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Export processing zones in Bangladesh: Economic impact and social issues

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Preface

Over the years, the ILO has undertaken research and commissioned working papers on EPZs in response to the interest expressed by the ILO's constituents. This working paper was commissioned with the collaboration and co-financing of the ILO Office in Dhaka, Bangladesh. It is the latest in the series of case-studies of the impact of export processing zones (EPZs) on the economy, labour and society of different host countries (see annex containing the list of ILO publications on multinational enterprises at the end of this working paper).

The effects of the Chittagong and Dhaka EPZs on the economy of Bangladesh, as well as pay, working conditions and labour relations in the zones are examined. The author points out the important role of the EPZs in promoting the export sector as an engine of growth in the national economy. In 1995-96 the Chittagong and Dhaka zones employed 28,705 and 8,828 workers respectively. Exports from the zones were valued at $337 million, and cumulative inward investment amounted to $231.5 million. In January 1997, 96 of the 177 enterprises that had been given approval to set up business in the zones, were in operation.

The EPZs have contributed to an impressive increase in the share of clothing in the country's total merchandise exports — from 0.2 per cent in 1980 to 35 per cent in 1990 and 54.8 per cent in 1995.[1] Efforts are under way to attract investment in new, higher value-added industries and to diversify production.

Information on the social and labour aspects of activities in the zones was relatively limited. However, with that which was available, the author has given some insight into the contribution of the zones to job creation, as well as the development and upgrading of the skills of local workers. An overview of the situation with respect to wages, benefits, working conditions and labour relations is also provided. The aim is to promote discussion and help to shed light on social and labour issues that warrant further in-depth research.

Abebe Abate,
Chief,
Bureau for Multinational Enterprise Activities.

[1] General Agreement on Tariffs and Trade, *International Trade 91-92, Statistics*, Geneva, GATT, 1993, p. 62. World Trade Organization, *Annual Report 1996*, Geneva, WTO, p. 112.

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The author also expresses his gratitude to the Bangladesh Export Processing Zone Authority (BEPZA) as well as to the management of the Chittagong Export Processing Zone (CEPZ) and Dhaka Export Processing Zone (DEPZ), for their kind cooperation. The contributions of the entrepreneurs and workers from the two EPZs who shared their views with the author, are appreciated.

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Abbreviations

BEPZA	Bangladesh Export Processing Zones Authority
BIDS	Bangladesh Institute of Development Studies
BSIC	Bangladesh Standard Industrial Classification (Code)
CAD	computer-aided (or -assisted) design
CAM	computer-aided marking (of fabrics)
CEPZ	Chittagong Export Processing Zone
C & F	clearing and forwarding
c.i.f.	cost, insurance and freight
DEPZ	Dhaka Export Processing Zone
DTA	domestic tariff area
EPZ(s)	export processing zone(s)
FDI	foreign direct investment
GDP	gross domestic product
GSP	Generalized System of Preferences
IRD	Industrial Relations Department
ISS	Industrial Surveys and Studies
MFA	Multi-Fibre Agreement
MFN	Most Favoured Nation
MNE(s)	multinational enterprise(s)
NGO(s)	non-governmental organization(s)
$	Refers to US dollars
Tk.	Taka (currency of Bangladesh)
USAID	United States Agency for International Development
VAT	value added tax

1. Introduction

1.1 The setting

At independence in 1971, Bangladesh inherited a public sector-led import substituting industrial regime. Since then a marked shift has taken place in the country towards a policy framework characterized by measures to promote the private sector and export-oriented activities, and to increase exports. The policy metamorphosis manifested itself through, inter alia, *institutional policies*, such as the divestiture of state-owned enterprises, reduction of the number of sectors reserved for public investment, and relaxation of rules and procedures for foreign investment. Concurrently, changes in the *incentive structure* were brought about through trade liberalization and tariff rationalization, activation of the capital market, market-oriented exchange rate management, financial sector reforms and specific measures to support exports. These included duty-free access to imported inputs, export subsidies, preferential financing of exports, corporate tax rebates and other fiscal incentives. Most of those reform initiatives were undertaken as a part of the structural adjustment programme promoted by international development agencies.

Within the evolving package of export-promotion measures targeted to augment private investment, particularly of foreign origin, the establishment of export processing zones (EPZs) in Bangladesh occupies a conspicuous place. BEPZA Act No. XXXVI (1980), which was subsequently amended by Ordinance No. XLIX (1984) and Ordinance No. LII (1988), provides the legal framework for the creation of EPZs.

The above-mentioned legal instruments set out the objectives of the Bangladesh Export Processing Zones Authority (BEPZA), the official organ of the Government responsible for the promotional activities relating to EPZs. These objectives are as follows:

(i) to foster the economic development of Bangladesh by encouraging and promoting foreign investment in a zone;

(ii) to diversify the sources of foreign exchange earnings by increasing the exports of Bangladesh through a zone;

(iii) to encourage and foster the establishment and development of industries and commercial enterprises in a zone in order to widen and strengthen the economic base of Bangladesh; and

(iv) to generate productive employment opportunities and to upgrade the skills of labour and management through the acquisition of advanced technology.

Under the aegis of the BEPZA, the two EPZs currently in operation in Chittagong and Dhaka were established in 1983 and 1993, respectively. A third one is now in the process of being set up in Gazipur, while establishment of two others (one in the southern and another in the northern part of the country) remains under active consideration.

Up to December 1996, the cumulative investment received by the Chittagong Export Processing Zone (CEPZ) and the Dhaka Export Processing Zone (DEPZ) together amounted to more than $231.51 million. In December 1996, 96 units were in operation in the two zones. Another 81 were under implementation. A total of 45,815 local employees were working in the zones at that time. The gross volume of export by the Bangladesh EPZ units in 1995-96 was to the tune of $337 million.

In October 1996 the Government of Bangladesh enacted a law allowing the establishment of EPZs by the private sector. Taking advantage of the new provision, a Korean firm (Youngone Corporation) is currently setting up the country's first *private* EPZ in Chittagong. Sponsors expect $1 billion to be invested in the zone, while another $200 million will be spent for infrastructural development. The private EPZ is expected to start production by 1998 and create direct employment for 150,000 people.

Against the backdrop of the country's largely disappointing experience with industrialization, the experiment with EPZs is considered to be a rewarding one, particularly in terms of inward foreign investment, employment generation and export promotion. None the less, that optimistic assessment does not relate to issues such as the forging of backward linkages with the domestic economy and the transfer of technology. There is also ambiguity as regards the implications of the overlaps of the EPZ units with domestic export industries.[1]

Episodic investigations of EPZs in Bangladesh have somehow steered clear of issues like *industrial relations*, particularly since the formation and operation of trade unions are prohibited in the Bangladesh EPZs. Similarly, *gender-specific aspects* of working conditions in the units located in the zones have never come up for substantive discussion, nor has the *environmental impact* of the EPZs ever been the subject of public policy analysis in Bangladesh.

The argument that EPZs may be used as a convenient decoy to delay the needed economy-wide trade reforms appears to be unfounded in the case of Bangladesh. Over the last decade the country has implemented a trade liberalization programme that is more in-depth and comprehensive than those of its regional neighbours. In the light of this, and given the current macroeconomic policies being put into effect, the rationale for promoting EPZs in Bangladesh needs some reconceptualization.

The continuing relevance of EPZs in Bangladesh possibly lies in the country's effort to address the structural impediments which inhibit the inflow of foreign direct investment (FDI). With the crumbling of the tariff wall in the Bangladesh economy, the temptation for foreign investors to produce for a captive domestic market no longer exists. Understandably, future FDI in the country will essentially flow to industries producing for overseas markets. However, it is well recognized that the absence of adequate infrastructural facilities constitutes one of the main factors which deter the inflow of foreign capital. The EPZs therefore continue to offer the best package available in the country in terms of well-equipped industrial sites, and related commercial and financial services and facilities.

1.2 Nature of the study

Objectives

The primary objective of the present study is to assess the *economic and social impact* of EPZs in Bangladesh. Specifically, it seeks to evaluate the EPZs in Bangladesh from the following vantage points:

(i) the regulatory and institutional framework and its underlying policies;

(ii) the macroeconomic contribution and impact on welfare;

(iii) growth and diversification in terms of investment (volume and source), employment (size and structure) and exports (gross and net);

(iv) linkage effects in terms of integration with the local economy, technology transfer and skill diffusion;

(v) conditions of work (wage and non-wage benefits) and rules governing industrial relations.

Scope

The stated objectives of analysing the structural features and operational characteristics of the two EPZs, as well as their socio-economic consequences for the host country, defined the scope of the study. The data analysed in this respect relate to the period covering the inception of the two EPZs, up to 1996 — Chittagong EPZ (1983-96) and Dhaka EPZ (1993-96).

[1] See BIDS (1994).

Apart from the general features of EPZs, labour-related issues — particularly the working conditions of women and labour-management relations — were supposed to constitute one of the core subjects of the working paper. Unfortunately, the treatment of these aspects of the zones remained limited because enterprise-level information could not be gathered by means of a questionnaire.

Information base

Published and unpublished documents and data collated from the BEPZA and from the management of the two zones provided the primary sources of information for carrying out the analysis. Discussions with key informants, including BEPZA officials, EPZ entrepreneurs, workers and trade union activists, constituted other important sources of information. Earlier studies of the EPZs in Bangladesh, as well as research on zones elsewhere, were also consulted.

Structure

Following the present introductory note, section 2 describes the underlying policy and rationale for setting up EPZs in Bangladesh and the incentive package available to investors. It also tries to situate the EPZs within the national economy. Sections 3 and 4 examine the investment and employment characteristics of EPZ enterprises in terms of their growth and structure. The dynamics of the linkages between the Bangladesh EPZs in relation to the rest of the economy are discussed in section 5. Working conditions and labour-management relations in the enterprises in the zones are dealt with in sections 6 and 7, respectively. A cost-benefit analysis of the Bangladesh EPZs has been attempted in section 8. The conclusions of the research are presented in the final section.

2. Macroeconomic dimensions of EPZs in Bangladesh

2.1 The policy rationale

There now exists a significant body of literature which spells out the potential advantages of, as well as the pitfalls in establishing EPZs in developing countries.[2] However, the theoretical considerations underlying the policy of launching EPZs in Bangladesh have not been explicitly articulated anywhere. In this respect, I would like to suggest that the policy rationale for creating EPZs in Bangladesh is guided by *two* competing, but not mutually exclusive, theoretical perspectives. The first may be termed the "*trade regime argument*", and the second, the "*structural bottleneck argument*". Given the benefits of FDI in export-oriented activities which accrue to the host country, augmenting foreign capital inflows constitutes the common underlying concern of both policy approaches. An attempt has been made to deconstruct these two approaches in the following paragraphs.

Trade regime argument

The first perspective as regards the rationale for having the EPZs in Bangladesh maintains that the degree of protection offered to the import-competing activities in the country has not been matched by comparable measures to promote the activities of exporters. In order to maintain overall relative prices at the "pre-protection" level, the *first best* solution would have been to offer subsidies to the export sector equivalent to the import tariffs used to protect the import substituting sector. While the process of rationalization of the effective rates of protection accorded to the two segments of the industrial sector is under way, Bangladesh has opted for the *second best* option by investing resources to create the EPZs for achieving a "free trade" pattern of relative prices.

As a result, we observe that while firms investing in EPZs are subject to normal customs procedures at the entrance of the zones, they enjoy duty-free access to imports of capital and intermediate goods to be utilized fully within the zones. The favoured treatment with respect to import of inputs is strengthened by favourable fiscal provisions. The aforementioned characteristics of the EPZs in Bangladesh appeared to provide the opportunity to realize some of the advantages of export promotion without diminishing the protection accorded to industries producing for the domestic market.

With the changes occurring in the international division of labour spurred by, inter alia, changes in factor pricing, new opportunities emerged for countries like Bangladesh to receive foreign investment in light manufacturing activities that make intensive use of unskilled and/or semi-skilled labour. These foreign enterprises, despite their "footloose" nature, are associated with the benefits usually attributed to FDI (e.g. transfer of technology and management know-how, the upgrading of skills and access to international marketing networks). In its bid to attract foreign investors in search of low-wage economies, Bangladesh not only liberalized its policy framework regulating foreign investment, but went a step further by creating an "enclave economy" in the form of export processing zones. To some extent, the setting up of the EPZs preceded the introduction of policies for liberalizing the regime governing FDI as a whole.

The distinguishing feature of foreign investment in the EPZs is its market orientation. That is, whereas in the past, FDI in Bangladesh was *almost* entirely channelled into activities for the domestic market, these new FDI flows are destined for operations producing for overseas

[2] See, for example, Warr (1990), Kumar (1989) and Lee (1984).

markets. The EPZs are supposed to provide Bangladesh with the opportunity to give effect to the much-desired "investment-trade nexus".

In sum, the first perspective stipulates that the establishment of EPZs in Bangladesh tends to produce positive welfare effects analogous to those resulting from a movement towards free trade, because the elimination of tariffs and other distortions causes the factor intensity of production activities to correspond more closely with the factor endowment of the host country.

The problem with this conception of an EPZ is that it rests on the traditional assumption that capital is internationally immobile and implies that the capital used in an EPZ is domestic capital (fixed in total supply) which has moved from elsewhere in the country. This assumption may be obviously discarded as we have mentioned earlier that one of the objectives of setting up an EPZ is to attract FDI and we know that an overwhelmingly large portion of the investment in Bangladesh EPZs comes from foreign sources. Moreover, the "footloose" character of the firms operating within the EPZs is well known — in fact, their very establishment in, or relocation to Bangladesh, attests to their international mobility and capacity to adjust rapidly in response to changing external conditions.

The "trade regime argument" has a limited value, because the relevance of setting up such "free trade" enclaves is diminishing over time with the implementation of structural adjustment reforms and liberalization measures in the national economy. Moreover, if providing access to duty-free flow of inputs and outputs is to be the prime objective of an EPZ, then this may be addressed in a much more cost-effective way by using alternative methods — e.g. through bonded warehouses and duty drawback facilities as already provided in the case of export-oriented garment enterprises in Bangladesh.

In other words, *as the whole national economy is seeking to transform itself into an EPZ*, the relevance of EPZs in Bangladesh from a trade policy perspective will progressively diminish with time.

Structural bottleneck argument

According to the second perspective, the rationale for creating EPZs is that, notwithstanding Bangladesh's potential comparative advantages in attracting this relatively new form of FDI, a host of other structural features of the domestic economy are inhibiting prospective investors from coming to the country. It is reckoned that some of these structural bottlenecks can be offset by two important features of the "enclave" nature of the EPZs. These are: (a) the effective provision of physical and financial infrastructural facilities; and (b) freedom from industrial relations regulations applied elsewhere in the country. The former entails *significant public investment in the utility services*, whereas the latter particularly relates to the *absence of collective bargaining rights for workers* in EPZs. These two features are supposed to free the firms in the zone from some of the structural bottlenecks afflicting the economic environment of the country and to attract new foreign investment in "frontier" manufacturing activities.

This view further maintains that EPZs in Bangladesh basically offer a package of services, the most fundamental of which is *on-site support* facilities and services for producers. The zone is a fenced area where the movement of goods is policed by customs officials, but more importantly, it is equipped with infrastructural facilities such as roads, electricity, water and gas, telecommunications, as well as standard factory buildings or ready industrial plots — the quality of which is normally superior to those available outside. It is argued that the provision of relatively efficient utility services, streamlined administrative procedures and legal protection under the BEPZA, all help to provide assurance to entrepreneurs, particularly from foreign countries. The investors are further assured of the "enabling environment" because of the absence of trade union activities in the zone area. In other words, the establishment of EPZs marks an attempt, albeit a limited one, to overcome the factors which quite often causes foreign investors to shy away from Bangladesh.

The issue which arises in this regard concerns the extent to which the sizeable public investment incurred in setting up these industrial estates is matched by the numbers of export-oriented units which would not have otherwise come into existence. The establishment of EPZs, under the circumstances, is considered to be justified if it leads to a surge in foreign investment and the launching of enterprises producing non-traditional products using new processes. Alternatively, it may be argued that such a huge and concentrated investment of public resources in infrastructural development would have lesser positive externalities than would be the case if it were done in a liberalized economic environment, incorporating all the features that make EPZs attractive.

