated significant improvement. The top areas of improvement were: (1) adopting grievance handling procedures, (2) notifying authorities in the case of accidents, (3) increasing awareness of employees rights to paid time-off for breast feeding, (4) paying workers during normal working hours, and (5) paying workers who had work-related accidents. In all of these areas, there were between 18 per cent and 28 per cent improvements in compliance rates over a six-month period. On the other hand, a number of issues demonstrated a decline in compliance. These include: (1) paying workers correct severance pay, (2) training and encouraging workers to use protective clothing and equipment, (3) keeping an inventory of chemicals stored on site, (4) complying with contract requirements for workers in factory for more than two years, and (5) keeping safety data sheets for chemicals.

2.3. Costa Rica

Since the promulgation of the EPZ law in the early 1980s, the EPZs of Costa Rica have experienced rapid expansion. A recent study of Costa Rica's EPZs by the ILO offers data regarding the composition of the workforce, relative wages inside versus outside of the EPZs, and an overview of labour conditions.¹⁵ At first, EPZs in Costa Rica were dominated by labour-intensive operations in the textile/garment industry, but the position of textile gradually weakened relative to other sectors. By the end of the 1990s, textile/garment firms represented the largest industrial sectors in the Costa Rican EPZs, accounting for 23 per cent of all firms and for 40 per cent of employment. The second largest sector was the electric/electronics industry (21 per cent of firms and 24 per cent of employment), followed by footwear/leather and machinery/metal products. Currently, Costa Rican EPZs have a large presence of technologically advanced companies, great capital intensity and skilled labour force.¹⁶

A survey conducted in 2001 of export firms provides an overview of working conditions and employment in the EPZs. A total of 1,753 firms were surveyed and 1,173 valid answers were received, of which 69 were from EPZ firms. In terms of gender composition, approximately 52.3 per cent of EPZs workers are male. Although EPZs in other countries have a larger share of female workers than EPZs in Costa Rica, when the proportion of male workers in the EPZs are compared with non-EPZ exporting firms in Costa Rica, EPZs in the country are have a higher proportion of women workers. EPZ firms also tend to hire young workers – 40.2 per cent of workers are between 18 and 25 year old, and another 25.5 per cent between 25 and 30 year old – and the vast majority of employees have only a small number of years of formal education – 53.8 per cent of

¹⁵ This section is based on Jenkins.

¹⁶ EPZs represent an important share of the Costa Rican economy, accounting for 2.2 per cent of total employment in the country (up from 1.1 per cent in 1991) and for 47.2 per cent of total exports. Although the EPZ legislation offer fiscal and other incentives to firms located in backward regions, the majority of EPZ activity is located in the central region of the country, where the four main urban centers are and where firms can find better infrastructure, specialized services and skilled workforce.

workers have not completed high school, and 75.4 per cent have not received formal education after high school. However, the education level of EPZ workers is not unique, but is common to the rest of exporting firms in the country.

In terms of wages, the majority of EPZ firms responded to the survey that they pay salaries higher than the reported median salary paid in the Costa Rican local economy. Specifically, 96.8 per cent of EPZ firms pay higher salary to their plant and machine operators than the median Costa Rican salary for that occupation group, 87.1 per cent pay higher salary to administrative/clerks, and 71.7 per cent to managers. These salaries are also considerably higher than the salaries of non-EPZ exporting firms.

The study finds that working conditions in EPZs in Costa Rica tend to be at least as good as, and generally better than, those in other comparable operations in the rest of the economy. The survey found that the workplaces in EPZ firms are clean and well-ventilated, workers have access to medical attention, subsidized meals and transportation. However, this study does not provide a broad assessment of working conditions in EPZs.

Notwithstanding the limitations of the study on Costa Rica, a number of conclusions can be drawn. First, the Costa Rican EPZs tend not to be as feminized as EPZs in other countries, but follow the trend of being more feminized than the broader economy. Second, wages tend to be higher in EPZs than in similar employment outside of EPZs, again supporting this common finding.¹⁷ Finally, EPZs are not shown to have significantly worse working conditions than other workplaces, although this finding is supported by the least robust data.

2.4. Dominican Republic

Over the past 30 years, the Dominican Republic has experienced tremendous growth in the apparel industry that was common in the Caribbean Basin. From 1990 to 2000, the number of employees working in the free trade zones increased from 130,045 to 195,262. More recently, this trend reversed, and between 2004 and 2005 there were 55 fewer factories and 40,887 fewer employees in the apparel sector, placing pressure on the economy.¹⁸ Notwithstanding the recent decline largely attributed to the end of the Multi-Fiber Agreement, the apparel sector remains a significant part of the Dominican economy, accounting for 26 per cent of employment in the manufacturing sector.¹⁹

A recent study in the Dominican Republic provides another snapshot of the effect of EPZ employment on the women in free trade zones.²⁰ The authors of this study hypothesize that female headship of households and employment in EPZs will have negative effects on health. To test this hypothesis, the authors use data from nationally representative health survey of 8,000 households administered by the United States Agency for International Development (USAID). The sample included 373 heads of households employed in the EPZs, allowing for direct comparison between conditions inside and outside the free trade zones. The researchers ran a series of logistic regression analyses to find the relationship between health outcomes (the dependent variables) and

¹⁷ Madani, 1999.

¹⁸ Consejo Nacional de Zonas Francas de Exportación, 2005.

¹⁹ Montas, 2005.

²⁰ Liberato and Fennell, 2007.

free trade employment, gender of households, and the interaction between gender and free trade employment (independent variables). These regressions controlled for the number of working adults in the household, the age of the head of the household, whether the household is in a rural or urban area, and education level.

This study found a mixed relationship between health outcomes and EPZ employment. EPZ employment had a statistically significant positive relationship with healthcare coverage through social security. Indeed, households with heads that were EPZ employees were more than twice as likely to be covered through social security than non-EPZ heads of households, holding all other variables (including gender, age, and education) constant. On the other hand, EPZ employees were also more likely to report having health problem in the week previous to the interview. The analysis did not, however, find any statistically significant relationship between the use of preventative medicine or hospitalization (in the month before the survey) and EPZ employment. These “no relationships” may be due to the sample size of the survey, which may lack the sensitivity to identify smaller relationships between variables that do indeed exist. Both inside and outside of the EPZs, gender is a significant predictor on the usage of preventive medicine, with female headed households nearly three times as likely to report using preventative medicine. For the remainder of the dependent variables, however, there is no relationship between gender of the heads of household and health outcomes. However, when gender is interacted with EPZ employment, there is a significantly positive relationship with hospitalization in the past month. In other words, households that are headed by a female EPZ employee are more likely to report hospitalization than other households. This finding supports the authors’ hypothesis that female head of households working in the EPZ will have worse health conditions. However, the interaction term between gender and EPZ employment was not statistically significant for any other dependent variables. One would expect that if the combination of EPZ employment and gender had strong relationship with negative health outcomes, it would follow that both hospitalization and reports of health problems would have had statistically significant coefficients.

Overall, the findings from the study indicate that there are likely mixed health impacts of EPZ employment, and of the interaction between EPZ employment and gender. Part of these findings may have been influenced by the study’s approach to their control group. Instead of taking first time applicants (like the Honduras study below), or workers employed in a similar sector outside of the EPZs (like the Bangladesh study above), the researchers used a representative sample of the entire Dominican population. As the authors note, the informal sector in the Dominican Republic provides employment to 26 per cent of the economically active population. This may account for the relative increase in probability of health care coverage of EPZ employees. In other words, the study may be capturing the effect of formal employment, rather than the effect of EPZ employment.

Another study conducted in the Dominican Republic analyses the differences in living conditions more broadly.²¹ This study, carried out by the Human Development Office of UNDP compares the living conditions of workers in EPZs with those of workers in other productive sectors. The study analysed a group of indicators – quality of housing, overcrowding (of the household), environmental conditions, and available services – and found that workers in EPZs have living conditions slightly lower than those of the national average and definitely lower than those of other workers in the formal economy. First, the percentage of workers in EPZs that live in shacks is twice that of the national average (11.4 per cent versus 5.8 per cent). Second, the level of overcrowding is high in EPZs.

²¹ Ceara-Hatton, 2005.

Overcrowding is measured in terms of number of bedrooms per household and number of people per bedroom and both these indicators are higher for workers in the EPZs than for the national average. The percentage of workers in EPZs that live in housing with one bedroom is 32 per cent versus 24 per cent for the national average, and 25 per cent of workers in EPZs live in overcrowded housing (with 3 to 4.5 people per bedroom), whereas the proportion is 20 per cent for the national average. On the other hand, the quality of materials of construction for the housing of workers in EPZs is better than that of the national average, although is worse than that of workers employed in other private firms, outside EPZs. In terms of available services, such as sewage, and sources of pollution/contamination, there are not big differences between workers in EPZs and the national average.

The study also shows that the labour force in the EPZs has a different profile compared to the labour force of the entire economy in terms of age (EPZs employ a young-adult labour force, age range 20–39) and education (EPZs tend to employ workers with middle education), thus offering job opportunities to population groups that before were marginalized in the labour market and stimulating the level of education.

The EPZs in the DR are one of the main sources of job for women. During the period 1992–98, 13 out of 100 employed women were working in EPZs, whereas only 4 out of 100 employed men were. However, women employment in EPZs is slowly decreasing. In the period 1992–2003, the percentage of women employed in EPZs decreased from 61 per cent to 53 per cent of total employment. In other words, while the growth rate of female employment in EPZs was 0.6 per cent per year, male employment grew at the yearly rate of 3.5 per cent. Women employment in EPZs is also concentrated in the textile sector, therefore particularly vulnerable to the changes in the sector, especially after the end of the MFA. In addition, women usually occupy the lowest job level in the occupational rank, while men occupy technical positions and the majority of administrative and managerial positions. A feature of women employed in EPZs is the low rate of fertility, that is 15 per cent lower than the national average. The study offers two possible explanations. First, women employed in EPZs tend to be younger than the average in the national economy, therefore the low fertility rate could be just a natural consequence. The second explanation could be found in the practices of some companies that, according to Human Rights Watch, discriminate against pregnant women.²² EPZs also show a higher proportion of women head of the household than the national average. However, the study shows that this is not a sign of women empowerment, but a consequence of the absence of a man in the household.

These studies are, however, snapshots in time and, while they provide a detailed view of a particular moment, do not capture the trends in EPZ development in the Dominican Republic. With the end of the MFA, recent reports from NGO, government, and business association sources have reported factory closures and decreases in employment.²³ Projects made before the end of the MFA indicate that there could likely be a 30 per cent drop in exports and a 40 per cent drop in employment in the apparel sector.²⁴ These new developments suggest that the loss of jobs will have significant negative effects on workers.

²² Human Rights Watch, 2004.

²³ Consejo Nacional de Zonas Francas de Exportación, 2005.

²⁴ International Labour Organization, 2005.

2.5. Honduras

Through the 1990's, Honduras saw tremendous growth in EPZ's, primarily in the apparel sector. Along with this growth came labour unrest and a series of international campaigns directed against specific factories that suppressed unions.²⁵ Employment in the industry has held steadily for the past four years at approximately 130,000 direct employees.²⁶

One study directly compares the conditions of workers within and outside of export processing zones in Honduras.²⁷ Comparing working conditions within export processing zones and outside of them is plagued by the difficulty in finding an appropriate comparison group to workers within the EPZs. This study proposes a solution to this problem by comparing EPZ workers with those who seek employment in the EPZ. The researchers surveyed a random sample of 270 employees that currently were employed in EPZs as well as 149 first-time applicants. The latter were selected randomly in maquiladora parks during times of recruitment, and were asked nearly identical questions about their quality of life as those who were currently employed. The researchers determined that first time applicants are an appropriate comparison group because they are largely similar in socioeconomic (age, education, marital status, etc.), further strengthening their assertion that first time applicants are an appropriate control group. Although this control group may not be perfect (a group of workers currently employed in similar jobs outside the EPZ may serve as a better control), it provides a solution to the control group question that is amenable to survey research, generating useful data.

Overall, across a series of indicators, the study found that the differences between the quality of life of workers employed in the EPZ compared with those who were applying for jobs were not self-evident. For three indicators, workers in the EPZs were clearly better off than applicants. First, the survey found that workers in the EPZ earn a 50 per cent higher wage than the first time applicants. Moreover, they found that workers with more experience earned more than those with less experience, indicating that there was some room for advancement in the EPZ. However, the survey found that women earned less than men in the EPZ (although women in the EPZ earned more than men who were first time applicants), and overall that the salaries of EPZ workers were not enough to lift them out of poverty. Second, the survey found that those currently employed in EPZs were more likely to report having better relationships with others in their household and more likely to be the head of the household. Moreover, employees in the EPZ were more likely to feel that men contributed to household chores than applicants. Third, the employees in EPZs are more likely to vote and feel that they can influence the government.

Across other indicators it appears that workers in the EPZs were worse off than applicants. First, workers reported significantly more health problems than applicants. Second, fewer EPZ workers were employed in workplaces with unions than applicants (8.5 per cent versus 11.3 per cent). This finding is amplified by the fact that many applicants were employed as domestic labour or in restaurants that are unlikely to be unionized. Third, workers in EPZ report having less free time than applicants.

For the remainder of the indicators examined in this study, there was no significant difference between workers in the EPZs and applicants. First, there was no difference in

²⁵ Armbruster-Sandoval, 2003.

²⁶ Asociation Hondureña de Maquiladores, 2005; Asociation Hondureña de Maquiladores, 2007.

²⁷ Ver Beek, 2001.

the percentage of workers and applicants that report having worked overtime. Approximately half of workers and applicants felt that overtime is mandatory, despite Honduras' laws prohibiting mandatory overtime. There is one significant difference between applicants and EPZ workers with regards to overtime – contrary to many depictions of EPZ overtime conditions, the applicants report on average twice the overtime that EPZ workers reported. Second, EPZ workers and applicants report the same stress levels. Third, EPZ workers and applicants report the same education levels and opportunities. Fourth, EPZ workers do not appear to be a higher risk of crime than applicants. For these indicators, there appears to be no significant differences between the lives of applicants and EPZ workers.

Despite the innovative methodology of comparing applicants with current workers, one noteworthy difficulty in the survey method is that workers were interviewed on site in the workplace. While management was not present at the time of the survey, there is the possibility that workers' answers could have been affected by the context of the interviews. For example, this could have easily attenuated the number of workers who report sympathies for unions. Notwithstanding these limitations, this snapshot of working conditions inside and outside EPZs in Honduras paints a mixed picture of EPZ labour.

2.6. Madagascar

Two recent studies of Madagascar also provide comparative empirical accounts of labour conditions in EPZs, as well as data on the effects of EPZ employment on women. Madagascar is one of the few African countries that have successfully induced the development of EPZs through government incentives. The EPZs in Madagascar grew rapidly, by approximately 20 per cent annually between 1997 and 2001, and by 2001 accounted for a half of all secondary sector employment in the economy. In total, after ten years of growth, employment in the EPZs reached 70,000, and peaked out at even higher levels. However, in terms of overall employment in the economy, the EPZs account for only approximately 1 per cent of all employees in the country. EPZ employment in Madagascar is largely similar to EPZ employment in other parts of the world—employees tend to be younger, more female, and less educated when compared with other formal sectors. Also, like many other EPZs, it is dominated by clothing production, accounting for 90 per cent of production in 2001. There have been a series of studies conducted on employment conditions in Madagascar's EPZs based on a series of labour force surveys from 1995–2002.²⁸ Like the studies in Honduras and the Dominican Republic, the findings are mixed, with favourable outcomes associated with EPZ employment, such as high wages, but some unfavourable outcomes, such as long hours.