The other snag in the "structural bottleneck argument" arises from the fact that the provision of services such as electricity which allows entrepreneurs in the zones to overcome the general deficiencies, is *absolutely* limited in supply in the rest of the country. Financial resources potentially available for developing such services are also finite. Under the circumstances, such constraints will limit possibilities for expanding the EPZs in Bangladesh. Incidentally, allowing private (foreign) capital to set up EPZs in Bangladesh has been identified as a way out of dealing with the situation.

2.2 The institutional and incentive package

The BEPZA is the promotional agency in charge of implementation, operation and expansion of EPZs in the country. In order to endow the body with enough political clout (so that, inter alia, interdepartmental coordination takes place in an effective manner), the BEPZA has been anchored in the Prime Minister's Office with the head of the Government as its Chairperson. The day-to-day affairs of the BEPZA are run by an Executive Chairman under the guidance of a high-powered Board of Governors. The BEPZA also oversees the activities of the management of enterprises located in the zones.

Enterprises in the Bangladesh EPZs fall into three categories depending on the sources of investment.

(a) *Type A:* 100 per cent foreign investment, including investment made by Bangladeshis living abroad.

(b) *Type B:* Joint venture between foreign investors and Bangladeshi entrepreneurs residing in the country.

(c) *Type C:* 100 per cent investment made by Bangladeshi entrepreneurs resident in the country.

Investments in the EPZs are guaranteed by the country's Foreign Private Investment (Promotion and Protection) Act, 1980. Services, security and safeguards provided under the Overseas Private Investment Corporation (OPIC) US, Multilateral Investment Guarantee Agency (MIGA) and the International Centre for the Settlement of Investment Dispute are available to investors.

Similar to those in other countries, an EPZ is an industrial estate which offers an attractive package of investment incentives to both foreign and domestic entrepreneurs for the setting up of modern manufacturing plants producing exclusively for overseas markets. Accordingly, EPZs in Bangladesh provide developed infrastructural facilities (e.g. land, factory building, warehouse) along with utilities (e.g. water, gas, electricity, telephone) and communication facilities (e.g. convenient surface, water and air transport links). The support services are provided by the BEPZA through a "one window" facility located at the site.

Although an "indicative list" of sectors is made available to prospective investors, there are no restrictions as regards the type of industry that can be established in EPZs. Table 2.1 presents a non-exhaustive list of the types of industrial products that may be manufactured in the zones.

Table 2.1. EPZs in Bangladesh: Indicative list of industries and products

Electrical equipment	Cutting/polishing of precious and semi-precious stones
Electric components	Household fittings and equipment
Electronic products	Specialized garments
Software	Head wear
Optical goods	Jewellery
Woven and knitted fabrics	Horological instruments
Engineering products	Scientific measure instruments
Leather products	Aircraft instruments
Footwear	Laboratory ware
Toys	Printing and publishing
Medical and biological instruments	Printing and copying equipment and accessories
Pharmaceutical products	Do-it-yourself tools and equipment
Plastic moulded products	Musical instruments
Industries based on new uses of jute	Products based on laser technology

Source: Compiled from BEPZA documents.

The fiscal and non-fiscal incentives provided to EPZ units in Bangladesh are presented in table 2.2. The following are some aspects of the incentive package. There is no ceiling on the value of investment that can be made by EPZ units. The fully foreign-owned enterprises are to meet their investment requirements either from imported capital or out of the export earnings of the enterprise. Investors of Bangladeshi origin can finance investment in local currency from indigenous sources. The investors are allowed duty-free imports of machinery and other capital goods, raw materials, intermediate inputs and other requirements for carrying out their operations. Foreign investors are allowed to repatriate fully their investments as well as profits and dividends. Foreign personnel employed with the approval of the BEPZA can repatriate their salary earnings.

The fiscal package includes, inter alia, tax holidays for ten years and tax relief with respect to dividends during the tax holiday period. Exemption is also extended to income tax on salaries of foreign technicians (for three years) as well as on interest on borrowed capital.

The EPZ units in Bangladesh may enjoy the privileges available under the General System of Preference (GSP) for exports to the US, European Union and Japanese markets. The Most Favoured Nation (MFN) status accorded to Bangladeshi exports is extended to those originating from EPZs.

Table 2.2. Incentive framework for EPZs in Bangladesh

Fiscal incentives	Non-fiscal incentives
1. Tax exemption (a) Tax holiday for ten years. (b) Exemption of income tax on interest on borrowed capital. (c) Relief from double taxation subject to bilateral agreement. (d) Complete exemption from dividend tax during tax holiday period for foreign nationals. (e) Exemption of income tax on salaries of foreign technicians for three years subject to certain conditions. **2. Duty-free import and export** (a) Duty-free import of machines, equipment and raw materials. (b) Duty-free import of three motor vehicles for use of the enterprise in EPZs under certain conditions. (c) Duty-free import of materials for construction of factory buildings in the zones. (d) Duty-free export of goods produced in the zones. (e) GSP facilities for exports to the US, the European Union and Japan. (f) Exports from Bangladesh to the United States enjoy Most Favoured Nation (MFN) status.	**1. Investment** (a) All foreign investments protected by law. (b) No ceiling on value of foreign investment. (c) Full repatriation of profits and capital permissible. (d) Repatriation of investment including capital gains, if any, permissible. (e) Remittances allowed in the following cases: (i) all post-tax profits and dividends on foreign capital; (ii) savings from earnings, retirement benefits, personal assets of individual retirement/termination of services; (iii) approved royalties and technical fees. **2. Project financing and banking** (a) Off-shore banking facilities available. (b) Local and international banking facilities also widely available. **3. Import** (a) Freedom from National Import Policy restrictions. (b) Import of raw materials also allowed on Documentary Acceptance (DA) basis. (c) Advantage of opening back-to-back letter of credit (L/C) for certain types of industries for import of raw materials. (d) Import of goods from the Domestic Tariff Area (DTA) permissible. (e) Enterprises can sell 10 per cent of their products to the DTA on payment of duties and taxes under certain conditions. **4. Project implementation** (a) Relocation of existing industries from abroad allowed. (b) Relocation of industries from one zone to another within the country permissible. **5. Operation** (a) Subcontracting within the EPZ allowed. (b) Inter-zone and intra-zone export permitted. (c) All custom formalities done at the gate site of the respective factory building within the zone. (d) Permission for import/export given in the same day. (e) Repair and maintenance of machineries and capital equipment from domestic tariff area allowed.

Source: Compiled from BEPZA documents.

2.3 Contribution to the national economy

The EPZs have been accorded a high profile within the industrial development and export promotion strategy of Bangladesh. Thus, it is of particular interest to assess their impact on investment, employment and exports.

Investment

Gross capital formation through increased investment has been one of the prime objectives of promoting EPZs in a "capital-starved" economy like that of Bangladesh. According to table 2.3, between July 1983 and December 1996 a cumulative amount of $231.35 million was invested in the two EPZs. The EPZ in Chittagong accounted for more than $177.08 million (i.e. 76.5 per cent) of that amount, while the rest $54.27 million) (23.5 per cent) was attributable to the one located in Dhaka (established in 1993). It may be mentioned that the total value of proposed investment for the two zones between 1983 and 1996 was to the tune of $681.76 million. The apparently low (34 per cent) realization rate is explained by the fact that the Dhaka EPZ is yet to be fully functional.

Table 2.3 indicates that during the periods 1991-92 to 1995-96 inflows of investment in the two EPZs accounted for, on average, 0.11 per cent of gross domestic product (GDP). The total stock of investment in EPZs accounted for 0.6 per cent of GDP in 1995-96 (see table 2.3, last column). When one recalls that private investment in manufacturing in Bangladesh over that period was estimated to be between 1 and 2 per cent of GDP, the amount of inward investment in EPZs may be considered to be relatively insignificant.

However, one notices that the annual flow of investment has decelerated since 1993-94, after recording the peak figure of Tk. 1.5 billion (i.e. 0.15 per cent of GDP). Exhaustion of the existing industrial sites in the CEPZ and the lag in getting the DEPZ fully on stream largely explain this slowdown of capital inflows.

Table 2.3. Value of investment in EPZs in Bangladesh, 1991-96

Year	CEPZ		DEPZ		Total		Cumulative investment in EPZ as % of GDP
	Amount (Tk. million)	Share of GDP (%)	Amount (Tk. million)	Share of GDP (%)	Amount (Tk. million)	Share of GDP (%)	
1991-92	923	0.10	–	–	923	0.10	0.30
1992-93	878	0.09	–	–	878	0.09	0.40
1993-94	1 174	0.11	331	0.03	1 505	0.15	0.51
1994-95	1 114	0.09	333	0.03	1 447	0.12	0.57
1995-96	460	0.04	732	0.06	1 192	0.10	0.59
Average (1991/92-1995/96)	910	0.08	465	0.04	1 189	0.11	–

Source: Computed from BEPZ and BBS data.

Since attracting foreign investment had been the prime objective of the EPZs and the figures mentioned in table 2.3 include investment from both foreign and local sources, one needs to assess the success of these zones particularly in terms of *foreign capital* inflow. Table 2.4 reveals that over the periods 1991-92 to 1995-96, Bangladesh, on average, received net annual investment of $140 million of which $118.5 million was *direct* investment. The rest was foreign portfolio investment in the stock market. During the comparable period, average annual foreign investment in the EPZs amounted to a little more than $21 million. In other words, foreign investment in the EPZs during the 1990s accounted for more than 15 per cent of the total net inflow of foreign investment in the country and about 17.8 per cent of net FDI.

The trend in foreign capital inflow to Bangladesh in the 1990s was largely influenced by the emergence of foreign portfolio investment as the major source of foreign investment. It is well known that this form of foreign investment behaves like "tide water", quite often resulting in a negative balance (as has happened in 1995-96 in Bangladesh). The other factor which has caused the surge in FDI in Bangladesh in the early 1990s (the peak year being 1993-94) relates to commissioning of the largest joint venture to date — the Karnaphuly Fertilizer Company (KAFCO). The aforementioned factors were responsible for the erratic pattern of the EPZs' contribution to total foreign investment (table 2.4).

It seems that with the expansion of the CEPZ and the coming on stream of facilities at the DEPZ, aggregate foreign investment in the EPZs is again picking up. Thus, in 1995-96 a record amount of approximately $27 million went into the two zones.

Table 2.4. Foreign investment in EPZs in Bangladesh relative to total inward foreign investment, 1991-96

Year	Total net inflow of foreign investment ($ million)	Total net inflow of foreign *direct* investment ($ million)	Foreign investment in EPZs ($ million)	(3) as % of (1)	(3) as % of (2)
	(1)	(2)	(3)	(4)	(5)
1991-92	41.46	35.46	21.71	52.36	61.22
1992-93	113.00	103.00	20.34	18.00	19.75
1993-94	407.46	354.46	18.81	4.62	5.30
1994-95	124.07	60.07	17.86	14.75	29.73
1995-96	16.47	39.47	26.86	163.09	68.05
Average (1991/92-1995/96)	140	118.49	21.11	15.09	17.82

Source: BEPZA and Bhattacharya (1996).

Employment

As both the import of inputs and profits generated by EPZ firms benefit from tax exemptions, the most significant gains derived from investment in the zones are the wages and salaries of local staff. Consequently, employment generation constitutes one of the core performance indicators of EPZs.

Table 2.5 shows that between 1991-92 and 1995-96, the workforce in the EPZs in Bangladesh increased from 14,614 to 37,533 — i.e. about 2.6 times. More than 99 per cent of those workers were from the host country. As a result of this job creation, employment in the EPZs as a percentage of total employment in the manufacturing sector increased steadily from 0.22 per cent in 1991-92 to 0.36 per cent in 1995-96.

Table 2.5. Employment in EPZs in Bangladesh, 1991-96

Year (July-June)	Cumulative employment			Total manufacturing employment (000)[a]	Employment in formal manufacturing sector[b]	Total EPZ employment as % of total manufacturing employment (%)	Total EPZ employment as % of formal manufacturing employment (%)
	CEPZ	DEPZ	Total				
1991-92	14 614	-	14 614	6 630	1 150 634	0.22	1.27
1992-93	17 728	-	17 728	7 419	1 185 153	0.24	1.49
1993-94	20 814	5 522	26 336	8 302	1 220 707	0.32	2.16
1994-95	25 111	7 366	32 477	9 290	1 257 328	0.35	2.58
1995-96	28 705	8 828	37 533	10 395	1 295 047	0.36	2.90

[a] Estimated figures. 1990-91 benchmark of 5.925 million has been projected using the historical sectoral employment growth rate (1971-90) of 11.9% per annum provided in the Labour Force Survey (LFS), 1990-91.

[b] Estimated figures. 1989-90 benchmark of 1.85 million has been projected using the employment growth rate (3%) of the concerned segment of the manufacturing sector provided in the Census of Manufacturing Industries (CMI).

Source: BEPZA; Labour Force Survey (1990-91); Census of Manufacturing Industries (1989-90).

However, given the fact that the overwhelming portion of the manufacturing employment in Bangladesh is in disparate, informal, small enterprise and cottage-level activities, it would be only fair to compare the EPZ employment to those in the organized sector (i.e. registered units having ten workers or more). In this context, one observes that during the last five years (1991-92 to 1995-96), direct employment in EPZs as a proportion of employment in the country's formal manufacturing sector underwent more than a twofold increase, i.e. from 1.27 per cent to 2.90 per cent. This implies that the rate of job creation in EPZs has been faster than that in manufacturing units located in the domestic tariff area (DTA).

Export earnings

The increases in exports happen to be another major concern which has led to the creation of EPZs in Bangladesh. As may be seen from table 2.6, over the period 1991-92 to 1995-96, exports from the units located in the EPZs increased from about Tk. 3 billion to Tk. 19 billion, registering approximately a sixfold increase. As a result, the share of exports from the EPZs in total exports has steadily improved from 3.8 per cent to 11.1 per cent during the last five-year period. Correspondingly, EPZ exports as a proportion of GDP went up from 0.34 per cent in 1991-92 to 1.47 per cent in 1995-96. These figures suggest that export growth in EPZs had been faster than that of the other export-oriented units located in the DTA.

Table 2.6. Value of exports from the EPZs in Bangladesh, 1991-96

Year	CEPZ (Tk. million)	DEPZ (Tk. million)	Total (Tk. million)	Total national exports (Tk. million)	EPZ exports as % of national exports	EPZ exports as % of GDP
1991-92	2 990	-	2 990	78 045	3.83	0.34
1992-93	5 057	-	5 057	93 247	5.42	0.53
1993-94	5 649	211	5 860	101 360	5.78	0.57
1994-95	7 526	1 662	9 188	139 788	6.57	0.78
1995-96	15 010	4 086	19 096	172 200	11.09	1.47

Source: Computed from BEPZA and BBS data.

Admittedly, not all of the export earnings by EPZ units constitute a *net* contribution to the country's balance of payments as most of the inputs used by these units are imported duty-free from foreign sources. Therefore, it is the trade balance of the EPZs which needs to be considered. According to table 2.7, the positive trade balance of EPZs has more or less steadily increased from $13.3 million in 1991-92 to $63 million in 1995-96. During that period, the *net* export earnings of EPZ units went up from 0.06 per cent of GDP to 0.20 per cent, notwithstanding some annual fluctuations.

To sum up, up to 1995-96 the contribution of the EPZs to the economy of Bangladesh still remained modest in terms of investment generation (0.11 per cent of GDP), job creation (2.9 per cent of formal manufacturing employment) and export earnings (11.1 per cent of national export earnings). However, the EPZs are definitely demonstrating more dynamism than the rest of the economy. As a consequence, one observes the gradual emergence of these zones as one of the important factors shaping developments in the domestic economy. The potential of EPZs to influence the economy as a whole may well increase with the Government's decision to adopt policies for encouraging the further development of existing and proposed zones.

Table 2.7. Balance of trade of EPZs in Bangladesh, 1991-96

Year	Imports ($ million)			Exports ($ million)			Trade balance of the EPZs	EPZ trade balance as % of GDP
	CEPZ	DEPZ	Total	CEPZ	DEPZ	Total		
1991-92	63.37	-	63.37	76.66	-	76.66	13.29	0.06
1992-93	88.67	-	88.67	127.05	-	127.05	38.38	0.16
1993-94	103.81	20.24	124.05	140.35	5.35	145.60	21.55	0.08
1994-95	158.45	41.73	200.18	186.98	41.28	228.26	28.08	0.10
1995-96	190.67	56.87	247.54	244.07	66.43	310.50	62.96	0.20

Source: BEPZA.