With regard to wages, controlling for education this study found that for men, EPZs pay more or less the same as other private informal and formal sector employment, and less than public sector employment. Compared with other sectors for female workers, EPZ employment pays better than private informal employment, about the same as private sector formal employment outside the EPZ (industrial and non-industrial), and less than public sector employment. Male and female EPZ employees tend to have lower monthly earnings and longer hours compared with other industrial formal private sector employment. Real wages in the EPZ grew over the period 1995–2002, but not at the same rate as wages in other sectors (notably public enterprises, public administration and private formal employment). The authors speculate that this may be because the EPZ labour market is somewhat decoupled from the rest of the local economy, which accounts for the

²⁸ Cling, Razafindrakoto and Roubaud, 2005; Glick and Roubaud, 2006.

fact that real wages were able to grow in other sectors at a greater rate than the EPZs despite the boom in EPZs in the same period.

There are no statistically significant differences between hourly wages of male and female employees within the EPZs. In contrast to large differences in the informal sector, the authors argue that this is evidence of an improvement in gender earning equality as a result of the growth of EPZs. However, in the EPZs, return on education for women is lower than other sectors (with the exception of public administration). But there are no statistical differences between returns on education for men and women in the EPZ.

Beyond wages, the study finds that EPZ employment consistently outperforms informal employment, but has more mixed results compared with the private formal and public sectors in terms of other job characteristics and benefits. First, EPZ employees are trained at approximately the same rate (~21 per cent receiving training in the five years before the survey) as workers in public administration and public enterprises. This compares favourably with the informal sector, which provides almost no training, and unfavourably with the private formal sector, in which half of workers reported receiving training. The study does not, however, probe into the content of the training, and we have no way of knowing if training in the EPZ is equivalent in any way to training in public administration. Second, EPZ employees tend to report having unions in their workplace and, for those in unionized workplaces, belonging to unions at higher rates than the rest of the private formal sector (and nearly double the trade union presence of the non-EPZ industrial sector). However, EPZ unionization rates are lower than unionization rates in the public sector. Third, turnover is relatively high in the EPZ; EPZ employees leave their jobs at twice the rate of other private sector employees. Fourth, EPZ employees are more likely to have an employment contract than those employed in the informal sector or the private formal sector, but as or less likely to have a contract than those employed in the public sector. Fifth, EPZ employees are more likely to be entitled to paid leave than the private formal or informal sectors and are just as likely to receive this benefit as public sector employees. Overall, these job characteristics consistently show that EPZ employment is favourable in relation to other private sector employment and approximately equivalent to public sector employment.

In one final work characteristic, working hours, EPZ employment compares unfavourably to all other sectors of the economy. EPZ employees work significantly more hours than workers in other sectors. On average, EPZ employees work 211 hours per month, compared with 187 hours in the rest of the private formal sector, 180 hours in the informal sector, and 161 hours in public administration. This finding is consistent with the characterization of EPZ employment as relying more heavily on overtime than other sectors.

Overall, the results of this study find that one's assessment of the quality of EPZ employment depends on what one compares it with. In all indicators besides working hours, EPZ employment compares favourably with the informal sector, at times is better than the rest of the private sector, and is generally on the same level as the public sector. Specifically regarding women, however, there is evidence that the informal sector may be the most relevant comparative group. This is because the growth in EPZ employment was largely among women who would have been employed in the informal sector. This is evidenced by the drop in female informal employment from 24 per cent to 14 per cent in the same period during which EPZ employment increased from 5 per cent to 15 per cent of all female employment. Further evidence for this substitution is that during the decline associated with the political crisis of 2001, the drop in EPZ employment was accompanied with an increase in informal employment for women. Moreover, the authors argue that "In light of the under-representation of women in other kinds of formal employment, export

processing appears to provide women with opportunities for formal employment not available to them in other sectors.”²⁹ While realistic in empirical terms, normatively this approach is limited because it implicitly compares EPZ employment with some of the worst (an indeed, illegal) jobs in the economy.

2.7. Sri Lanka

Employment in the EPZs of Sri Lanka has risen dramatically in the past five years, from 111,000 to 410,000 workers.³⁰ A significant part of this growth has been, like many countries, in the apparel industry. The common labour problems found in the EPZs include: excessive and obligatory overtime, suppression of trade unions, avoidance of social security pay, monotonous work in poorly ventilated factories, and overcrowded housing for workers.³¹

The contrasts between work conditions inside of the Sri Lanka’s free trade zones and those outside are not as pronounced as in other countries discussed above. A survey of 370 women and 75 men conducted in 2001 provides a basis for analysis of working conditions in Sri Lanka’s EPZs.³² For some issues, working conditions in the EPZs were as good or better than workers outside the EPZ. For example, wages that workers report in the EPZs conformed with, or exceeded, minimum wage laws. Nearly 90 per cent of workers, both in the EPZ and in other factories, received wages just above the official poverty line. In contrast, 37 per cent of home-based women workers earned less than the poverty line. Also, workers were also generally given legally mandated benefits and overtime pay, but they often lacked access to bathrooms and transport.

In contrast with other countries, in Sri Lanka, the vast majority of workers do not have contracts and believed that they could be dismissed without formal notice. Employment is unstable in the EPZs, with over 70 per cent of employees being employed for less than five years in their workplace. The survey found the lack of contracts to be common inside and outside the EPZs. Also, the report found that “the majority of workers in the EPZ factories and a smaller proportion in the rural factories claimed exposure to occupational health hazards such as dust pollution, continuously standing for long hours and hand injuries, and many complained of the absence of safeguards and compensation.”³³

Similar to many other countries discussed above, this study found extensive overtime in violation with Sri Lanka's labour legislation – with 41 per cent of women and 37 per cent of men in the EPZ reporting mandatory work more than nine hours per day. Also, the researchers found almost no trade unions in operation in the EPZs (only organizations founded by the employers).

²⁹ Glick and Roubaud, 2006.

³⁰ International Labour Organization, 2002a; International Labour Organization, 2007b.

³¹ Best, 2005.

³² Jayaweera, 2003.

³³ *ibid.*

3. Non-governmental and corporate social responsibility efforts

Efforts of labour rights activists who target global factories are frustrated. After having drawn international attention to the issue of “sweatshop” conditions in many exporting factories located in developing countries during the 1990s, civil society actors created a series of overlapping non-governmental international labour regulation regimes. However, these non-state approaches have had mixed results. In the words of the director of a leading labour rights organization, the Fair Labour Association, “[f]our years of monitoring in thousands of factories have showed us that monitoring alone is an inadequate tool to create sustainable change in working conditions.”¹ Nevertheless, systems of private regulation have grown substantially over the past twenty years, and are still growing.² The basic structure of these regimes is as follows: multinational corporations voluntarily adopt standards through a “code of conduct” that they then impose on the firms in developing countries that produce their goods.³ These standards are policed by the multinational firms themselves, by an independent NGO, or by a combination of both.