3. Enterprise and investment profile of EPZs in Bangladesh

This section takes a closer look at investment in EPZs. The four major aspects highlighted are the growth of enterprises and investment over time, the ownership of enterprises and investment, the origin of investment (by country) and the sectoral distribution of investment in the zones.

3.1 Growth of enterprises

Flow of enterprise

Between 1983-84 and 1996-January 1997, approval to operate has been given to a total number of *177 units* in two EPZs in Bangladesh. Among the total number of approved investment proposals, 120 units (67.8 per cent) were for the Chittagong EPZ, while the rest (57 units (32.2 per cent))were for the Dhaka EPZ (see table 3.1).

The number of enterprises in the two zones taken together increased by 27.33 per cent for the period 1983-84 to 1995-96.[3] In the CEPZ, the rate of growth over that period was 24.8 per cent. We observe that since the DEPZ opened in 1993, the number of companies setting up in the zone rose by 63.81 per cent, up to January 1997.

Table 3.1. Number of enterprises granted approval to operate EPZs in Bangladesh, 1983 to January 1997

Year	CEPZ		DEPZ		Total	
	Annual No.	Cumulative No.	Annual No.	Cumulative No.	Annual No.	Cumulative No.
1983-84	4	4	-	-	4	4
1984-85	5	9	-	-	5	9
1985-86	6	15	-	-	6	15
1986-87	5	20	-	-	5	20
1987-88	4	24	-	-	4	24
1988-89	5	29	-	-	5	29
1989-90	13	42	-	-	13	42
1990-91	13	55	-	-	13	55
1991-92	5	60	-	-	5	60
1992-93	4	64	7	7	11	71
1993-94	11	75	10	17	21	92
1994-95	20	95	11	28	31	123
1995-96	13	108	17	45	30	153
1996-97 (January 1997)	12	120	12	57	24	177
Growth rate	-	24.15[a]	-	60.81[b]	-	26.63[a]

[a] For the period 1983-84 to 1995-96. [b] For the period 1992-93 to 1995-96.

Source: Computed from BEPZA data.

[3] *All trends in growth rates* mentioned in the paper have been calculated using semi-log function.

An analysis of the data on the establishment of enterprises in the Chittagong EPZ reveals that during the initial years (1983-84 to 1988-89), the number of approved units ranged between three to five per year. In the following seven-year period (1989-90 to 1995-96), there was a relative surge in the number of approvals and the average number of companies that set up business exceeded 20. If the figure for the first seven months is any indicator, then one may expect the upward trend observed earlier to be sustained in the current year (1996-97). During the early years, the majority of the units in the CEPZ were either joint ventures or of local origin. In the subsequent period, exclusively foreign-owned units predominated. The DEPZ, on the other hand, from the very beginning, started off with a larger number of approved units per annum and a higher percentage of foreign-owned companies (see Annex table 3.1).

Three explanations may be offered in this regard. *First,* the number of units approved by the BEPZA depends to a large extent on the number of applications received. Obviously, the number of requests increased with the maturity of the zones as more entrepreneurs became aware of the facilities on offer. The *second* explanation, to some extent, follows from the first. It is natural to expect that at the initial stages of such a new initiative in a country like Bangladesh, it is not the foreign investors, but rather local entrepreneurs, or foreign entrepreneurs with local counterparts, who would be the first to show an interest. The performance of the CEPZ has possibly encouraged foreign investors to come to the DEPZ from its inception. The *third* explanation of this interest in the zones is possibly the most convincing one. It relates to the marked favourable changes in the policy regime governing foreign investment in Bangladesh since the latter part of the 1980s, and which are in line with changes taking place at the global level. Experience has shown that there is a time-lag between receiving permission to set up an enterprise and actually putting it into operation. As of January 1997, more than 54 per cent of all approved enterprises were in operation in the two zones. The implementation rate at the CEPZ was about 61 per cent. In the recently established the DEPZ, the share of enterprises in operation was, understandably, lower — around 40.5 per cent (see table 3.2).

Table 3.2. Distribution of enterprises in EPZs in Bangladesh by status (as of January 1997)

Status	CEPZ		DEPZ		Total	
	No.	%	No.	%	No.	%
In operation	73	60.83	23	40.35	96	54.24
Under implementation	47	39.17	34	59.65	81	45.76
Total	120	100.00	57	100.00	177	100.00

Source: Computed from BEPZA data.

When considered in terms of ownership (see Annex table 3.2), one observes that more wholly foreign-owned enterprises, despite being latecomers, have gone into operation in comparison to joint ventures and Bangladeshi-owned units — 67.2 per cent in the CEPZ and 58.8 per cent in the DEPZ. The foreign firms are followed by Bangladeshi firms in the CEPZ with 55.6 per cent in operation — possibly reflecting their early entry. In the case of the DEPZ, the implementation rate was higher among joint ventures (22.2 per cent).

Based on the above evidence, one is tempted to draw the conclusion that the degree of foreign participation has a positive association with the speed with which an enterprise starts production and this association is strengthened as the zones gain maturity. There have been few instances of companies pulling out of the EPZs in Bangladesh, apart from the case of 1993-94, when the operation of three units was suspended in the CEPZ.

Investment flow

As mentioned earlier, between 1983-84 and December 1996 the BEPZA received more than $231 million in investment. Of that total, the CEPZ accounted for $177 million (76.5 per cent), while a little more than $54 million (23.5 per cent) went to the DEPZ. The rate of growth of investment in the EPZs in Bangladesh during that period was a staggering 41.8 per cent (see table 3.3)

Table 3.3. Trends in actual investment in EPZ units in Bangladesh

Year	CEPZ			DEPZ			Total		
	Annual investment ($ million)	Cumulative investment ($ million)	Annual growth rate (%)	Annual investment ($ million)	Cumulative investment ($ million)	Annual growth rate (%)	Annual investment ($ million)	Cumulative investment ($ million)	Annual growth rate (%)
1983-84	0.874	0.874	–	–	–	–	0.874	0.874	–
1984-85	1.598	2.472	182.94	–	–	–	1.598	2.472	182.94
1985-86	3.602	6.074	145.71	–	–	–	3.602	6.074	145.71
1986-87	6.631	12.705	109.17	–	–	–	6.631	12.705	109.17
1987-88	1.791	14.496	14.10	–	–	–	1.791	14.496	14.10
1988-89	2.722	17.218	18.78	–	–	–	2.722	17.218	18.78
1989-90	8.580	25.798	49.83	–	–	–	8.580	25.798	49.83
1990-91	22.054	47.852	85.49	–	–	–	22.054	47.852	85.49
1991-92	23.659	71.511	49.44	–	–	–	23.659	71.511	49.44
1992-93	22.048	93.559	30.83	–	–	–	22.048	93.559	30.83
1993-94	29.181	122.740	31.19	8.224	8.224	–	37.405	130.964	39.98
1994-95	27.669	150.409	22.54	8.265	16.489	100.50	35.934	166.898	27.44
1995-96	16.128	166.537	10.72	14.455	30.944	87.66	30.583	197.481	18.32
1996-97 (up to Dec. 1996)	10.545	177.082	–	23.325	54.269	–	33.870	231.351	–
Growth rate	–	41.000	–	–	–	–	–	41.800	–

Note: Growth rate refers to period 1983-84 to 1995-96.

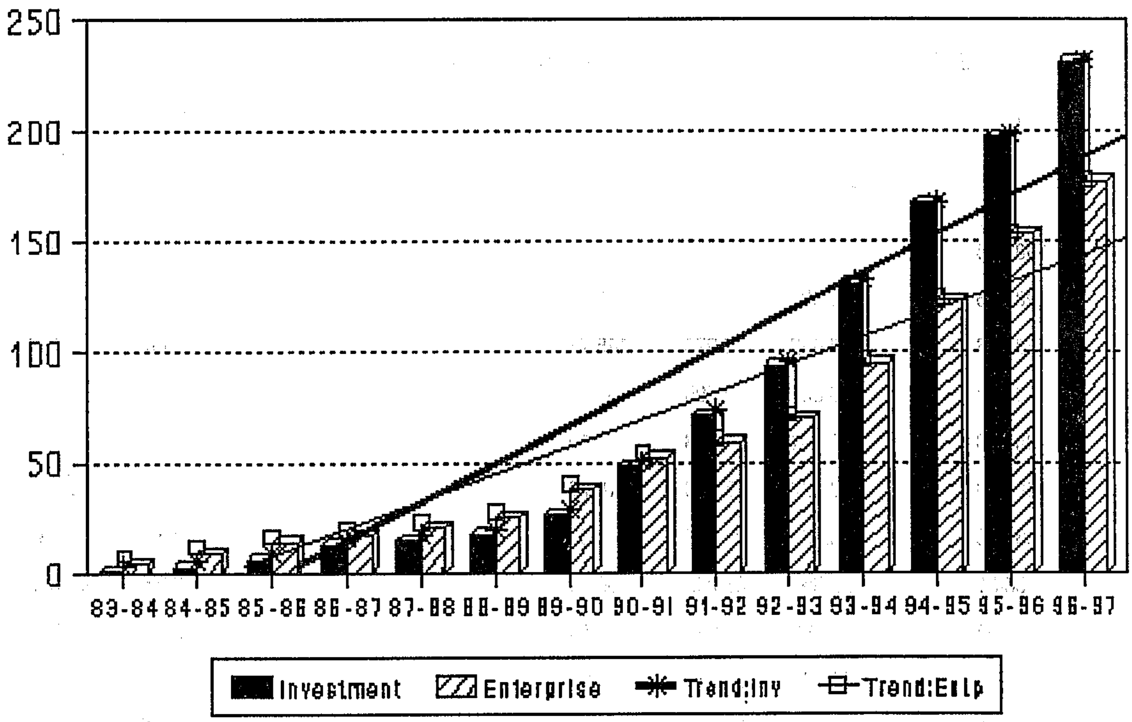
Source: Computed from BEPZA data.

The annual investment inflows in both zones closely followed the pattern of approvals of applications by enterprises. The data in figure 3.1 illustrate this.

Given the implementation lag, the data on approved and actual investment diverge on an annual basis. Consequently, it is better to take the cumulative amount for estimating the investment realization rate. The total value of investment approved during the period 1983-84 to 1996-97 (January 1997) for the two zones amounted to about $681.76 million. However, the actual investment made during that period was $231.28 million. In other words, the rate of investment realization was 34 per cent. The relatively low realization rate is due largely to the fact that investments in the relatively new DEPZ are just trickling in, at a rate of less than 14 per cent to date. The CEPZ, however, has already received about 61 per cent of the expected investment. Fortunately, experience has shown that a project, on completion, often ends up investing more than that it had initially planned.

In short, the analysis of the data on proposed and approved investment by enterprises and investment project showed a dynamic picture characterized by more approvals and, possibly, faster implementation.

Figure 3.1. Flow of actual investment ($ million) in enterprises approved to operate in EPZs



Source: Based on BEPZA data.

3.2 Ownership patterns

Enterprise mix

EPZ units may be classified as fully foreign-owned (type A), joint venture between foreign and local capital (type B) and fully locally owned (type C). It appears that to date the fully foreign-owned units constitute the majority of the approved investment proposals. The type A units in both zones accounted for more than 55 per cent of investment proposals approved between 1983-84 and 1996-January 1997. At the zone level, the corresponding figures were more than 53 per cent for the CEPZ and about 60 per cent for the DEPZ. The shares of the type B and type C enterprises are about 24 per cent and 22.5 per cent respectively in the CEPZ and 16 per cent and 24.5 per cent respectively in the DEPZ.

It has been indicated earlier that the fully foreign-owned firms show a higher rate of implementation. Thus, we find that type A accounts for about 65.6 per cent of the total number of units in operation in the two zones, followed by type B (17.7 per cent) and type C (16.7 per cent) (see table 3.4). The share of foreign firms among the operational units in the CEPZ is about 59 per cent and 87 per cent in the DEPZ. Although the CEPZ has an almost equal proportion (20.55 per cent) of joint ventures and local units, the DEPZ has a slightly higher share of the former (type B — 8.7 per cent and type C — 4.4 per cent).

Table 3.4. Distribution of units in operation by ownership type in EPZs in Bangladesh (as of January 1997)

Type of unit	CEPZ		DEPZ		Total	
	No.	%	No.	%	No.	%
Fully foreign-owned (type A)	43 (64)	58.90	20 (34)	86.95	63 (98)	65.63
Joint venture: Foreign and local (type B)	15 (29)	20.55	2 (9)	8.70	17 (38)	17.70
Fully locally owned (type C)	15 (27)	20.55	1 (14)	4.35	16 (41)	16.67
Total	73 (120)	100.00	23 (57)	100.00	96 (177)	100.00

Note: Figures in parentheses denote number of enterprises that obtained approval.
Source: Computed from BEPZA data.

Investment composition

Apart from the mix of enterprises, the other way of looking at the ownership pattern is by composition of investment (see table 3.5). Total investment in the two BEPZA zones between 1983-84 and 1996-January 1997 was to the tune of $195 million in 96 operational units (excluding investment in 81 enterprises not yet on stream). At the aggregate level (i.e. in the two zones taken together), more than 76 per cent (about $149 million) of the actual investment was made by foreign companies. Fully locally owned units were the second largest investors accounting for about 16 per cent ($31 million) of total investment. The share of joint ventures, occupying an intermediate position, was about 8 per cent (more than $15 million).

The above described scenario remains, by and large, true for the Chittagong zone. However, to date, in the Dhaka EPZ, an overwhelming proportion of the investment has come from foreign firms (more than 93 per cent) followed by joint ventures (less than 7 per cent). The contribution of local capital remains marginal (less than 1 per cent).

An analysis of both enterprise and investment data clearly shows the predominant position of foreign capital in the EPZs. This high salience of foreign firms is more pronounced in the new zone (DEPZ) than in the old one (CEPZ). It is reflected in the higher share of both exclusively foreign firms and joint ventures in the DEPZ. Although the BEPZA has an unwritten guiding principle which accords preference to foreign firms, the situation may be seen as presenting a realistic picture of the origin of the demand for investment opportunities in the zones.

Table 3.5 further reveals that the *average size of investment* in the Bangladesh zones is about $2 million. However, among different categories of enterprises, the size of investment is highest among foreign enterprises ($2.38 million), followed by local units ($1.93 million). The joint ventures are almost half the size ($0.91 million) of the other two categories of enterprises. However, the differences in average investment size may be possibly better explained by the type of activities of the units than by their type of ownership.

Table 3.5. Distribution of actual investment by ownership of enterprises operating in the EPZs in Bangladesh (as of January 1997)

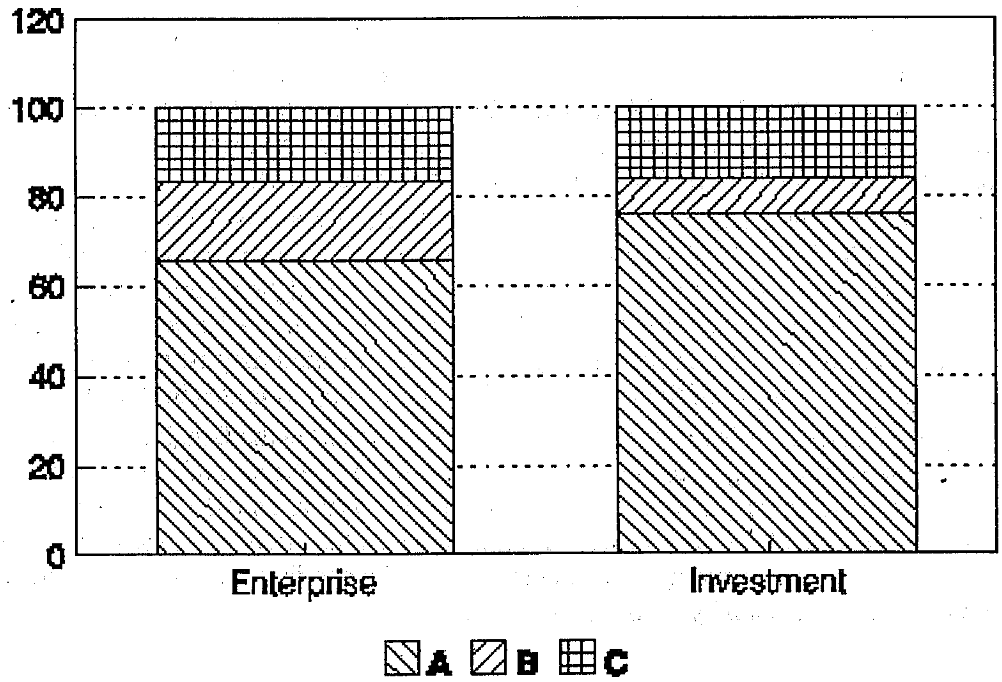
Type of units	CEPZ			DEPZ			Total		
	Total investment ($ million)	% of total investment	Average investment size	Total investment ($ million)	% of total investment	Average investment size	Total investment ($ million)	% of total investment	Average investment size
Fully foreign-owned (type A)	115.767 (43)	72.52	2.69	33.026 (20)	93.27	1.65	148.793 (63)	76.28	2.36
Joint venture: Foreign and local (type B)	13.036 (15)	8.16	0.87	2.356 (2)	6.65	1.18	15.392 (17)	7.89	0.91
Fully locally owned (type C)	30.838 (15)	19.32	2.06	0.028 (1)	0.08	0.08	30.866 (16)	15.83	1.93
Total (N=96)	159.641 (73)	100.00	2.19	35.41 (23)	100.00	1.54	195.051[a] (96)	100.00	2.03

[a] The total investment figure is less than that mentioned in table 3.3 as investment in enterprises under implementation (N=81) has not been included.