Private, voluntary, or non-governmental regulatory regimes formally rely almost entirely on market mechanisms and punitive sanctions for factories that are caught violating basic labour standards. They derive their power and legitimacy from the market forces that consumers, and in turn multinationals, wield on factories.⁴ Both practitioners and scholars have found that there are limitations to the efficacy of private regulatory systems. There are many potential sources of the limitations, and the particulars of private regulation have been subject to extensive scholarly inquiry. The debates in the literature on self-regulation of labour are cantered around: the reliability and capability of monitoring code implementation;⁵ the reality of any market pressure on companies to improve labour conditions;⁶ the voice afforded to the workers that are subject to the codes and the undemocratic nature of the codes;⁷ the types of supply chains that lead to better governance;⁸ whether the codes are no more than public relations;⁹ and finally whether private regulation displaces state regulation.¹⁰

¹ www.fairlabor.org (accessed 14 November 2006).

² World Bank, 2003.

³ Mamic, 2003.

⁴ Cashore, 2002.

⁵ O’Rourke, 1997.

⁶ Elliott and Freeman, 2001; O’Rourke, 2005.

⁷ Esbenschade, 2004; Rodriguez-Garavito, 2005.

⁸ Gereffi, Humphrey, and Sturgeon, 2005.

⁹ Klein, 2000.

¹⁰ Batley, 2005; Jenkins, 2001; International Labour Organization, 1998.

3.1. Implementation of codes of conduct

The ILO conducted a comprehensive study on the implementation of corporate codes of conduct in 2003.¹¹ The study focused on three sectors, apparel, footwear, and retail, and drew on data from interviews at twenty multinational enterprises (MNEs) and 74 supplier factories in Turkey, Sri Lanka, Cambodia, Guatemala, Honduras, China, Viet Nam, Thailand, and the United States. This study reports that MNE's unevenly implement their codes of conduct. On the one hand, notwithstanding commitment from top management to codes, there is an "inadequate, if not poor, level of integration of CSR and Code compliance responsibilities in the internal structure of MNEs and suppliers."¹² On the other hand, the report argues that some progress, albeit uneven, has been made.

Broadly, there are significant differences across the sectors in the implementation of codes of conduct. The first sector, footwear, to respond to pressure by creating codes of conduct is the most advanced. Moreover, in the footwear sector, there are relatively fewer suppliers for which multinationals work with, making implementation easier. In contrast, less progress has been made in the apparel industry, where there are many suppliers that have shorter term relationships with MNE's. The structure of the industry stretches resources, and "it was not uncommon to find a single individual attempting to manage the labour, social, and ethical obligations of between five to fifty supplier factories and in some cases even more."¹³ In the retail sector, the large variety of products and sheer size of the supply chains of many MNE's also frustrates the implementation of codes.

Across a variety of issues, this study found that codes of conduct are generally congruent with national labour legislation and international standards, but that the implementation of these standards is highly variable. For some issues, such as occupational health and safety, MNE's were able to gain traction and improve conditions. Although health and safety was often cited as a concern of MNE compliance staff, remediation is easier than with other issues because of the tangible nature of the problems. Also, suppliers offer less resistance to improving health and safety conditions because they often believe that changes will improve productivity. Similarly, with wages MNE's have been able to make progress ensuring that correct wages are paid at or above the legal minimum.¹⁴

For other issues, the researchers found that efforts to improve labour conditions by MNE's have been less successful. Notably, although nearly all codes of conduct have provisions for freedom of association, enforcing these provisions is extremely difficult.¹⁵ Moreover, for some MNE's the definition of freedom of association differs from ILO and union definitions. These MNE's view freedom of association as including the allowance of worker grievance committees or other means of association. Overtime and working hours also prove to be an extremely difficult issue for MNE's to address. First, these issues can be difficult to find, and the most common reported issues of non-compliance include "double book keeping, incorrect overtime payment, and faulty overtime records."¹⁶

¹¹ Mamic, 2003.

¹² *ibid.*, p. 246.

¹³ *ibid.*, p. 245.

¹⁴ It should be noted that the MNE's focused on ensuring payment of minimum wage, not on living wage.

¹⁵ See also: Hunter and Urminsky, 2003.

¹⁶ Mamic, 2003, p. 235.

Second, overtime is exacerbated by the short shipping timelines and seasonal nature of the three sectors covered by the study – footwear, apparel, and retail.

Finally, some trends have been identified in the development of CSR and code of conduct implementation over time. Among the sectors studied, the footwear sector, that has had the longest time to develop, was found to be the most advanced. This shows growth in code of conduct implementation over time. Also, there have been shifts in the character of implementation, most notably “there appears to be a push in all sectors to move from a ‘policing model’ to a more consultative approach.”¹⁷ This reflects a broader trend towards spreading best practices and lessons learned, involving more dialogue between MNE’s and suppliers. It also demonstrates a convergence in style between CSR initiatives and traditional models of government labour inspection that rely heavily on tutelage.¹⁸

3.2. Multi-stakeholder initiatives

A series of annual reports from the Fair Labour Association (FLA) provide one of the few data sources that compile comparable data on labour conditions for a large number of countries worldwide.¹⁹ These reports also provide a comprehensive assessment of one of the largest multi-stakeholder initiatives. As a multi-stakeholder initiative, the FLA combines NGOs, universities, and industry to create a system to improve labour conditions in apparel and footwear factories throughout the world.²⁰ The FLA reports the results of approximately one hundred audits of export factories conducted in approximately twenty countries. These factories are selected from FLA member companies, which are major apparel multinational firms. In 2005, the one hundred audits were drawn from as a sample from the supply chains of FLA member companies that include 3,753 factories employing approximately 2.9 million workers. Moreover, the FLA annual reports provide consistent data over time, allowing for the analysis of trends.

Notwithstanding these merits, the FLA reports also have limitations and a full assessment of the methods employed must be made before discussing their findings. The FLA monitors compliance with its code of conduct by employing third party “independent monitors” who conduct standardized audits of factories. The FLA code of conduct includes provisions for freedom of association and collective bargaining, health and safety, wages, limitations on overtime, forced labour, and child labour.²¹ In addition, the FLA requires that factories comply with all national legislation (when there are conflicts between national legislation and the code, whichever standard is more strict applies). The FLA accredits monitors, which include for-profit firms and NGOs, and provides them with detailed monitoring guidelines. Monitoring practices of codes of conduct have received intense criticism, and some question their methods and independence.²² They generally

¹⁷ *ibid.*, p. 245.

¹⁸ Piore, 2005; Piore and Schrank, 2006; Esbenshade. 2004.

¹⁹ See Fair Labor Association, 2004; Fair Labor Association, 2006.

²⁰ O’Rourke, 2003.

²¹ For the complete code, see <http://www.fairlabor.org/conduct> (accessed August 2007).

²² For an overview of some of the difficulties with monitoring, see: Burnett and Mahon 2001. Also, see: Pruet 2006. For an assessment of the problems with internal monitors, see: O’Rourke 1997.

involve a physical inspection of the factory, interviews with workers, and a review of documentation. These methods tend to be better at uncovering some issues, such as health and safety violations that are easier to uncover in physical inspections, as opposed to freedom of association violations that are difficult to uncover during audits.²³ Notwithstanding the limitations, as monitors do consistently find violations with the code of conduct in the factories, and considering the paucity of data, the patterns of these violations provide a valuable overview of labour conditions in the supply chains of multinational companies.

In 2005, FLA monitors found nearly 1,600 non-compliance items in 99 factory audits. First, by in large, the most common problems were violations of health and safety codes (45 per cent of all non-compliance items). These included lack of sufficient evacuation procedures, safety equipment, chemical management, ventilation, and sanitation. Health and safety violations represented a higher proportion of violations found in the Americas (where they were 58 per cent of all non-compliance items) than in East Asia and South Asia (where they were 38 per cent and 34 per cent of non-compliance items). Second, with regards to wages and benefits, the most commonly reported violations were procedural violations involving record keeping and worker awareness of wages. Monitors also commonly found firms that did not pay benefits (particularly social security) and did not comply with holiday and annual leave pay. The report admits that the monitors may be under identifying these violations due to false payroll records. Third, FLA monitors found 132 incidents of non-compliance with work hours regulations in 99 audits. Most common of all was excessive overtime (defined as a maximum of a 60 hour work week or the national laws, whichever is lower).