Note: Figures in parentheses denote number of enterprises in the respective category.

Source: Computed from BEPZA data.

Figure 3.2. Actual investment and number of units in EPZs in Bangladesh by type of enterprise (per cent)



Source: Based on BEPZA data.

3.3 Origin of investment

Countries of origin

While we have identified earlier the enterprises that have been approved and put into operation in the EPZs in Bangladesh by broad category of their ownership (viz. foreign, joint and local), the composition of the countries of origin of these units is of analytical interest. As may be seen from table 3.6, investors from *20 countries* (including Bangladesh) have obtained permission to set up units in the Bangladesh EPZs.

The Republic of Korea and Bangladesh top the list of countries with 42 (23.7 per cent) and 41 (23.2 per cent) of approved enterprises, respectively. These countries are trailed by Japan (23 units, 13 per cent) and Hong Kong, China (19 units, 10.7 per cent). The third set comprises the United States (15 units, 8.5 per cent) and the United Kingdom (11 units, 6.2 per cent). The other countries account for less than ten enterprises each (see table 3.6 for zone-specific information on origin of enterprises).

The geographical distribution of the origin of EPZ units in Bangladesh indicates the preponderance of the countries from East and South-East Asia (53 per cent of approved units in two zones). This implies that given the current dynamics of the international capital market and the ongoing process of global industrial restructuring, the main source of foreign investment for Bangladesh would be Asia. It is particularly true for fully foreign-owned firms.

Enterprises from North America and Europe constitute about 10 per cent (18 units) and 9 per cent (14 units) of approvals, respectively. Units from Pakistan and India account for a very marginal share (5 units, less than 3 per cent). The majority of foreign investors, irrespective of their origin, located in Bangladesh to take advantage of cheap labour, the MFA quota and GSP advantages. This is particularly true for the apparel-producing units which have an overwhelming presence in the EPZs.

Concentration of investment

One way of assessing the significance of the presence of investors from different countries (including Bangladesh) is by relating them to the size of their investment, as opposed to the number of enterprises they operate.

As of January 1997, in terms of approved investment, among the 20 investing countries/territories, the *top five* were the Republic of Korea ($221 million), Malaysia ($156 million), Bangladesh ($78 million), Hong Kong, China ($66 million) and Japan ($53 million). However, when we take into account the stock of *actual* investment, the above line-up changes a bit: Republic of Korea with about $80 million (34.5 per cent); Japan, $49 million (21.1 per cent); Hong Kong, China, $37 million (16 per cent); Bangladesh, about $34 million (14.6 per cent); and the United States, $14 million (6 per cent). The zone-specific breakdown of proposed and actual investment by countries of origin may be seen in table 3.7.

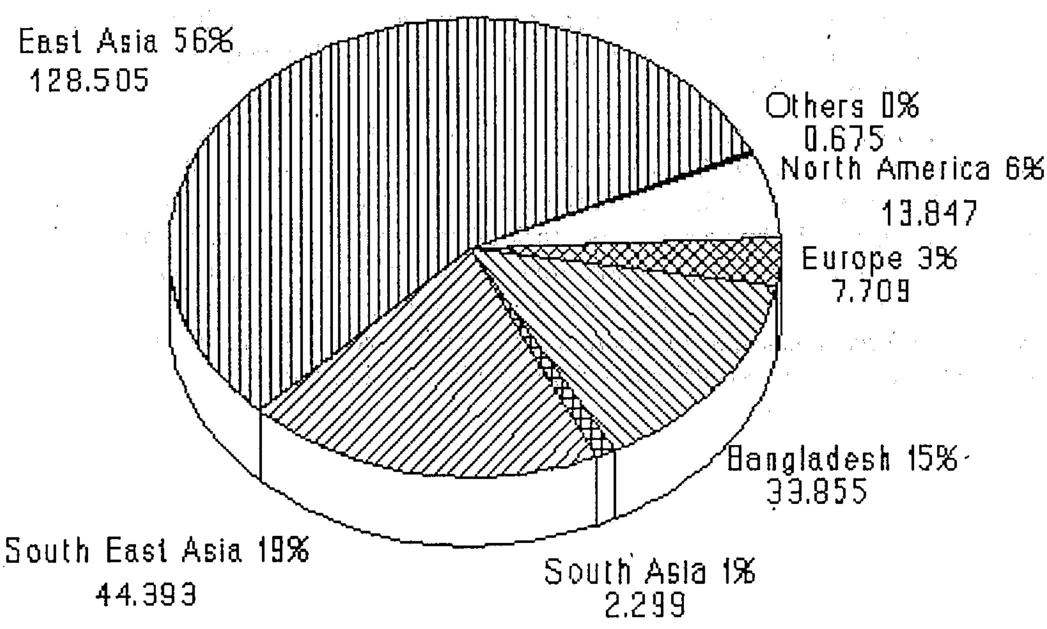
The distribution of investment by the 96 enterprises operating in the zones up to January 1997 is presented in Annex table 3.3. The origins of these investors, the proposed investment, as well as actual sums invested, are all indicated.

As regards actual investment in EPZs, certain aspects need to be noted. *First*, a number of countries/territories (e.g. Malaysia, Taiwan, China and China) are yet to make any investment to date in spite of having been given the necessary approval. *Second*, a number of countries have made significantly less investment than the amount approved in their application (e.g. the United Arab Emirates and Denmark). *Third*, a number of countries have significantly overshot their initial estimated investment (e.g. Sweden, United States, Pakistan and Thailand). However, Annex table 3.3 shows that the major investors that have started production have all crossed their maximum proposed investment. In fact, at the zone level, the units in production have together surpassed their investment targets.

Both in terms of the value of actual investment and the number of approved enterprises, we find that a handful of countries/territories from the East and South-East Asia predominate. Together they account for more than 68 per cent of actual investment in the CEPZ. In the case of the DEPZ, it is as high as 95.5 per cent. As mentioned earlier, it is possible that the skewed distribution of investment among the investing countries reflects current trends in global FDI flows and the international division of labour.

The other important feature which needs to be underscored relates to the prominent presence of Bangladeshi investment, at least in the CEPZ. The share of Bangladesh (18.5 per cent) as shown in table 3.7 is relatively low because its contribution to joint ventures has not been included in this estimate. Joint ventures are discussed later. However, one wonders what would have happened to these local investments if they could not have found a place in the EPZs.

Figure 3.3. Origin of actual investment ($ million and percentages) in EPZs in Bangladesh, January 1997



Source: Based on BEPZA data.

Table 3.6. Enterprises in the EPZs in Bangladesh by country/territory of origin (as of January 1997)

Country/territory of origin	CEPZ				DEPZ				Total in the two EPZs
	A	B	C	Total	A	B	C	Total	
Japan	16 (25.00)	3 (10.34)	–	19 (15.83)	3 (8.82)	1 (11.11)	–	4 (7.02)	23 (12.99)
Rep. of Korea	22 (34.38)	4 (13.79)	–	26 (21.67)	16 (47.06)	–	–	16 (28.07)	42 (23.73)
United States	5 (7.81)	7 (24.14)	–	12 (10.00)	1 (12.94)	2 (22.22)	–	3 (5.26)	15 (8.47)
Hong Kong, China	10 (15.63)	1 (3.45)	–	11 (9.17)	7 (20.59)	1 (11.11)	–	8 (14.04)	19 (10.73)
United Kingdom	5 (7.81)	1 (3.45)	–	6 (5.00)	5 (14.71)	–	–	5 (8.77)	11 (6.21)
Pakistan	–	4 (13.79)	–	4 (3.33)	–	–	–	–	4 (2.26)
Malaysia	2 (3.13)	–	–	2 (1.67)	1 (2.94)	–	–	1 (1.75)	3 (1.69)
Singapore	1 (1.56)	1 (3.45)	–	2 (1.67)	–	–	–	–	2 (1.13)
Sweden	1 (1.56)	–	–	1 (0.83)	–	–	–	–	1 (0.56)
Thailand	–	1 (3.45)	–	1 (0.83)	–	–	–	–	1 (0.56)
Germany	–	1 (3.45)	–	1 (0.83)	1 (2.94)	1 (11.11)	–	2 (3.51)	3 (1.69)
Bangladesh	–	–	27 (100.00)	27 (22.50)	–	–	14 (100.00)	14 (24.56)	41 (23.16)
Canada	–	–	–	–	–	2 (22.22)	–	2 (3.51)	2 (1.13)
France	–	1 (3.45)	–	1 (0.83)	–	–	–	–	1 (0.56)
Denmark	1 (1.56)	–	–	1 (0.83)	–	–	–	–	1 (0.56)
China	–	2 (6.90)	–	2 (1.67)	–	1 (11.11)	–	1 (1.75)	3 (1.69)
United Arab Emirates	–	1 (3.45)	–	1 (0.83)	–	–	–	–	1 (0.56)
Taiwan	–	2 (6.90)	–	2 (1.67)	–	–	–	–	2 (1.13)
India	1 (1.56)	–	–	1 (0.83)	–	–	–	–	1 (0.56)
Panama	–	–	–	–	–	1 (11.11)	–	1 (1.75)	1 (0.56)
Total	64 (100.00)	29 (100.00)	27 (100.00)	120 (100.00)	34 (100.00)	9 (100.00)	14 (100.00)	57 (100.00)	177 (100.00)

Notes: (a) Enterprises include those "in operation" and "under implementation. (b) Figures within parentheses are percentages. (c) Enterprises under type B are joint ventures with Bangladeshi counterparts. These enterprises are not indicated in the data for Bangladesh.

Source: Computed from BEPZA data.

Table 3.7. Investment in enterprises in EPZs in Bangladesh by country/territory of origin (as of January 1997)

Country/territory	CEPZ			DEPZ			Total		
	Proposed investment ($ million)	Actual investment ($ million)	Share in actual total investment (%)	Proposed investment ($ million)	Actual investment ($ million)	Share in actual total investment (%)	Proposed investment ($ million)	Actual investment ($ million)	Share in actual total investment (%)
Japan	50.445 (19)	47.462 (15)	26.80	3.16 (4)	1.33 (3)	2.45	53.605 (23)	48.792 (18)	21.10
Republic of Korea	107.954 (26)	50.563 (20)	28.55	113.15 (16)	29.15 (12)	53.78	221.104 (42)	79.713 (32)	34.47
United States	17.076 (12)	13.847 (11)	7.82	16.35 (3)	0.00 (0)	0.00	33.426 (15)	13.847 (11)	5.99
Hong Kong, China	23.956 (11)	15.578 (8)	8.80	42.09 (8)	21.33 (8)	39.35	66.046 (19)	36.908 (16)	15.96
United Kingdom	10.915 (6)	2.659 (4)	1.50	23.48 (5)	0.18 (1)	0.33	34.395 (11)	2.839 (5)	1.23
Pakistan	1.730 (4)	2.299 (4)	1.30	–	–	–	1.73 (4)	2.299 (4)	0.99
Malaysia	6.250 (2)	2.228 (2)	1.26	150.00 (1)	–	–	156.25 (3)	2.228 (2)	0.96
Singapore	4.328 (2)	4.000 (1)	2.26	–	–	–	4.328 (2)	4.000 (1)	1.73
Sweden	0.533 (1)	0.000	0.00	–	–	–	0.533 (1)	0.00	0.00
Thailand	1.150 (1)	1.257 (1)	0.71	–	–	–	1.150 (1)	1.257 (1)	0.54
Bangladesh	51.202 (27)	32.725 (21)	18.48	27.11 (14)	1.13 (5)	2.08	78.312 (41)	33.855 (26)	14.64
United Arab Emirates	0.530 (1)	0.055 (1)	0.03	–	–	–	0.530 (1)	0.055 (1)	0.02
Canada	–	–	–	5.03 (2)	0.00	0.00	5.030 (2)	0.00	0.13

Country/territory	CEPZ			DEPZ			Total		
	Proposed investment ($ million)	Actual investment ($ million)	Share in actual total investment (%)	Proposed investment ($ million)	Actual investment ($ million)	Share in actual total investment (%)	Proposed investment ($ million)	Actual investment ($ million)	Share in actual total investment (%)
Denmark	3.000 (1)	0.301 (1)	0.17	-	-	-	3.000 (1)	0.301 (1)	1.70
Germany	3.230 (1)	3.465 (1)	1.96	5.53 (2)	0.46 (1)	8.49	8.760 (3)	3.925 (2)	0.27
China	3.620 (2)	0.000	0.00	0.91 (1)	0.62 (1)	1.14	4.530 (3)	0.620 (1)	0.00
Taiwan, China	2.619 (2)	0.000	0.00	-	-	-	2.619 (2)	0.00	0.28
France	0.426 (1)	0.643 (1)	0.36	-	-	-	0.426 (1)	0.643 (1)	0.00
Panama	-	-	-	4.59 (1)	0.00	0.00	4.590 (1)	0.00	0.00
India	1.400 (1)	0.000	0.00	-	-	-	1.400 (1)	0.00	0.00
Total	290.364 (120)	177.082 (91)	100.00	391.40 (57)	54.20 (31)	100.00	681.764 (177)	231.282 (122)	100.00

Note: Figures within parentheses denote number of enterprises which have received investment (including enterprises under implementation).
Source: Computed from BEPZA data.

Joint ventures

As of January 1997, 17 joint venture units were in operation in the two zones (15 in the CEPZ and two in the DEPZ). These units have a total investment of $15.1 million. As it can be seen from table 3.8, the counterparts of the Bangladeshi entrepreneurs come from different countries — five from the United States, three from Pakistan, two from Hong Kong, China, and one each from the United Kingdom, Republic of Korea, Germany, United Arab Emirates, China, Japan and Thailand. The local-foreign investment ratios in these joint ventures are 46:54 and 31:69 in the CEPZ and the DEPZ, respectively.

There are indications that local participation in joint ventures has been declining over time. However, if one takes into account the Bangladeshi investment in these joint ventures along with the full local ownership of certain enterprises (type C), then the local investment adds up to about $37.5 million which is more than 19.2 per cent of total actual investment in the units that are operating in the two zones. The presence of indigenous capital in EPZs in Bangladesh is therefore noticeable.

To sum up, the value and volume of investment actually made in the two EPZs in Bangladesh remains satisfactory for the mature Chittagong zone. However, in both zones, the origin of investment is concentrated in a few countries/territories. The investment trend has picked up lately, often outstripping the approved amounts of investment. Despite provision for local investment in the zones, an overwhelming share of actual investment is of foreign origin and, if the present trend continues, the share of foreign firms is going to increase further.

Table 3.8. Breakdown of actual investment in joint ventures (type B) in operation in EPZs in Bangladesh (as of January 1997)

Names of enterprises	Foreign counterpart	CEPZ		DEPZ	
		Investment ($ million)		Investment ($ million)	
		Local	Foreign	Local	Foreign
Sonar Cotton Mills Ltd.	United States	0.36 (20)	1.45 (80)	-	-
Al-Hamedi Textile Mills Ltd.	United States	0.11 (15)	0.60 (85)	-	-
Global Fabrics (Pvt.) Ltd	Pakistan	0.09 (21)	0.34 (79)	-	-
Al-Salam Fabrics Ltd.	Pakistan	0.13 (25)	0.40 (75)	-	-
Institutional Textile Mills Ltd.	Pakistan	0.08 (10)	0.69 (90)	-	-
Atlantic Standard Times Co.	Japan	0.15 (29)	0.23 (61)	-	-
Grey Fab Bangladesh (Pvt.) Ltd.	United Kingdom	0.25 (60)	0.17 (40)	-	-
Plast Bangla Ltd.	Thailand	0.75 (60)	0.50 (40)	-	-
Fashion Express Ltd.	Republic of Korea	0.61 (49)	0.64 (51)	-	-
Delite Knitting Co. Ltd.	Hong Kong, China	0.16 (33)	0.32 (67)	-	-
Synergy International Ltd.	United States	0.28 (70)	0.12 (30)	-	-
Eastern Knit-Tex (Pvt.) Ltd.	United States	0.28 (49)	0.29 (51)	-	-
Paragon Leather and Footwear Ind. Ltd.	Germany	2.43 (70)	1.04 (30)	-	-
NedBang International Ltd.	United Arab Emirates	0.03 (50)	0.03 (50)	-	-
MNC Apparels Limited	United States	0.15 (79)	0.04 (21)	-	-
Welfrom Apparels Ltd.	Hong Kong, China	-	-	0.35 (20)	1.39 (80)
Dhaka-Beijing Dyeing and Weaving	China	-	-	0.38 (61)	0.24 (39)
Total		5.86 (46)	6.86 (54)	0.73 (31)	1.63 (69)

Note: Figures in parentheses denote equity ratio.

Source: Collated from BEPZA data.

3.4 Sectoral distribution

Of the 96 units in operation in the EPZs, only one is involved in services (container handling). The rest are engaged in processing activities of one type or another. The *most significant output* of Bangladesh EPZs consists of textiles, apparel and related products. About 60 per cent of the 95 processing units in operation produce these goods. If one includes the manufacture of sports wear to this group, the share will go up to 67 per cent. In the case of the DEPZ, almost 88 per cent of the units fall into this group. Table 3.9 presents the distribution of enterprises by product type (distinguished at three-digit level Bangladesh Standard Industrial Classification (BSIC) Code).

The textile and apparel-enterprises dominate all three types of ownership categories, although there are some intrasectoral specificities. The fully foreign-owned firms are more concentrated in producing garments, often of high value (e.g. jackets and T-shirts), while the joint ventures are concentrated in the production of goods located at the lower end of the value-added chain (e.g. grey fabrics). Knitted fabrics and knitwear occupy an intermediate position in the goods made in both types of enterprises. Local enterprises are involved in all categories of textile products.

To some extent, the industrial structure of the EPZs, by and large, corresponds with a commodity mix of the country's exports. What is perplexing however, is that the majority (60 per cent) of the type C units are also involved in textile/apparel-related activities. Against the background of a vibrant garment manufacturing sector in the domestic economy, one may very well question the rationale of establishing local units in the EPZs.

The *second most important* feature of the product profile of the EPZs relates to the prominent presence (18 per cent of the units) of electrical, electronic and engineering products (BSIC 381, 384 and 387). Fifteen out of the 17 units making these products were wholly foreign-owned. This does not come as a surprise as this is a technology-intensive subsector and only foreign investors have the required know-how to carry out these activities.

There is a residual set of units producing paper and plastic products, furniture and decorative handicrafts, and miscellaneous accessories (e.g. ropes and zippers).

Other measures

It would be inappropriate to analyse the product composition of the industries in the EPZs based on only the frequency distribution of the number of operating units. The relative importance of various industries at three-digit BSIC code level in terms of *investment, employment, import, export and trade balance* for the two zones has been presented in Annex tables 3.4a and 3.4b. Taking into account the relatively developed status of the Chittagong EPZ, table 3.10 presents the ranking of the five most important industries or product types to show the contribution of enterprises in these categories, in terms of investment, employment, imports, exports and balance of trade.

Table 3.10 again shows the dominance of the *textile and apparel* units in the EPZ. The only other activity which figures prominently among the top five under various criteria are enterprises in the metal trades (e.g. motor structure, steel chains, brakes, fishing reel). These products occupy the lead position in terms of the share of the enterprises that produce them in total investment in the zone. When we consider employment levels and volume of exports and imports, apparel emerges as the winner with the largest shares. However, it seems that companies producing sports bags and sports wear are the single largest net foreign exchange earner.

In short, it is quite evident from the analysis of products made by enterprises in the CEPZ and the DEPZ that they are essentially outputs of labour-intensive manufacturing processes. Incidentally, these activities are far from those contained in the BEPZA's "Indicative list" for prospective investors, in which a whole gamut of high-tech/knowledge-intensive products are mentioned. We return to this issue later in the context of assessing the role of the EPZs in the development of skills and transfer of technology.

Table 3.9. Distribution of CEPZ and DEPZ units in operation by product type (as of January 1997)

Product by BSIC code		CEPZ				DEPZ				Total			
		A	B	C	Total	A	B	C	Total	A	B	C	Total
321	Textile manufacturing: terry towels, textile tents, sleeping bags, grey fabrics, shop towels	5 (11.6)	7 (16.7)	4 (28.6)	16 (22.2)	4 (20.0)	1 (50.0)	-	5 (21.7)	9 (14.3)	8 (47.1)	4 (26.7)	21 (22.1)
322	Textile manufacturing: knitwear, knit fabrics, "inmate knitwear" (i.e. knitted undergarments, fabric-made bags	4 (9.3)	2 (13.3)	3 (21.3)	9 (12.5)	3 (15.0)	-	-	3 (13.0)	7 (11.1)	2 (11.8)	3 (20.0)	12 (12.6)
323	Wearing apparel: head wear, jacket garments, T-shirts, caps, paddings	12 (27.9)	-	2 (14.3)	14 (19.4)	8 (40.0)	1 (50.0)	-	9 (39.1)	20 (31.7)	1 (5.9)	2 (13.3)	23 (24.2)
325	Footwear and leather goods: shoes, outsoles	-	1 (6.7)	2 (14.3)	3 (4.2)	1 (5.0)	-	-	1 (4.3)	1 (1.6)	1 (5.9)	2 (13.3)	4 (4.2)
332	Furniture manufacturing	-	-	1 (7.1)	1 (1.4)	-	-	-	-	-	-	1 (6.7)	1 (1.1)
341	Paper products: paper and packaging products	-	-	1 (7.1)	1 (1.4)	-	-	1 (100.0)	1 (4.3)	-	-	2 (13.3)	2 (2.1)
357	Plastic materials: plastic bags	1 (2.3)	1 (6.7)	-	2 (2.8)	-	-	-	-	1 (1.6)	1 (1.6)	-	2 (2.1)
381	Motor structure (i.e. prefabricated metal products): fishing reel, steel chain, motor brakes	6 (14.0)	2 (13.3)	-	8 (11.1)	-	-	-	-	6 (9.5)	2 (11.8)	-	8 (8.4)
384	Electrical machinery: electronics, video tapes, electrical goods, floppy diskettes	7 (16.3)	-	-	7 (9.7)	-	-	-	-	7 (11.1)	-	-	7 (7.4)
387	Photographic and optical goods: camera lenses	2 (4.7)	-	-	2 (2.8)	-	-	-	-	2 (3.2)	-	-	2 (2.1)
391	Decorative handicraft: artificial flowers	1 (2.3)	-	-	1 (1.4)	-	-	-	-	1 (1.6)	-	-	1 (1.1)
392	Manufacture of sports goods: sports wear	3 (7.0)	1 (6.7)	-	4 (5.6)	3 (15.0)	-	-	3 (13.0)	6 (9.5)	1 (5.9)	-	7 (7.4)
393	Other manufacturing industry: ropes, zippers	2 (2.3)	1 (6.7)	1 (6.7)	4 (5.6)	1 (5.0)	-	-	1 (4.3)	3 (4.8)	1 (5.9)	1 (6.7)	5 (5.3)
Total		43 (100.0)	15 (100.0)	14*	72 (100.0)	20 (100.0)	2 (100.0)	1 (100.0)	23 (100.0)	63 (100.0)	17 (100.0)	15 (100.0)	95 (100.0)

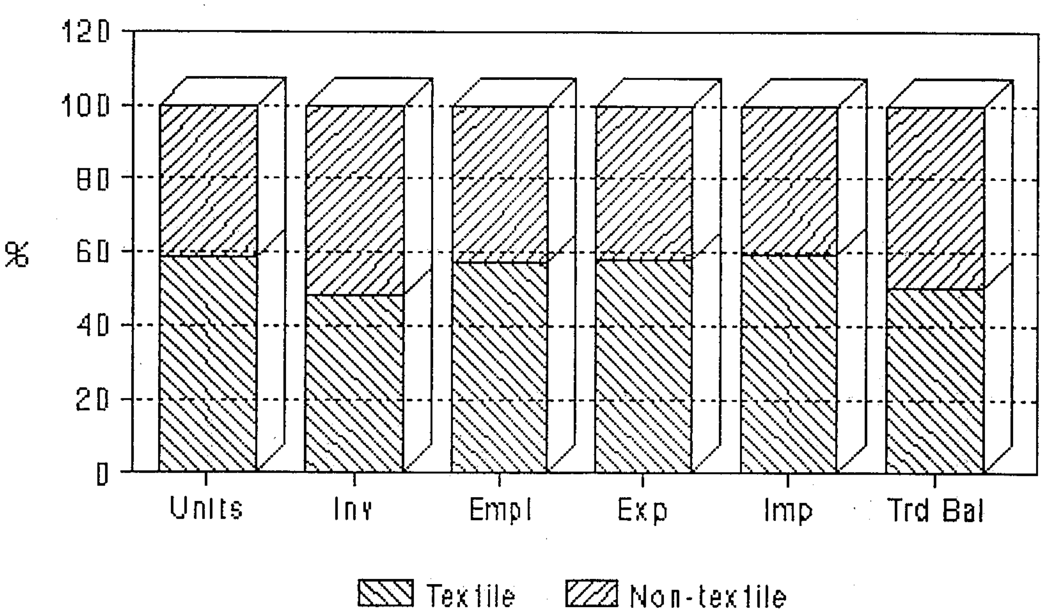
* Excluding one service enterprise.
Note: Figures in parentheses denote percentage of column total.
Source: BEPZA.

Table 3.10. Enterprises by industry and types of goods produced, ranked in terms of investment, employment, exports, imports and balance of trade, Chittagong EPZ, January 1997

Criteria	Rank				
	First	Second	Third	Fourth	Fifth
Investment	Motor structure: steel chains, motor vehicle brakes, fishing reels (24.48)	Textile manufacturing: terry towels, grey fabrics (18.76)	Wearing apparel (15.41)	Manufacture of sports goods: sports wear and bags (14.03)	Textile manufacturing: knitwear, knitted fabric, inmate knitwear, fabric-made bag (9.61)
Employment	Wearing apparel (31.38)	Sports bags and sports wear (19.43)	Textile manufacturing: knitwear, knit fabrics (13.56)	Textile: terry towels, textile tents, grey fabrics, sleeping bags (12.65)	Motor structure: brakes, fishing reels steel chains (8.38)
Export	Wearing apparel (22.84)	Sports bags and sports wear (20.91)	Textile: Knitwear, knitted fabric, inmate knitwear (19.10)	Motor structure: brakes, fishing reels, chains (16.35)	Textile: terry towels, tents, grey fabrics, sleeping bags (11.25)
Import	Wearing apparel (25.62)	Textile: knitwear, knitted fabric, inmate knitwear (20.04)	Motor structure: fishing reels, steel chains, brakes (17.75)	Sports bags and sports wear (17.46)	Textile: terry towels, textile tents, sleeping bags, grey fabrics (11.30)
Trade balance	Sports bags and sports wear (33.39)	Textile: knitwear, knitted fabric, inmate knitwear, bags (15.70)	Wearing apparel (12.76)	Motor structure: steel chains, brakes, fishing reels (11.29)	Textile manufacturing: terry towels, tents, sleeping bags, grey fabrics (11.08)

Note: Figures in parentheses denote percentage share of that particular product in the total. The term "motor structure" refers to fabricated metal products and "inmate knitwear" to knitted undergarments.
Source: Annex table 3.4a.

Figure 3.4. Share of textile and non-textile industries in EPZs in Bangladesh



Source: Based on BEPZA data.

Annex table 3.1

Number of enterprises approved to operate in Bangladesh EPZs by ownership type (as of January 1997)

Year	CEPZ					DEPZ				
	A	B	C	Total	Cumulative	A	B	C	Total	Cumulative
1983-84	3	1		4	4					
1984-85	1	2	2	5	9					
1985-86	1	3	2	6	15					
1986-87	1	1	3	5	20					
1987-88	2	1	1	4	24					
1988-89	2	2	1	5	29					
1989-90	12	0	1	13	42					
1990-91	7	3	3	13	55					
1991-92	4	0	1	5	60					
1992-93	1	2	1	4	64	7			7	7
1993-94	8	1	2	11	75	5	3	2	10	17
1994-95	9	7	4	20	95	5	2	4	11	28
1995-96	5	5	3	13	108	8	4	5	17	45
1996-97	8	1	3	12	120	9	0	3	12	57
Total	64	29	27	120	–	34	9	14	57	–

Source: BEPZA

Annex table 3.2

Distribution of enterprises in the CEPZ and the DEPZ by ownership type and production status (as of January 1997)

Status of enterprises	A		B		C		Total	
	No.	%	No.	%	No.	%	No.	%
CEPZ								
In operation	43	67.19	15	51.72	15	55.56	73	60.83
Under implementation	21	32.81	14	48.28	12	44.44	47	39.17
Total	64	100.00	29	100.00	27	100.00	120	100.00
DEPZ								
In operation	20	58.82	2	22.22	1	7.14	23	40.35
Under implementation	14	41.18	7	77.78	13	92.86	34	59.65
Total	34	100.00	9	100.00	14	100.00	57	100.00

Source: BEPZA.

Annex table 3.3

Distribution of investment in enterprises in operation in EPZs in Bangladesh by country of origin (as of January 1997)

Country	CEPZ (N=73)			DEPZ (N=23)			Total (N=96)		
	Proposed investment ($ million)	Actual investment ($ million)	Actual as % of proposed	Proposed investment ($ million)	Actual investment ($ million)	Actual as % of proposed	Proposed investment ($ million)	Actual investment ($ million)	Actual as % of proposed
Republic of Korea	44.01 (17)	46.06 (15)	104.66	96.86 (11)	26.90 (10)	27.77	140.87	72.96	51.79
Bangladesh	32.77 (15)	30.84 (14)	94.11	0.18 (1)	0.03 (1)	16.67	32.95	30.87	93.69
United States	4.64 (7)	8.31 (7)	179.09	–	–	–	4.64	8.31	179.09
Hong Kong, China	9.96 (7)	14.11 (6)	141.67	19.65 (6)	6.16 (6)	38.28	29.61	20.27	68.46
Pakistan	1.35 (3)	1.98 (3)	146.67	–	–	–	1.35	1.98	146.67
United Kingdom	1.22 (2)	1.46 (2)	119.67	0.76 (1)	0.18 (1)	23.68	1.98	1.64	82.83
Sweden	0.53 (1)	–	–	–	–	–	0.53	0.00	0.00
Thailand	1.15 (1)	1.26 (1)	109.57	–	–	–	1.15	1.26	109.57
Denmark/Australia	3.00 (1)	0.30 (2)	10.00	–	–	–	3.00	0.30	10.00
Malaysia	6.25 (2)	2.23 (2)	35.68	–	–	–	6.25	2.23	35.68
Germany	3.23 (1)	3.47 (1)	107.43	1.23 (1)	0.46 (1)	37.40	4.46	3.93	88.12
United States/Canada	1.56 (1)	2.05 (1)	131.41	–	–	–	1.56	2.05	131.41
United States/China	1.60 (1)	0.09 (1)	5.63	0.91 (1)	0.62 (1)	68.13	2.51	0.71	28.29
United Arab Emirates	0.53 (1)	0.06 (1)	11.32	–	–	–	0.53	0.06	11.32
United Kingdom/ Hong Kong, China	4.8 (1)	1.16 (1)	24.17	–	–	–	4.80	1.16	24.17
Total	159.29	159.65	100.23	121.45	35.40	30.03	280.74	195.05	69.48

Figures in parentheses denote number of enterprises.