Harassment, abuse, discrimination, child labour, forced labour and violations of freedom of association were found less often. Despite the difficulty uncovering these problems in audits, monitors found 19 incidences of verbal abuse, 16 violations involving discrimination practices, and 49 violations related to freedom of association. Given that these types of violations are difficult to uncover, it is problematic to draw conclusions about the exact magnitude of these problems; if anything, these figures underreport the total number of violations of FLA's code.

Overall, the number of non-compliance items found per factory increased slightly between 2004 and 2005 from 15.1 to 16.0 (although this change may be an artifact from differences in monitoring practices). In addition, FLA monitoring demonstrates significant differences in working conditions in factories located in different parts of the world. Although all factories are in the same sector and in the supply chains of the same set of multinational companies, the average number of non-compliance items per factory is nearly double in South-East Asia and South Asia than in East Asia or the Americas. Specifically, the average number of non-compliance items that auditors found in East Asia and the Americas was 10.6 and 12.6, respectively, while in South Asia and South East Asia they were 21.2 and 23.2 respectively. Of course, this treats the all non-compliance items equivalently and does not weigh serious violations (such as forced labour) more heavily than less consequential violations (such as record keeping). However, if the distribution of the gravity of violations is remotely the same in the different regions, this finding indicates that labour conditions in EPZs in South and South-East Asia may be significantly worse than in East Asia and the Americas.

Notwithstanding the limitations of the FLA reports, there is congruence in the types of problems reported by the FLA with those found in the country studies and in other

While many lessons have been learned since this report came out, the overall criticism of monitoring provides an overview of some of the problems involved.

²³ See Hunter and Urminsky, 2003.

accounts, such as the ICFTU report.²⁴ This indicates that actors with different perspectives using very different methodologies find similar types of poor labour conditions.

Although the methods used to gather data from the FLA distort the distribution of labour problems that they identify, the trend over time does not indicate that conditions have improved. These data do not provide a comparison between factories that are and are not subject to codes of conduct, but it demonstrates that notwithstanding the efforts taken by the FLA and its member companies, there have not been noticeable improvements over time. In addition, the absolute level of compliance for some issues remains extremely low, indicating that major non-compliance problems remain in apparel factories throughout the world.

Another study of a multi-stakeholder groups examined the implementation of the Ethical Trade Initiative's code of conduct in 25 workplaces selected across five countries (India, Viet Nam, South Africa, Costa Rica, and the United Kingdom) and three sectors (garments, footwear, and fruit).²⁵ At each workplace, the researchers interviewed managers and workers. Outside the factories, interviews were conducted with ETI member companies, trade agents, and key informants from a number of stakeholder groups. Before presenting the findings of the study, it is worth to mention some of the limitations of the research methodology. First, the findings are not a statistically representative population of factories in ETI member companies' supply chains because, for each country case study, only a small sample of factories was included. Also, the research was conducted only with the first-tier suppliers, where codes of conduct are adopted. Therefore, the study includes minimal information on lower tier suppliers. Second, findings may also have a bias towards factories with better practices, because the research team found it difficult to obtain full information from all factories, and some suppliers also declined to participate. Finally, the study aimed at identifying the impact that the ETI code of conduct had on working conditions, but in many cases the authors could not attribute changes in these conditions to the ETI code rather than to other factors. Similarly, the research focused on the role of ETI member companies and not on the role of other actors that possibly may have impacted working conditions in the same factories. However, when possible, the research team interviewed with key informants from other groups.

Notwithstanding these data limitations, this report provides one of the few studies to examine labour conditions in detail in a number of different countries with export intensive industries. To assess labour conditions, three stages of research were undertaken. First, interviewees were asked to report any changes that had occurred in one of the areas covered by the code since the date of implementation of the code. Then, they were asked to identify the cause of those changes. Finally, they were asked whether they thought that the change was positive or negative, and explain why. It is important to note here that sometimes workers and managers had a different view on some of the changes.

The findings of the ETI report are congruent with those of other studies; the impact of the ETI code of conduct is generally mixed, having the code triggered "minor or isolated impacts" in almost all areas covered by the code. However, the study highlights that in a few areas impacts were more frequently noted. These areas are: health and safety, child labour, working hours, and minimum (not living) wage. Generally, these impacts were seen as positive changes by workers and managers. However, as discussed more in detail below, some of these changes were seen as negative by some of the interviewees. On the other hand, the areas where the least impacts were found are: freedom of employment,

²⁴ International Confederation of Free Trade Unions, 2004.

²⁵ Barrientos and Smith, 2006.

freedom of association, discrimination, regular employment, and harsh treatment. The table below summarizes these results.

Table 9. Impact assessment of ETI code of conduct ²⁶

Base code principle	Viet Nam		India		Costa Rica	
	Management	Workers	Management	Workers	Management	Workers
Freedom of employment	No impact	No impact	No impact	No impact	No impact	No impact
Freedom of association	No impact	Minor	No impact	No impact	Minor	Minor
Health and safety	Major	Major	Major	Major	Major	Major
Child labour	Minor	Minor	Minor	No impact	Minor	Minor
Living wage	Minor	Minor	Minor	Minor	Minor	Minor
Working hours	Major	Major	Minor	Minor	Minor	Minor
Discrimination	Minor	Minor	Minor	No impact	Minor	Minor
Regular employment	Minor	No impact	Minor	Minor	No impact	No impact
Harsh treatment	No impact	No impact	Minor	Minor	Major	Major

With regard to positive impacts, as it appears in the table, health and safety was the area that recorded most changes across all countries, with positive results from the code at 20 of 25 workplaces. These positive results were generally described as fewer accidents, more safe and secure work environment and better health. Second, the study found no employment of child labour (excluding during school holidays or after school) in all but one supplier, due to the enforcement of the law. As of a more direct impact of the code of conduct, the study found that one buyer had stopped employing children during school holidays because of pressure of buyers and, more broadly, it found evidence of checking of age documentation. However, in South Africa, Costa Rica and Viet Nam, many from both workers and management saw these changes as negative because many young people did not have alternative sources of employment and their families needed the income. Third, although the code had a very limited impact in ensuring that workers receive a living wage, the study found at nine of the 25 workplaces the codes of conduct engendered the payment of the legal minimum wage for at least certain categories of workers. Finally, the last area where positive impacts of the codes were found is that of working hours, with reduction in regular and/or overtime hours at 16 of 25 worksites. In few cases, employers started paying premium rates for overtime work due to the codes of conduct. However, the reduction in working hours in many cases translated into a reduction in take-home pay. The personal situations of the workers and the extent to which the reduction in working hours affected take-home pay influence workers' perception on whether this change was positive or negative. For instance, migrant workers with no children at home prefer to work as many hours as they can to maximize their pay; for these workers, the change was perceived as a negative.

In sum, the study of ETI demonstrates the mixed results of non-state initiatives that are largely congruent with the findings of the 2003 ILO study. Also, the types of issues that codes of conduct are generally more successful at improving tend to be the same as those found in the country studies with conditions better inside of EPZs than in the rest of the economy.

²⁶ Adapted from *ibid.*

3.3. Case study of a multinational apparel firm

A study of internal compliance data from Nike by a team of academic researchers provides an additional quantitative examination of compliance with codes of conduct across a large number of factories.²⁷ These studies provide one of the few data sources that are consistent over a large number of years, tracking the success of codes of conduct over time. These researchers used Nike's internal compliance data to analyse trends and drivers of compliance with Nike's code of conduct and supplemented the quantitative data with ethnographic research in Nike factories in China, Turkey, and Mexico. The researchers analyse data from two different types of audits, approximately 575 of which assigned a quantitative score to factories based on a 48 hour audit, and over 3,000 qualitative grades given to Nike factories by monitors. The data cover over 700 factories employing 600,000 workers in 51 countries and allow for time series analysis.

These data suffer from many of the same problems as the FLA data – internal compliance data from multinational companies is often criticized for inaccuracies and the inherent conflict of interests of the monitors.²⁸ Again, notwithstanding limitations in the data, lessons can be drawn by what monitors do find, and the patterns that are identified in the data, even if the absolute level of poor labour conditions found is underestimated.

The Nike data reveal that most factories are not in full compliance with Nike's code of conduct. The quantitative audits rate factories on a scale of 0 to 100, with 100 being full compliance. The average score for all factories in the sample was only 65, with a standard deviation of 16. Although it is impossible to assess the absolute level of labour conditions based on the audits, the researchers were able to extensively analyse the high levels of variation in the relative level of compliance among Nike factories. Similar to the FLA report, the researchers found that scores in the Americas are significantly higher than those in South Asia (77 versus 58). Among the types of factories that produce for Nike, the study found very little variation between apparel, footwear, and equipment factories (with footwear factories having slightly better conditions than the others). To assess what drives the variation in compliance rates found by Nike, the researchers run a series of multivariate regressions estimating models with compliance as the dependent variable. The researchers find that measures of rule of law, geographic region, percentage of production for Nike, industry type, and number of audits by Nike all have a statistically significant relationship with compliance scores.

The researchers also looked at change in compliance over time, to gauge whether Nike's program was effective. The authors conclude that despite spending millions of dollars to implement their code of conduct program, Nike largely failed to improve labour conditions in their supply chain over time. They find that while quantitative assessments of labour conditions are improving over time, the qualitative scores show the opposite trend. In conclusion, the research shows that conditions have largely not improved over the four years that the data cover and that working conditions have not improved in EPZs, similar to the FLA report.

²⁷ Locke, Kochan, Romis and Qin, 2007; Locke, Qin and Brause, 2007.

²⁸ O'Rourke, 1997; Pruett, 2006; Esbenschade, 2004; Burnett and Mahon, 2001.

4. The way forward

This section lays out a proposal for a framework for interventions to improve conditions in EPZs that involves combining a “pedagogical” approach to labour regulation and a mix of global non-governmental and local governmental efforts. The poor labour conditions that persist in EPZs are intertwined with the systems of production in EPZ firms and with the ties that EPZs have to global and local economies. Thus, these findings privilege policies that improve production processes in order to facilitate better working conditions, as well as policies that combine local and global forces. A number of specific policy tools can be used within this framework, examples of which are already in place include the ILO’s programs in Cambodia, Viet Nam, and Sri Lanka. The following two sections describe the pedagogical approach and the need to combine local and global efforts in more detail.

4.1. A pedagogical approach to improving labour conditions

Many of the labour problems found consistently across a wide variety of EPZs require deep changes in production systems that can be best brought about through a pedagogical approach to regulation. The pedagogical approach departs from traditional “command and control” or deterrence based regulatory models that often dominate diagnoses of poor labour conditions in EPZs. The underlying logic of many regimes of labour regulation – whether governmental inspection combined with sanctions, or enforcing private, voluntary codes of conduct – is that regulation alters the incentives of rational factory managers by creating economic consequences for poor labour conditions. A causal assumption is made that with these incentives, factory managers will invest in better conditions. In other words, social deviance is deterred by making the expected value of the costs of non-compliance greater than the gains that can be made by not investing in better labour conditions. However, this approach to labour regulation is based on the assumption that firms have the ability to comply if given the right incentives. Moreover, it is based on the assumption that with the right incentives, firms are in the best position to know how to change their production systems in order to come into compliance.

An alternative approach to improving labour conditions emphasizes the “pedagogical” or a tutelary role of regulators.¹ In other words, regulators help firms come into compliance with labour standards by spreading best practices and working with firms to problem solve. A pedagogical approach involves combining regulation through sanctioning with an active stance of increasing the capability of firms to comply with regulations. Regulation in pedagogical systems is conducted by generalists, who have knowledge of many parts of the labour code (not just health and safety, or wages and hours) and who have the discretion to work with firms to bring them into compliance. This aspect of labour inspection, although central to the profession of the labour inspector in many accounts,² is often lost in discussions of EPZ policy. Although the literature on the pedagogical approach has focused on state labour inspectors, this model can, and has, been extended to private, voluntary regulatory systems as well.³ Indeed, labour inspectors, social auditors, and capacity builders from international organizations, can all act as agents

¹ See Piore, 2005; Piore and Schrank, 2006.

² Von Richthofen, 2002; Albuquerque, 2003.

³ Mamic, 2003; Amengual, 2007.

of change in spreading good practices in firms. The pedagogical approach to regulation has been shown to engender sustained improvements in regulatory performance across a variety of policy areas, including working conditions.⁴ When combined with traditional incentive-based approaches to regulation,⁵ policy interventions that emphasize pedagogical approaches have the potential to improve labour conditions in EPZs.

The importance potential for the pedagogical approach can be illustrated by examining one of the labour standards in most need of improvement: excessive overtime. A striking finding in all of the country studies is the fact that, both in relative terms to conditions outside of EPZs and in absolute terms of compliance with labour law, excessive overtime is consistently a problem in EPZ workplaces. Common reasons for overtime are delays due to weak supply chains, production systems that do not meet quality standards of clients (requiring last minute adjustments to products), and seasonal peaks in demand. Low wages on the part of the workers create an incentive for workers to comply, even encourage, long overtime hours. Notwithstanding the incentive that workers who are paid low wages have to work overtime, studies in China⁶ and Honduras⁷ indicate that many workers believe that overtime is mandatory and work more hours than they want to given the wage incentives. As a consequence, overtime is persistent, even when as in Cambodia, inspections are increased and there are market-based sanctions for firms that do not comply. Congruently, assessments of corporate codes of conduct demonstrate that reducing overtime is often beyond the reach of monitoring and sanctioning programs. In sum, overtime is pervasive, and not easily reduced simply by changing the incentives of managers.

Reducing overtime requires both paying workers a sufficient salary to reduce the need for extra hours and adjusting production processes to be able to decrease the pressure that clients place on factories. For the both to occur, there has to be capacity building in factories to improve production processes and quality, as well as incentives for buyers to better manage production orders. Indeed, the ability of targeted interventions in production practices to reduce overtime has been demonstrated by the ILO's Factory Improvement Programmes in Viet Nam⁸ and Sri Lanka.⁹ In Viet Nam, training in factories focused on improving productivity through introducing systematic approaches to identifying production delays and altering human resources practices to improve worker management relations. By increasing communication, planning, and simplifying work processes, the average rate of overtime was reduced by 50 per cent participating factories.¹⁰ This finding is congruent with a comparative study of two factories in Mexico producing for Nike that demonstrated that improved production systems can be linked to decreased overtime.¹¹ In this analysis, an improved production system in one factory decreased overtime hours

⁴ See Kagan and Scholz, 1984; Hawkins and Thomas, 1984; Kelman, 1981; Lee, 2005.

⁵ For a classic statement on the logic of command and control regulation as a cost-benefit analysis, see: Becker 1968.

⁶ Verité, 2004.

⁷ Ver Beek, 2001.

⁸ Anh, Lam, B-Holm, Pedersen, Bodwell and Mamic, 2005.

⁹ Best, 2005.

¹⁰ Anh, Lam, B-Holm, Pedersen, Bodwell and Mamic, 2005.