Source: Computed from BEPZA data.

Annex table 3.4a

Sectoral contribution of operational enterprises in the CEPZ (1995-96)

BSIC Code	Product	Investment ($ million)	Employees (No.)	Exports ($ million)	Imports ($ million)	Trade balance ($ million)
321	Textile manufacturing: terry towels, textile tents, sleeping bags, grey fabrics, shop towels	30.25 (18.76)	4 107 (12.65)	29.69 (11.25)	23.36 (11.30)	6.33 (11.08)
322	Textile manufacturing: knitwear, knitted fabric, inmate knitwear, fabric-made bags	15.50 (9.61)	4 405 (13.56)	50.38 (19.10)	41.41 (20.04)	8.97 (15.70)
323	Wearing apparel: headwear, jacket garments, T-shirts, caps, padding	24.85 (15.41)	10 189 (31.38)	60.24 (22.84)	52.95 (25.62)	7.29 (12.76)
325	Footwear and leather goods: shoes, outer soles	13.29 (8.24)	2 474 (7.62)	9.52 (3.61)	7.01 (3.39)	2.51 (4.39)
332	Furniture manufacturing	0.50 (0.31)	0 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
341	Paper products: paper and packaging products	0.39 (0.24)	92 (0.28)	0.68 (0.26)	0.44 (0.21)	0.24 (0.42)
357	Plastic materials: plastic bags	1.61 (1.00)	108 (0.33)	0.49 (0.19)	0.32 (0.15)	0.17 (0.30)
381	Motor structure: fishing reels, steel chains, motor brakes	39.48 (24.48)	2 722 (8.38)	43.14 (16.35)	36.69 (17.75)	6.45 (11.29)
384	Electrical machinery: electronics, video tapes, electrical goods, floppy diskettes	7.76 (4.81)	1 124 (3.46)	6.69 (2.54)	4.53 (2.19)	2.16 (3.78)
387	Photographic and optical goods: camera lenses	2.74 (1.70)	489 (1.51)	5.48 (2.08)	2.78 (1.35)	2.70 (4.73)
391	Decorative handicraft: artificial flowers	0.36 (0.22)	329 (1.01)	0.66 (0.25)	0.27 (0.13)	0.39 (0.68)
392	Manufacture of sports goods: sports wear, sports bags	22.63 (14.03)	6 310 (19.43)	55.15 (20.91)	36.08 (17.46)	19.07 (33.39)
393	Other manufacturing industry: ropes, zippers	1.90 (1.88)	125 (0.38)	1.68 (0.64)	0.84 (0.41)	0.84 (1.47)
	Total	161.26 (100.00)	32 474 (100.00)	263.80 (100.00)	206.68 (100.00)	57.12 (100.00)

Note: Figure in parentheses denote percentage of column total.

Source: BEPZA

Annex table 3.4b

Sectoral contribution of operational units in the DEPZ (1995-96)

BSIC code	Product	Investment ($ million)	Employees (No.)	Exports ($ million)	Imports ($ million)	Trade balance ($ million)
321	Textile manufacturing: terry towels, textile tents, sleeping bags, grey fabrics, shop towels	6.75 (20.25)	453 (3.46)	18.07 (24.68)	17.17 (28.33)	0.90
322	Textile manufacturing: knitwear, knitted fabric, inmate knitwear, fabric-made bags	5.56 (16.68)	1 287 (9.84)	10.28 (14.04)	6.79 (11.20)	3.49
323	Wearing apparel: headwear, jacket garments, T-shirts, caps, padding	11 .61 (34.83)	5 847 (44.69)	26.34 (35.97)	18.07 (29.82)	8.27
325	Footwear and leather goods	0.20 (0.60)	122 (0.93)	0.00 (0 .00)	0.02 (0.03)	-0.02
341	Paper and paper products	0.03 (0.09)	42 (0.32)	0.03 (0.04)	0.07 (0.12)	-0.04
392	Manufacture of sports goods: sports wear, sports bags	9.18 (27.54)	5 333 (40.76)	1 850 (25.27)	18.48 (30.50)	0.02
	Total	33.33 (100.00)	13 084 (100.00)	73.22 (100.00)	60.60 (100.00)	12.62 (100.00)

Note: Figures in parentheses denote percentage of column total.

Source: BEPZA.

4. Characteristics of employment in EPZs in Bangladesh

4.1 Employment growth

Creating new employment opportunities for Bangladeshi nationals has been one of the compelling reasons for establishing EPZs. More than 99 per cent of all workers in the two EPZs are of local origin. Statistics on direct employment of Bangladeshis in the two zones since their inception are presented in table 4.1. Unfortunately, no time series data on employment of foreigners were available.

Table 4.1. Growth in the number of Bangladeshi workers and employees in the EPZs (up to December 1996)

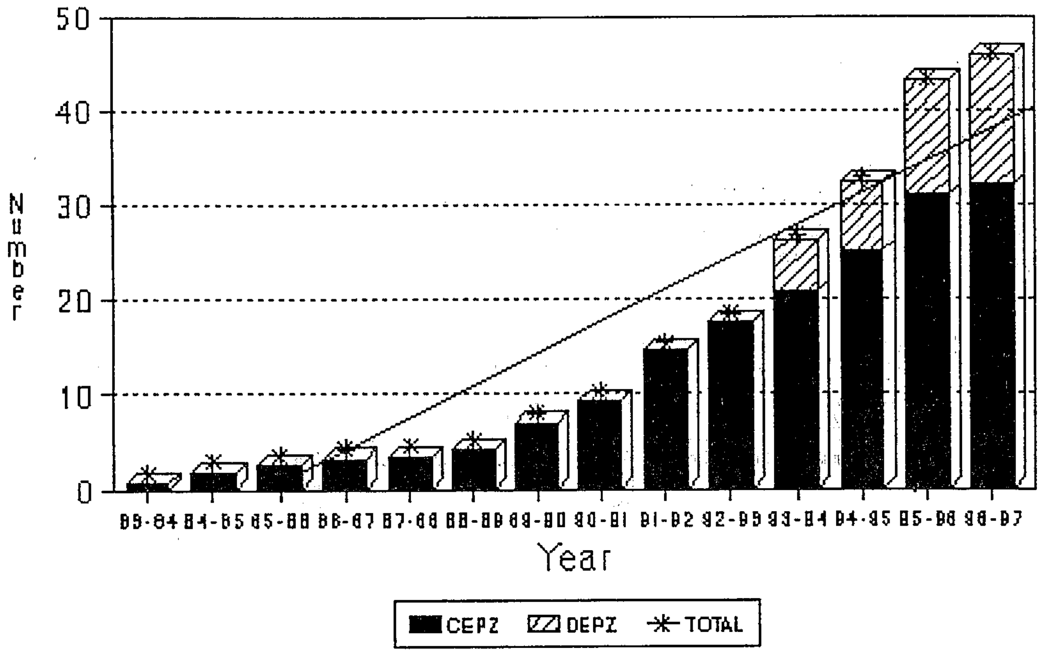
Year	CEPZ			DEPZ			Total		
	Annual	Cumulative	Annual growth rate (%)	Annual	Cumulative	Annual growth rate (%)	Annual	Cumulative	Annual growth rate (%)
1983-84	624	624	-	-	-	-	624	624	-
1984-85	1 156	1 780	185.26	-	-	-	1 156	1 780	185.26
1985-86	732	2 512	41.12	-	-	-	732	2 512	41.12
1986-87	728	3 240	28.98	-	-	-	728	3 240	28.98
1987-88	198	3 438	6.11	-	-	-	198	3 438	6.11
1988-89	769	4 207	22.37	-	-	-	769	4 207	22.37
1989-90	2 794	7 001	66.41	-	-	-	2 794	7 001	66.41
1990-91	2 363	9 364	33.75	-	-	-	2 363	9 364	33.75
1991-92	5 250	14 614	56.07	-	-	-	5 250	14 614	56.07
1992-93	3 114	17 728	21.31	-	-	-	3 114	17 728	21.31
1993-94	3 086	20 814	17.41	5 522	5 522	-	8 608	26 336	48.56
1994-95	4 297	25 111	20.64	1 844	7 366	33.39	6 141	32 477	23.32
1995-96	5 875	30 986	23.40	4 831	12 197	39.61	10 706	43 183	32.96
1996-97 (up to Dec. 96)	1 126	32 112	-	1 542	13 739	-	2 668	45 851	-
Growth rate 1983-84 to 1995-96)		29.62			39.62			31.94	

Source: Computed from BEPZA data.

Table 4.1 reveals that up to December 1996, 45,851 Bangladeshi nationals were employed in 96 units currently in operation in the two zones — 70 per cent of them in the CEPZ and the other 30 per cent in the DEPZ. These figures do not include government officials employed in the BEPZA.

Between the period 1983-84 and 1995-96, local employment in the EPZs increased at an impressive rate of almost 32 per cent per annum. Over those years the employment of locals at the CEPZ grew by more than 29.6 per cent, whereas in the DEPZ (during 1993-94 to 1995-96), employment grew by more than 39.6 per cent. Despite annual variations, employment grew at a relatively steady rate (see figure 4.1).

Figure 4.1. Trends in the employment of locals in enterprises operating in EPZs in Bangladesh (1983-84 to 1996-97)



Source: Based on BEPZA data.

4.2 Composition of the workforce by nationality

It has been mentioned earlier that the vast majority of the EPZ workforce are of local origin. Table 4.2 shows that, of the 46,214 persons employed in the two zones up to January 1997, more than 99 per cent of them were local. In both zones, the number of expatriate employees was negligible — less than 0.5 per cent in the CEPZ and just over 1 per cent in the DEPZ. One wonders to what extent the marginal rise in expatriate employment which we observe in the relatively new zone reflects the skill and technology intensity of the activities of enterprises of more recent origin.

Table 4.2. Employment by nationality in enterprises in EPZs in Bangladesh (up to January 1997)

Nationality	CEPZ		DEPZ		Total	
	No.	% of proposed	No.	% of proposed	No.	% of proposed
Local	32 095 (99.21)	101.80	13 720 (98.97)	71.96	45 815 (99.14)	90.56
Expatriate	256 (0.79)	79.26	143 (1.03)	52.96	399 (0.86)	67.28
Total	32 351 (100.00)	101.57	13 863 (100.00)	71.70	46 214 (100.00)	90.29

Note: Figures in parentheses denote percentage of column total.

Source: Computed from BEPZA data.

The other issue which may be discussed in connection with the nationality of the EPZ employees relates to the rate of achievement of the employment targets in EPZ enterprises (see table 4.3). It may be further observed from table 4.2 that more than 90 per cent of the planned employment (local and foreign taken together) has been already achieved. Two particular aspects may be noted in this respect. *First*, in both zones, the employment targets for locals have been attained. In fact, in the CEPZ the target has been surpassed (102 per cent). This leads us to make the *second* observation — that the relatively low level of employment in the DEPZ is likely to take an upward turn over time.

Table 4.3. Proposed and actual employment by ownership of enterprises in operation in EPZs in Bangladesh, January 1997

Enterprise type	Proposed			Actual		
	Local	Foreign	Total	Local	Foreign	Total
CEPZ						
Type A	23 157	272	23 429	25 546	236	25 782
(N=43)	(73.45)	(84.21)	(73.56)	(79.59)	(92.19)	(79.69)
Type B	2 551	32	2 583	2 676	4	2 680
(N=15)	(8.09)	(9.91)	(8.11)	(8.34)	(1.56)	(8.28)
Type C	5 819	19	5 838	3 873	16	3 889
(N=15)	(18.46)	(5.88)	(18.33)	(12.07)	(6.25)	(12.02)
Total	31 527	323	31 850	32 095	256	32 351
(N=73)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)
DEPZ						
Type A	18 325	229	18 554	12 529	131	12 660
(N=20)	(96.12)	(84.81)	(95.96)	(91.32)	(91.61)	(91.13)
Type B	676	41	717	1 149	12	1 161
(N=2)	(3.55)	(15.19)	(3.71)	(8.37)	(8.39)	(8.37)
Type C	64	-	64	42	-	42
(N=1)	(0.33)		(0.33)	(0.41)		(0.30)
Total	19 065	270	19 335	13 720	143	13 863
(N=22)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)
Total						
Type A	41 482	501	41 983	38 075	367	38 442
(N=63)	(81.99)	(84.49)	(82.02)	(83.11)	(91.98)	(83.18)
Type B	3 227	73	3 300	3 825	16	3 841
(N=17)	(6.38)	(12.31)	(6.45)	(8.35)	(4.01)	(8.31)
Type C	5 883	19	5 902	3 915	16	3 931
(N=16)	(11.63)	(3.20)	(11.53)	(8.55)	(4.01)	(8.51)
Total	50 592	593	51 185	45 815	399	46 214
(N=96)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)

Note: Figures in parentheses denote percentage of total.

Source: Computed from BEPZA data.

4.3 Distribution of employment by type of enterprise

Given the predominance of fully foreign-owned enterprises in the EPZs, in terms of both numbers and value of investment, it does not come as a surprise that up to January 1997, more than 83 per cent of the workforce were employed in type A units. That share was higher than the target. The other two categories of units, viz. joint ventures (type B) and locally owned companies (type C) accounted for about 8.5 per cent of total employment in the two zones. While joint ventures recruited more than the maximum number of workers for which they had planned, the units of local origin were, up to the time of writing, lagging behind in this regard. Foreign firms are the main employers in the new Dhaka EPZ, where the only local enterprise in operation accounts for a negligible share of employment.

Employment and labour intensity

In fact, for a proper understanding of the employment situation, one needs to compare the size of the workforce by category of enterprise. Thus, we observe from table 4.4 that the average size of the workforce in EPZ units in Bangladesh is 481. The foreign firms have the largest number of workers — 610, while joint ventures and locally owned units have on average 226 and 246 workers, respectively. The average size of the foreign firms, which are predominantly in textiles and apparel, does not seem to be larger than similar types of firms located in the DTA.

Another interesting aspect which may be explored in this connection is the labour intensity of different categories of enterprises in the EPZs. Table 4.4 shows that type A enterprises which account for 76 per cent of total capital stock in the two zones, employ 83 per cent of the total workforce. For every $3,820 invested, one job was created. Type B and type C enterprises account for about 8 and 16 per cent, respectively, of all jobs in the zones. For every $4,000 and $7,850 invested by type B and type C enterprises, respectively, one job was created.

Labour intensity is highest in the type A units followed by type B enterprises. The locally owned units are using almost double the amount of capital per job in comparison to the other two categories of enterprises. This bears out the hypothesis that foreign capital inflows into EPZs are primarily driven by the availability of cheap labour. The inefficient use of capital in the locally owned units is a possibility not to be disregarded.

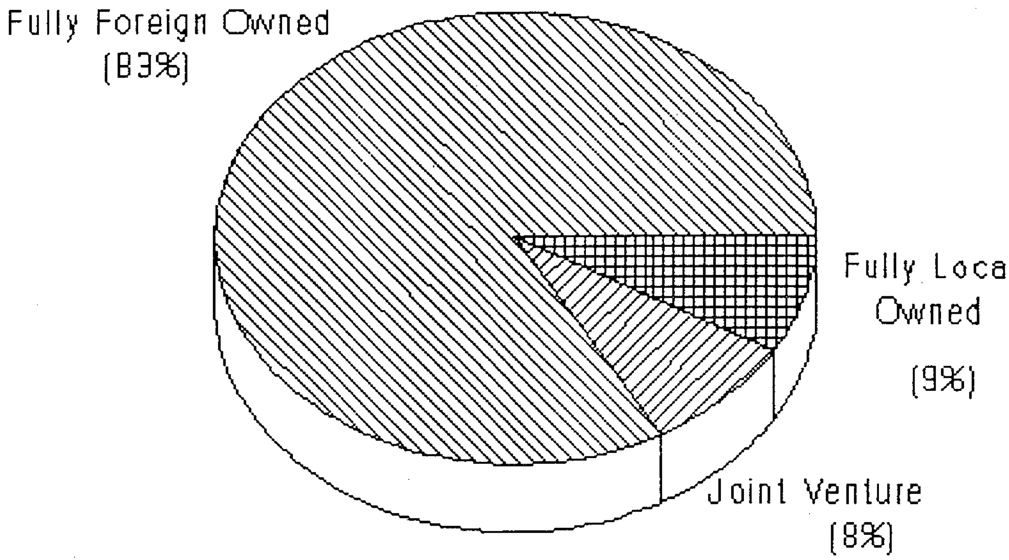
Table 4.4. Average size of workforce and labour intensity of enteprises in EPZs in Bangladesh, January 1997

Enterprise type	Total employment	Average number of jobs	Total investment ($ million)	Investment/ employment ($ '000)
Type A (N=63)	38 442 (83.18)	410	147.01 (76.06)	3.82
Type B (N=17)	3 841 (8.31)	226	15.40 (7.97)	4.01
Type C (N=16)	3 931 (8.51)	246	30.87 (15.89)	7.85
Both zones (N=96)	46 214 (100.00)	481	193.28 (100.00)	4.18

Note: Figures in parentheses denote percentage of column total.

Source: Calculated from BEPZA data.

Figure 4.2. Distribution of workforce in EPZs in Bangladesh by ownership of enterprise



Source: Based on BEPZA data.

4.4 Gender composition of employment

It is by now well known that enterprises in EPZs usually have a preponderantly female workforce. The Bangladesh case is no exception. The gender composition of the Chittagong EPZ employees is depicted in figure 4.3 and the distribution of these employees (local) by functional status is presented in table 4.5. The total number of 32,095 workers mentioned in the table belong to 73 units currently in operation in the Chittagong EPZ.[4]

The workforce in the CEPZ has the following characteristics. *First,* about 70 per cent of all employees in the EPZ enterprises are women. This share is much higher than the comparable national average and even of that in the labour-intensive garment manufacturing companies located in the DTA. The widely held view that EPZ enterprises have a higher propensity to hire female workers is borne out by these facts.

Second, while 79 per cent of the males belong to the "production workers" category, the matching share for women is much higher — 98.4 per cent. This shows that women are disproportionately confined to relatively low-skilled (and thus low paid) jobs in enterprises in the zones. In other words, there exists a gender bias in the intra-firm division of labour.

Third, women are largely unrepresented in the "technical" and "salaried employees" occupational categories. This is particularly true in the case of technical officers, where there are only 0.11 per cent of all female workers in this category. In contrast, 4.1 per cent of all male workers are in these positions.

Fourth, the share of casual labour among the male and female workers is almost equal — about 24 per cent in each case. This suggests that the hypothesis relating to the "casualization of female labour" is not borne out in the EPZ units in Bangladesh. This is largely because all EPZ workers become "permanent" once they have worked for three consecutive months.

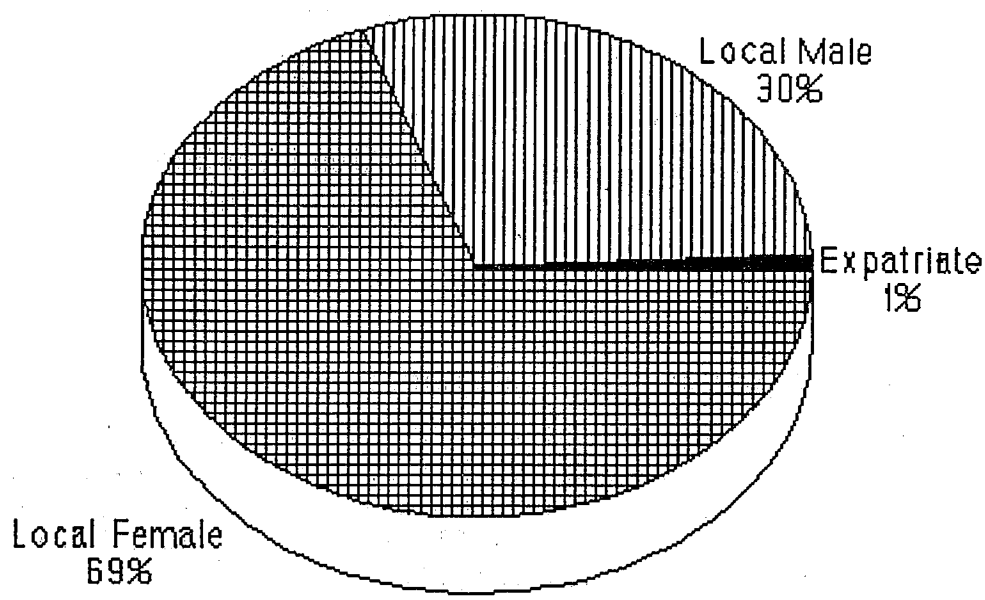
Fifth, there seems to be a positive association between the degree of foreign participation in an enterprise and the level of feminization of the workforce. For example, the share of female

[4] Data on gender composition of the DEPZ workers were not available.

workers in fully foreign-owned enterprises is more than 75 per cent and about 51.7 per cent in joint ventures. In contrast, local companies have about 48.6 per cent female workers.

It was beyond the scope of this paper to investigate the underlying factors of the gender-specific employment in the EPZs. However, during discussions, the BEPZA officials and the EPZ entrepreneurs emphatically denied that there were any discriminatory wage policies which would account for such a situation. Rather, they highlighted factors such as punctuality and the amenability of women workers to acquiring skills, as the reasons for entrepreneurs' preference for female labour.

Figure 4.3. Composition of the workforce in the CEPZ



Source: Based on BEPZA data.

Table 4.5. Gender composition of local workforce in enterprises in the CEPZ (up to January 1997)

Type of employment	Type of enterprise			Total (N=73)
	A (N=43)	B (N=15)	C (N=15)	
Workers	**23 824 (93.26)**	**2 378 (88.87)**	**3 513 (90.70)**	**29 715 (92.59)**
Male	4 976 (19.48)	1 015 (37.92)	1 647 (42.52)	7 637 (23.80)
Permanent	3 847 (15.06)	669 (24.99)	1 192 (30.76)	5 707 (17.78)
Casual	1 129 (4.42)	346 (12.93)	455 (11.75)	1 930 (6.01)
Female	18 848 (73.78)	1 363 (50.95)	1 866 (48.18)	22 078 (68.79)
Permanent	14 628 (57.26)	213 (7.97)	1 507 (38.91)	16 348 (50.94)
Casual	4 220 (16.52)	1 150 (42.98)	359 (9.27)	5 730 (17.85)
Staff	**1 022 (4.00)**	**218 (8.16)**	**209 (5.40)**	**1 449 (4.52)**
Male	793 (3.10)	201 (7.51)	198 (5.11)	1 192 (3.71)
Female	229 (0.89)	17 (0.65)	11 (0.30)	257 (0.80)
Officer — Non-technical	**398 (1.56)**	**51 (1.90)**	**64 (1.65)**	**513 (1.60)**
Male	328 (1.29)	50 (1.85)	61 (1.56)	439 (1.37)
Female	70 (0.27)	1 (0.05)	3 (0.09)	74 (0.23)
Officer — Technical	**302 (1.18)**	**29 (1.07)**	**87 (2.24)**	**418 (1.30)**
Male	279 (1.09)	29 (1.07)	86 (2.21)	394 (1.23)
Female	23 (0.09)	0 (0.00)	1 (0.03)	24 (0.08)
Total local employee	**25 546 (100)**	**2 676 (100)**	**3 873 (100)**	**32 095 (100)**
Male	6 376 (24.96)	1 294 (48.35)	1 991 (51.40)	9 661 (30.10)
Female	19 170 (75.04)	1 382 (51.65)	1 882 (48.60)	22 434 (69.90)

Note: Figures in parentheses denote percentage of column total.

Source: Computed from BEPZA data.

5. Linkage effects of Bangladesh EPZs

The linkage effects of the EPZs in Bangladesh may be perceived from two angles: *first,* in terms of their interface with the global economy, and *second,* in terms of the level of their integration with the domestic economy of the host country. This section examines, in connection with the *first* set of linkages, the performance of the zones as regards foreign trade and technology transfers. Since job creation by the zones has already been discussed, other issues relating to flow of goods and services from the domestic tariff area to the EPZs are examined, with reference to the level of integration of the zones in the domestic economy.

5.1 Trade performance

One of the major attractions of EPZ for countries like Bangladesh, which face foreign exchange shortages, is the possible export earnings by the units in the zones. In 1995-96, EPZs in Bangladesh accounted for more than 11 per cent of the national export receipts and their net contribution to the balance of payment was to the tune of 0.20 per cent of GDP. Their contribution in both spheres has been on the increase in recent years. Tables 5.1a and 5.1b provide information on imports, exports and the trade balance of the Chittagong and Dhaka EPZs from their establishment, up to 1996.

Table 5.1a indicates that between 1983-84 and 1995-96 average imports by enterprises in the CEPZ amounted to $57 million per annum, while exports were about $72 million. The annual *net* foreign exchange receipts were a little more than $14.5 million. During the aforementioned period, exports grew at a robust rate of 47 per cent while imports grew at little less than 41 per cent.

The data on average exports and imports in the CEPZ conceal a high degree of annual variations in the trade balance. It seems that once the commissioning phase of the zone was over, the wide fluctuations in export earnings stabilized after 1990. Thereafter, imports declined and there was a significant surplus in favour of the zone, up to 1996 (see last two columns of table 5.1a). There was a corresponding rise in investment and employment.

The fact that the DEPZ is still in its teething period is reflected in its trade performance as depicted in table 5.1b. Although the average value of imports and exports in the first three years (1993-94 to 1995-96) of its operation was almost the same ($40.9 million and $39.9 million, respectively), on average the zone has had a deficit of about $1 million per annum between 1993 and 1996. However, there has been a noticeable improvement in the trade balance particularly in 1995-96. It is possible that this situation will continue, as was the case in the CEPZ.

In sum, in recent years (1994-95 and 1995-96) both imports to and exports from the EPZs have experienced high rates of growth (i.e. above the historical rates). More importantly, exports expanded at a faster pace than imports. As a result, net foreign exchange earnings (manifested in the trade balance), which had plummeted due to the commissioning of the second zone in Dhaka during 1993-94 and 1994-95, registered an accelerated recovery in 1995-96.

Table 5.1a. Trends in imports and exports by enterprises in the CEPZ, 1983-96

Year	Imports ($ million)	Exports ($ million)	Imports as % of exports	Trade balance ($ million)
1983-84	0.607	0.164	370.12	-0.443
1984-85	4.342 (615.32)	4.450 (2 613.41)	97.57	0.108
1985-86	7.870 (81.25)	7.593 (70.63)	103.50	-0.277
1986-87	11.526 (46.45)	15.266 (101.05)	75.50	3.740
1987-88	9.633 (-16.42)	13.927 (8.77)	69.17	4.294
1988-89	14.776 (53.39)	16.076 (15.43)	91.91	1.300
1989-90	31.907 (115.94)	34.212 (112.81)	93.26	2.305
1990-91	40.235 (26.10)	47.986 (40.26)	83.85	7.651
1991-92	63.377 (57.52)	76.661 (59.76)	82.67	13.284
1992-93	88.674 (39.92)	127.049 (65.73)	69.80	38.375
1993-94	103.808 (17.07)	140.353 (10.47)	73.97	36.540
1994-95	158.499 (52.68)	186.978 (33.22)	84.77	28.480
1995-96	209.670 (32.33)	263.798 (39.48)	79.48	54.130
Average	57.302 (40.80)	71.886 (46.99)	105.81	14.576

Note: Figures in parentheses stand for percentage change over previous year (except in the case of the last row). The figures in parentheses in the last column entitled "Average" denote average growth rates.

Source: Computed from BEPZA data.

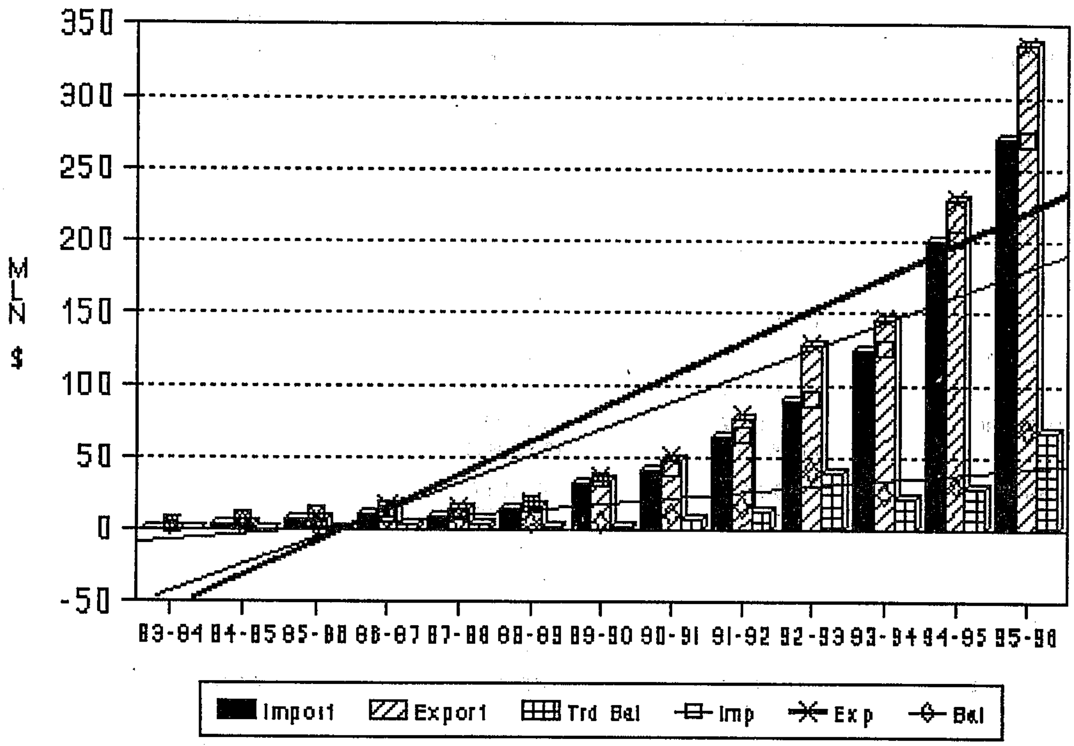
Table 5.1b. Trends in imports and exports by enterprises in the DEPZ, 1993-96

Year	Imports ($ million)	Exports ($ million)	Imports as % of exports	Trade balance ($ million)
1993-94	20.24	5.25	385.52	-14.99
1994-95	41.73 (106.18)	41.28 (686.29)	101.09	-0.45
1995-96	60.61 (45.24)	73.22 (77.37)	82.78	12.61
Average	40.86 (54.84)	39.92 (131.76)	189.80	-0.94

Note: Figures in parentheses stand for percentage change over previous year (except in the case of the last row). The figures in parentheses in the last column entitled "Average" denote average growth rates.

Source: Computed from BEPZA data.

Figure 5.1. Trade performance of EPZs in Bangladesh



Source: Based on BEPZA data.

By ownership type

The trade data may be analysed by the type of enterprise. Depending on the ownership of the units, the degree of dependence on imports, their share of trade surpluses and their gross export earnings differ. Consequently, this has implications for assessing the value added-generating potential of units operating under different ownership structures.

According to table 5.2, during 1995-96 foreign-owned enterprises (type A) in the CEPZ were the biggest importers. The value of imports as a share of the value of exports exceeded 91 per cent. Those companies were followed by those of local origin (type C) for which the figure was 77 per cent. The joint ventures (type B) occupied an intermediate position with regard to import intensity — about 65 per cent.

Given their lower import dependence, the joint ventures and local enterprises in the EPZs are performing better as net foreign exchange earners vis-à-vis the wholly foreign-owned firms.

The DEPZ has only been in operation since 1993, so it is therefore too early to draw conclusions about the extent to which enterprises rely on imports. Table 5.3 shows the value of imports and exports of enterprises of different ownership in the DEPZ.

It is totally incorrect to assume that the trade surplus generated by the EPZ units could redress the country's balance-of-payment deficit. Only a portion of the foreign exchange earnings of the EPZ units is converted into local currency and used to procure goods and services from the domestic economy and to remit returns to local capital. The rest is repatriated as profits and/or dividends to overseas investors.