¹¹ Locke, Kochan, Romis and Qin, 2007.

while increasing quality and wages for workers. The expertise of multinational firms well equips CSR auditors to undertake pedagogical regulation to reduce overtime by strengthening supply chains and production processes.¹² In sum, these successful interventions demonstrate the potential for the pedagogical approach to address one of the most prevalent violation of labour standards in EPZs.

Overtime is not the only issues in which a pedagogical approach is effective. Helping to build better human resource policies can have the potential to strengthen social dialogue, and improve working conditions and competitiveness.¹³ In addition, capacity building in the ILO Factory Improvement Programme has resulted in broad improvements in health and safety, social dialogue, and quality.¹⁴ Overall, many of the poor labour conditions in EPZs can be improved through better education of workers and managers, providing them with the ability to comply, not just the incentives to comply. This education can come from regulators of all types, but some regulators have a comparative advantage to help firms address certain labour problems. Different actors have different strengths: multinational enterprises often have expertise in the strengthening of supply chains for factories, firm associations often have expertise in improving production systems and health and safety,¹⁵ and international organizations have strength in promoting social dialogue.

There are widespread implications for an emphasis on strengthening the pedagogical aspect of labour regulation in EPZs. While the pedagogical approach should not be seen as a complete replacement to traditional “command and control” regulation,¹⁶ it represents a way forward to improve labour conditions through upgrading.¹⁷ Consequently, a more pedagogical approach has the potential to improve labour standards in a hostile economic environment where cost sensitive buyers can easily move to low costs environments without rigorous labour protection. Pedagogy is not a panacea, there is still a need to structure incentives for firms to induce compliance. However, policies that improve the pedagogical ability of labour inspectors and auditors alike have the potential to engender steady improvements in employment conditions in EPZs. Efforts to improve the capacity of labour inspection, to reform private, voluntary systems, and to create new programs (such as the one in Cambodia) should consider strengthening the pedagogical role of regulators.

4.2. Combining local and international efforts

Much of the debate and discussion surrounding efforts to improve labour standards in EPZs is polarized by those who focus on governmental efforts, and those who focus on international efforts. For the former, governmental regulation is the only approach that truly respects the rights of workers, and the only approach that is somewhat accountable and democratic.¹⁸ For the latter, many governments are seen as simply lacking the

¹² Amengual, 2007.

¹³ Lake, 2006.

¹⁴ Anh, Lam, B-Holm, Pedersen, Bodwell and Mamic, 2005.

¹⁵ For example, the Procinco programme of the Association of Honduran Maquiladoras.

¹⁶ For a discussion of balancing sanctioning with pedagogy, see: Ayres and Braithwaite, 1992.

¹⁷ Piore, 2005.

¹⁸ Seidman, 2003; Seidman, 2007.

necessary resources to regulate, and not having the willingness to risk losing investment by improving labour standards.¹⁹ The polarized debate aside, many workplaces in EPZs are now regulated by a hybrid system of governmental and non-governmental regulation.²⁰ Consequently, discussions of methods to improve labour standards in EPZs have begun to recognize the need to harness local and global forces, as well as governmental and non-governmental efforts,²¹ and ways to assure that private voluntary regulation supports, instead of detracts from, governmental efforts.²² The most promising proposals and programs combine multiple sets of actors in varying roles to leverage their comparative advantages in ensuring compliance with labour standards.²³

In the past five years, it has become clear to researchers that non-state efforts are at best a partial solution. The shortcomings of implementation of codes of conduct, as discussed above, demonstrate the limited ability of non-state efforts alone to improve labour conditions. In the implementation phase of codes of conduct, core labour standards, such as freedom of association, are often not adequately addressed.²⁴ Even when code of conduct implementation mobilizes intense efforts to force union recognition in factories,²⁵ these efforts are only aimed at a handful of the thousands of factories in EPZs throughout the world. For example, the Workers Rights Consortium, which is one of the leading NGOs supporting focused factory specific campaigns, has conducted only approximately a dozen factory “investigations” throughout the world as of 2005.²⁶ Moreover, factory closings and severance pay, which have become more of an issue in the apparel sector with the end of the MFA (which will hit Latin America particularly hard), remain outside the influence of code of conduct efforts. Private voluntary regulation systems that rely on leverage the market power of multinational enterprises lose all influence over labour conditions once clients stop purchasing goods from EPZ firms. However, international efforts are not entirely to be discarded and for some issues, such as health and safety, codes of conduct may be able to contribute to making marginal improvements.²⁷ Moreover, the pressures that multinational buyers and international civil society can place on firms to improve conditions have the potential to be leveraged, especially in places where the rest of the economy poses tremendous challenges to domestic labour regulators with limited resources.

Likewise, many national governmental labour regulatory programs continue to lack the resources they need to effectively regulate workplaces, including EPZs. In the words of one recent article, “some developing states have limited control over the effects of economic activity within their borders on such social objectives as human rights, labour rights, and environmental sustainability. Equally, some governments are unwilling to

¹⁹ Graham and Woods, 2006.

²⁰ Gereffi, 2006.

²¹ Polaski, 2006; Amengual, 2007.

²² O’Rourke, 2006.

²³ Braithwaite, 2006; Weil, 2005.

²⁴ See citations above, especially Mamic, 2003; Barrientos and Smith, 2006.

²⁵ Rodriguez-Garavito, 2005.

²⁶ O’Rourke, 2006.

²⁷ Barrientos and Smith, 2006.

regulate, perceiving instead benefits to be gained from lack of regulation as they compete for foreign direct investment".²⁸ Strength of national legislation is often not a good indicator of actual labour conditions because weak government agencies are unable to enforce the law. In some countries, such as Honduras, labour inspectors lack transportation to visit EPZs and never conduct preventative inspections.²⁹ Consider the discussion above about the relationship between working conditions in EPZs in Bangladesh, and those of non-EPZ Dhaka garment workers. With only 111 labour inspectors in Bangladesh, there clearly are not sufficient resources currently in the Bangladeshi government to oversee working conditions.³⁰ Capacity clearly needs to be developed with the government. However, even with increased capacity, the differential between working conditions inside and outside the EPZs would drive scarce resources (regardless of whether inspectors are strategic and do not wish to upset mobile capital) out of the EPZs and towards the more vulnerable wage workers in Dhaka. In other words, additional resources for government labour inspection will only go so far for improving conditions in the EPZs if outside the EPZs poor conditions continue. This conditionality on situations outside EPZs is evidenced by places, like the Dominican Republic, that have invested in labour regulation.³¹ In the Dominican Republic, poor labour conditions outside of EPZs push inspectors that focus their resources on the most problematic sectors of the economy, and consequently shift some resources away from EPZs.³² In countries where there are violations of core labour standards in the informal sector and limited resources for inspection, regulation will not improve in EPZs until the overall employment conditions in the economy are improved. In sum, without massive improvements in both economy wide labour conditions and government capability (labour inspectorates, courts, social service provision, etc.), governments will continue to be unable to adequately regulate labour standards in EPZs.

This dual failure of private and governmental efforts makes combinations of global and local efforts particularly attractive. Together, international efforts and local governmental efforts can make up for one another's weaknesses. As described above in the section on the pedagogical approach, different actors have comparative advantages in addressing poor labour conditions. The ILO's Better Factories Cambodia project, for instance, uses the market strength of international actors to create incentives for firms to improve conditions, and uses the credibility of ILO inspectors to enhance the credibility of the information that is gathered. New policies towards improving labour conditions in EPZs should acknowledge the presence of all types of actors and emphasize their comparative advantages.

In addition, interventions in EPZs should be coupled with interventions in the surrounding economies. For example, broad interventions have been seen as necessary to address the social dislocation caused by enforcement of child labour laws.³³ The logic that addressing conditions inside of EPZs also involves addressing conditions outside applies to other labour standards as well. For example, the continued complaints of violations of

²⁸ Graham and Woods, 2006, pp. 868–9.

²⁹ Author's interviews with labour inspectors in Tegucigalpa and San Pedro Sula, Honduras in June 2006. For a discussion of the difficulties with only conducting preventative inspections, see Silbey 1984.

³⁰ Bangladesh Department of Inspection for Factories and Establishments, 2003.

³¹ Murillo and Schrank, 2005; Schrank, 2005.

³² Amengual, 2007.

³³ International Labour Organization, 2002c; Murshed, 2005; Schrage, 2004.

freedom of association in EPZs indicate that there is a need to strengthen implementation of freedom of association protections in EPZs through state action. The climate towards unions generally (both inside and outside of EPZs) and the history of unions in countries, play a role in the lack of freedom of association in EPZs. Freedom of association, it appears, will not likely dramatically improve in EPZs with concurrent improvements in economies as a whole. While it is obvious that an antipathy towards unions in a country as a whole will make exercising freedom of association difficult in EPZs, policy makers must recognize this relationship when devising policy that explicitly uses state actors, who are often best positioned to address issues in the economy as a whole. Moreover, freedom of association violations and disputes often require conciliation or adjudication between labour and capital on the part of regulators. Conciliation involves intervening in conflicts between actors (e.g. workers, management, unions) to restore order in a way that is consistent with the rights of the actors. Adjudication is the determination of which side is correct in a conflict and what path should be taken. Often, only state regulators have the legitimacy to undertake these tasks.

Just because interventions are required both in EPZs and the domestic economy does not mean that there is no role for international actors and voluntary, private initiatives. Continuing with the freedom of association example, EPZs offer particular challenges to organizing that can be addressed with the help of international actors. There are often reports that, after a union has formed in a factory, factories close down.³⁴ In recent years, there has been an increased effort to encourage clients to continue to source from factories with unions.³⁵ International efforts to use the purchasing power of multinational enterprises that source from EPZs have the potential to support freedom of association by maintaining relationships with unionized factories.

In sum, efforts to improve conditions in EPZs should take advantage of the comparative advantages of all actors, and should consider the connection between conditions in EPZs and conditions in the broader economy. Also, the process of labour regulation should combine pedagogical methods with creating incentives for firms to comply. Interventions that meet the needs of specific countries and sectors should be taken, but it is within this broad framework that they are likely to be most effective.

³⁴ See discussions of freedom of association above.

³⁵ See the campaigns of the Maquila Solidarity Network.

Conclusion

Driven by the ongoing desire to expand exports, to tap into existing global supply chains for goods and services, and to create jobs and skills, governments have continued over the past five years to support an expansion of EPZs, along with many of their traditional concessions and liberal regulations. Companies have continued to invest in these zones as a source of profit and as a means to implement an efficient global supply chain. This expansion of EPZs has occurred in the face of growing international political and economic resistance. Political resistance comes from labour activists and NGOs, international organizations and regional trading arrangements. The economic forces working against EPZs include the declining terms of trade for manufactures and the enormous gains by China in world export shares of many products produced in EPZs.

Across many cases in many countries over decades of time, export processing zones have often generated considerable export growth and new employment. At the same time, the view that EPZs would spur broader economic development has not been borne out, as countries have often found it difficult to upgrade the activities in the EPZs to higher value-added enterprise, and spill-overs to economic activity outside the EPZs have been the exception rather than the norm.

The comparison of working conditions inside and outside the EPZs shows mixed findings. Of course, this comparison is highly sensitive to what “comparable” groups are, and the studies discussed in this review differ substantially in this regard. For example, while the study on Honduras compared workers in EPZs to applicants looking for work in EPZs, the studies of Madagascar compared workers inside EPZs with those in the formal, informal, and public sectors. A summary of the differences between conditions inside and outside of EPZs found in the country studies reviewed in this report is provided below.

Wages: Wages tended to be higher among EPZ workers than other sectors of the economy (Bangladesh, Costa Rica, Honduras, Madagascar, and Sri Lanka).

Overtime: Workers in EPZs tend to work more hours (excessive, and often illegal overtime) when *compared* with other sectors in the economy (Bangladesh, Madagascar, Sri Lanka).

Health and safety: Although some measures have been taken to protect the health and safety of workers in EPZs, there is evidence that EPZ workers have worse health and safety conditions than workers outside of EPZs (Honduras, Dominican Republic). However, workers in EPZs also tend to have health benefits more often than other workers, especially those in the informal economy (Bangladesh, Dominican Republic).

Freedom of association and social dialogue: At an absolute level, there continue to be many reports of violations of freedom of association in EPZs throughout the world,¹ but the evidence is inconclusive regarding the differences between conditions inside and outside EPZs. Most studies find very few unions inside and outside of EPZs alike.

Despite resistance internationally, EPZs are likely to continue to expand. But they are also likely to be transformed in response to the pressures we have identified. This transformation will involve major challenges to the stakeholders in the development community. This survey of EPZs raises at least four basic challenges ahead:

¹ Gopalakrisnan, 2007.

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- (1) With the loss of textile and apparel markets for many countries, and the possibility of United States balance of payments adjustment, the export orientation of growth strategies must shift more to domestic and regional sources of growth. An export orientation can coexist with an economy in which wages, demand, skills, and the decency of work are rising. The challenge will be to find a better balance between purely export-led and broadly demand-led growth.
 - (2) The WTO Agreement on SCM will push most countries to dismantle their export subsidies by 2015. The challenge will not be how to find ways to maintain EPZs under this pressure to dismantle them; countries will be pushed to offer incentives to the entire economy similar to those that they are offering only to EPZs. The challenge will be to find the tools required to run effective industrial policy while still satisfying the pressures of the WTO to dismantle the system of export subsidies.
 - (3) Increasingly over time, EPZs have been aimed at promoting high-tech and service sector, driven by the appeal of gaining entry into markets with enormous growth potential. Linking these EPZs to the domestic economy is even more difficult in these emerging sectors than in the traditional low-tech manufacturing EPZs, because the skills and technology required are significantly above the average in the rest of the economy and the production standards are extremely high. Channelling profits, skill and technology from these endeavours to the domestic economy will be a significant challenge.
 - (4) Finally, there is the challenge of transforming industrial upgrading into social upgrading. The findings of this review do not indicate that the situation of labour conditions have drastically improved since the 2002 report, *Employment and social policy in respect of export processing zones (EPZs)*.² The studies cited in this report that best compare work conditions to absolute standards, such as the results of the ILO's inspections in Cambodia, consistently reveal non-compliance with many issues. Although conditions are sometimes better inside EPZs when compared with other sectors of the economy, poor working conditions in terms of overtime, occupational health and safety, wages, and freedom of association remain in many EPZs. What gains have been made are likely to be challenged by the end of the MFA. The effects of the end of the MFA are just being felt, and it is still early for systematic a assessment, but market changes in the apparel industry are likely to displace millions of workers and put more pressure on working conditions.³ It is clear that new policy approaches are needed. Governmental labour regulation has not increased in capability to take on the challenges of EPZs and the first generation of private voluntary initiatives has failed to meet the expectations of its supporters. Notwithstanding these challenges, innovative programs that build the capacity of firms to comply with laws (as well as provide incentives for compliance), that leverage the resources of global and local actors, and that address the relationship between conditions inside and outside of EPZs represent a way forward to improve working conditions and compliance with labour standards in EPZs worldwide.

These four challenges are all connected to each other. But this does not make them any easier to overcome.

² International Labour Organization, 2002b.

³ International Labour Organization, 2005.

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