Table 5.2. Trade performance of enterprises in the CEPZ by type of ownership (1995-96)

Enterprise type	Exports	Imports	Imports as % of exports	Trade balance ($ million)
Foreign-owned (type A)	198.23 (83.71)	181.07 (86.36)	91.34	17.16 (63.25)
Joint ventures (type B)	9.00 (3.80)	5.84 (2.79)	64.89	3.16 (11.65)
Local origin (type C)	29.57 (12.49)	22.76 (10.86)	76.97	6.81 (25.10)
Total	236.80 (100.00)	209.67 (100.00)	88.54	27.13 (100.00)

Source: Computed from BEPZA data.

Table 5.3. Trade performance of the DEPZ by type of enterprise (1995-96)

Enterprise type	Exports	Imports	Imports as % of exports	Trade balance ($ million)
Foreign-owned (type A)	72.25 (98.68)	58.73 (96.90)	81.29	13.52 (107.22)
Joint ventures (type B)	0.94 (1.28)	1.81 (2.99)	192.55	-0.87 (-6.90)
Local origin (type C)	0.03 (0.04)	0.07 (0.11)	233.36	-0.04 (-0.32)
Total	73.22 (100.00)	60.61 (100.00)	82.78	12.61 (100.00)

Note: Type B includes one firm which is under implementation. Hence, import is higher than export for this type.

Source: Computed from BEPZA data.

5.2 Integration into the domestic economy

The overwhelming dependence of EPZ enterprises on imports is a well-known phenomenon. However, developing countries, when opting to establish EPZs, generally hope that the scope and magnitude of local sourcing by enterprises in the zone will increase over time. The expectation is that the demand for goods and services by the EPZ units will be met by domestic enterprises which would supply inputs of good quality and at competitive rates. They envisage that the EPZ units would encourage potential local suppliers to enhance their capability in order to match the new demand. The Government of Bangladesh, in order to facilitate this process of matching demand and supply, is extending to local suppliers fiscal incentives similar to those offered to export-oriented units in the DTA, since the suppliers' outputs are deemed to be exports.

Currently, enterprises in the EPZs procure their inputs through four channels, viz. (a) foreign imports, (b) intra-zone trade, (c) inter-zone trade and (d) the DTA. An enlargement of the purchases of goods and services from the DTA would, from the host country's point of view, represent a favourable change.

According to the data in table 5.4, during 1995-96 about $3 million worth of inputs accounting for 1.4 per cent of total imports by the zone was procured from the DTA, 0.89 per cent was supplied by units located in the Chittagong zone (intra-zone) and 0.34 per cent originated from the Dhaka zone (inter-zone). In short, foreign imports constituted 97 per cent of total imports by enterprises in the CEPZ.

Table 5.4. Origin of imports by enterprises in the CEPZ, 1995-96 ($ million)

Enterprise type	Raw, packing and auxiliary material				Total import
	DTA	Foreign	Intra-zone	Inter-zone	
Foreign-owned (type A)	2.00 (0.95)	176.46 (84.16)	1.80 (0.86)	0.71 (0.34)	180.97 (86.31)
Joint ventures (type B)	0.33 (0.16)	5.62 (2.68)	0.00 (0.00)	0.00 (0.00)	5.95 (2.84)
Local origin (type C)	0.62 (0.30)	22.08 (10.53)	0.06 (0.03)	0.00 (0.00)	22.76 (10.85)
Total	2.95 (1.41)	204.16 (97.37)	1.86 (0.89)	0.71 (0.34)	209.67 (100)

Note: Figures in parentheses are percentages of total imports by all enterprises and from all sources.
Source: Computed from BEPZA data.

It must be noted that imports from the DTA (1.4 per cent) may be underestimated because the data cover only those supplies which are procured with the approval of the BEPZA. There exists a host of items which are "freely" imported from the DTA (e.g. office stationery).

The DEPZ, which is relatively new, imports less from the DTA (0.33 per cent) than in the case of the CEPZ (see table 5.5). However, the shares of inter-zone and intra-zone trade are relatively higher, i.e. 1.02 per cent and 4.82 per cent, respectively. In other words, while to date the dependence on foreign import appears to be lower (about 94 per cent) in the new zone (DEPZ), inter- and intra-zonal trade, exceeds trade between the zones and enterprises in the DTA.

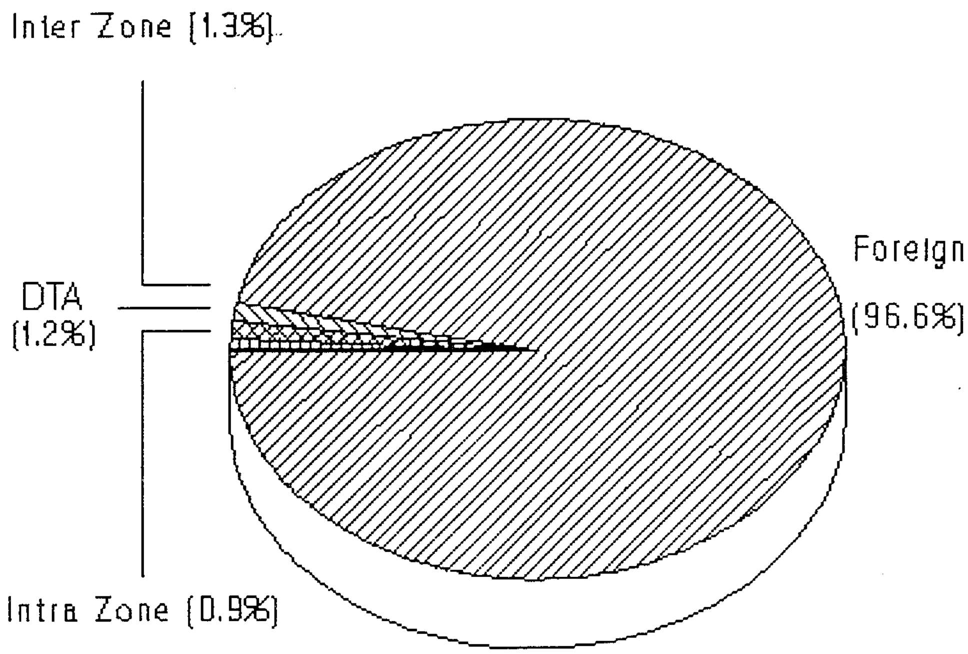
Table 5.5. Origin of imports by enterprises in the DEPZ by type of enterprise, 1995-96 ($ million)

Type	Raw, packing and auxiliary materials				Total imports
	DTA	Foreign	Intra-zone	Inter-zone	
Foreign-owned (type A)	0.20 (0.33)	54.99 (90.73)	0.62 (1.02)	2.92 (4.82)	58.73 (96.90)
Joint ventures (type B)	0.00 (0.00)	1.81 (2.99)	0.00 (0.00)	0.00 (0.00)	1.81 (2.99)
Local origin (type C)	0.00 (0.00)	0.07 (0.11)	0.00 (0.00)	0.00 (0.00)	0.07 (0.11)
Total	0.20 (0.33)	56.87 (93.83)	0.62 (1.02)	2.92 (4.82)	60.61 (100)

Note: Figures in parentheses are for percentage of total import by all types and sources.
Source: Computed from BEPZA data.

An overview of the import structure by sources of the Bangladesh EPZs (both the zones taken together) is presented in figure 5.2.

Figure 5.2. Sources of imports into EPZs in Bangladesh (1995-96)



Source: Based on BEPZA data.

Enterprise-type-specific sourcing pattern

The data show that in 1995-96 imports from the DTA as a percentage of total imports by foreign-owned firms (type A) were the lowest (1.11 per cent) among enterprises in the zones. Joint ventures (type B) recorded the highest share (5.55 per cent), and local firms (2.72 per cent). The aforementioned figures suggest that local entrepreneurs are not more inclined than foreign investors to make use of local supplies. It cannot be argued that local procurement is limited because of a lack of knowledge of the domestic market.

Changes in the sources of imports over time

In 1992-93, foreign imports constituted 96.5 per cent of the zone's total imports, whereas purchases from the DTA and within the zone accounted for 2.4 per cent and 1.24 per cent of total imports, respectively. Inter-zonal trade was not possible since the DEPZ was yet to be established. Over the last three years (1992-94 to 1995-96), dependence of EPZ enterprises on foreign imports has not decreased. Rather, the share of the DTA in the zone's imports has declined further. If the initial experience of the Dhaka zone is anything to go by, then one may not expect any drastic improvement in local sourcing in the near future. A discussion of the composition of the products supplied by the DTA shows that increasingly, most intermediate inputs are being produced in the zones.

Composition of imports from the DTA

Unfortunately, imports by EPZs from the domestic economy essentially consist of peripheral items such as packaging and auxiliary materials. The products imported by units in the CEPZ in 1995-96 were mainly related to textile and wearing apparel (see table 5.6). They accounted for more than 91.5 per cent of total imports from the DTA. The other inputs of any consequence, procured from domestic sources, were for the production of footwear and leather goods. The total absence of fabricated metal products in imports from the DTA comes as a surprise, given the level of development of this activity in the national economy.

Table 5.6. Products imported by units in the CEPZ from the DTA (1995-96) ($ million)

Product type	Enterprise type			Total	
	A	B	C		
Textiles	0.02	–	0.09	0.11	(3.73)
Knitting and other textile products	0.23	–	0.03	0.26	(8.81)
Terry towels	0.02	0.13	–	0.15	(5.08)
Garment accessories	0.50	–	0.45	0.95	(32.20)
Metal products	0.13	–	–	0.13	(4.41)
Footwear and leather goods	1.00	0.20	0.05	0.25	(8.47)
Sports wear	0.10	–	–	1.00	(33.90)
Ropes	–	–	–	0.10	(3.39)
Fishing reels		0.02	–	0.02	(0.09)
Total	2.00 (1.11)	0.33 (5.55)	0.62 (2.72)	2.95	(100)

Note: Apart from the last column, figures in parentheses stand for percentage of total imports of the respective category of enterprises. In the case of the last column, the figures in parentheses denote the percentage of the totals in that column.

Source: Computed from BEPZA data.

Entrepreneurs' perceptions

According to entrepreneurs in the CEPZ, imports from domestic sources are limited because of the *inferior quality, high cost* and *unreliable supply*. As a result, enterprises even opt for inputs of relatively higher cost but which are supplied by a more dependable foreign source. It should be borne in mind that reluctance to rely upon local raw material also stems from the global strategies of the multinational enterprises (MNEs) to which enterprises in the EPZs belong. Due to the cumbersome administrative arrangements governing duty-free exports, many local firms fail to supply their products to the CEPZ units at competitive prices by taking advantage of the incentive package on offer. Last but not least, the volatile political situation in the country often deters the EPZ entrepreneurs from depending on local suppliers.

In short, the current state of the development of backward linkages between the EPZs and the domestic economy remains unsatisfactory and signs of improvement are not apparent. Rather, there are indications that the enterprises are establishing production linkages among themselves within the zones. The modest importation from the DTA essentially involves packaging materials for enterprises in the textile, garments and related industries. The foreign-owned companies are procuring less from the DTA than the Bangladeshi firms. The underdeveloped state of the local supply market, policy and institutional failures, and global corporate strategies, are some of the factors responsible for the low level of integration of the EPZs in Bangladesh with the local economy.

5.3 Technology and skill transfer

There is growing evidence that the objective of transferring technology through the EPZs has remained largely unfulfilled. It is now well documented that EPZs are used mainly for producing components, semi-finished goods, and at best, simple low-technology, labour-intensive goods. The foreign firms usually undertake assembly-type production, retaining most of the technology- and skill-intensive operations in industrialized countries. Under those circumstances, skill formation and the advanced training of workers are hardly required. The managerial and technical skills needed for these enterprises may be acquired from industries in the modern sector of a developing economy. This situation concerning the transfer of technology and upgrading of skills is essentially the same in the case of Bangladesh.

Product and process innovation

A close examination of the list of goods produced at the Chittagong and Dhaka zones indicates that, at best, there are a dozen items which may be termed as *new, i.e. non-traditional products* that are usually not produced in the DTA. These include multi-lead lamps, electronic sensors for fences, fishing reels, golf shafts, camera lenses, motor brakes, computer diskettes, stuffed toys, tents and sleeping bags. While the list contains some textile-related products, the bulk of the items belong to the electronics and metal fabrication subsectors.

It is generally assumed that production of non-traditional items generally entails the use of *innovative processes*. Such a situation may be true for a handful of items such as multi-lead lamps, electronic sensors and computer diskettes. However, a number of traditional items are produced in the CEPZ using new processes, i.e. the use of computer-aided design (CAD) and computer-aided marking (CAM) of fabrics in the garment industry.

There is no evidence of any significant *diffusion of the innovative processes* in the CEPZ to enterprises producing non-traditional items in the DTA. The "closed" nature of the EPZ firms does not allow for local firms to imitate the processes through reverse engineering. None the less, the introduction of CAD and CAM in garment enterprises has led to the adoption of those modern methods by firms outside the zones. The link between the two processes is, however, likely to be a tenuous one.

The upgrading of skills

As a rule, fresh entrants in EPZ enterprises are given three to four weeks on-the-job training as apprentices. With respect to the upgrading of skills, it was reported by the BEPZA that during the period 1983-84, about 200 workers in the CEPZ received training overseas. Between 1988 and 1994, another 177 workers were sent abroad for training. As the Dhaka zone came on stream, the total number of EPZ workers sent abroad for training grew to approximately 550 by the end of 1996.

According to the BEPZA, about 49 per cent of those trainees were women. Overseas training was offered primarily by enterprises from Japan and the Republic of Korea. Workers were sent to the home countries of those enterprises. The training included an introduction to the use of technologies in the fields of casting iron, the making of apparel and headgear, the general operation and maintenance of machines and office management.

A significant number of those workers ultimately left their initial jobs and this could lead to some diffusion of skills. The BEPZA reported that workers trained abroad got higher wages in non-EPZ enterprises.

In general, firms in the two EPZs do not produce any high-tech, knowledge-intensive products. Their contribution is most noticeable with regard to the development of skills. However, the know-how for selecting, adapting and mastering production technologies (e.g. machinery and equipment) is lacking. Moreover, little has been done by way of learning how to "unpackage" the hardware used in the EPZ enterprises, which is usually established on a turnkey basis.

Development of support services

The EPZ units in Bangladesh utilize the services of number of specialized service enterprises both within and outside the zones, e.g. commercial banks, insurance companies, clearing and forwarding agents, courier services and auditors. According to our estimates, about 1.25 to 1.50 per cent of the value of the zones' total exports is spent on such services. Close interaction with globally competitive export-oriented industries has obviously helped to enhance this sector. The handling of import and export cargo to and from the EPZ units has, possibly, contributed to an improvement in the quality of services provided by a part of the transport sector of the country.

6. Wages, working conditions and industrial relations in Bangladesh EPZs

It is a matter of open admission, on the part of both the foreign investors and the host Government, that the existence of the EPZs in Bangladesh is due primarily to the exploitation of cheap and abundant labour. This has led to concerns about "exploitative" practices in the zones, particularly due to the absence of the right to collective bargaining for workers. These concerns have been accentuated by the large concentration of female workers in the EPZs, in a country where, traditionally, women's participation in the urban labour force particularly in modern economic activities, has been marginal. This section concentrates on three issues, viz. (a) wage rates, (b) non-wage benefits and (c) labour-management relations in the EPZs.

6.1 Wage level and structure

There is a simple economic logic which explains under what circumstances employment generation in the EPZ benefits both the investors and the host economy. Social gains accrue to Bangladesh as long as the wages offered in the EPZs are above the shadow price of labour. On the other hand, to the investors it is advantageous if these wages are below those which prevail in the country of the foreign investor and/or in those countries which manufacture competing products. The rationale for Bangladeshi entrepreneurs to invest in the EPZs is possibly driven by non-wage factors (e.g. fiscal incentives and better utilities) which have positive implications for their "cost of doing business" in the zones vis-à-vis in the DTA.

The BEPZA has a minimum wage policy. The stipulated minimum wages for different categories of workers are reviewed and revised periodically by the BEPZA taking into account trends in the local and global labour markets. The monthly "reservation prices" of labour for different skill categories are currently as follows: (a) apprentice/trainee — $22; (b) unskilled worker — $38; (c) semi-skilled worker — $45; and skilled worker —$63. On average, a local worker in an EPZ enterprise earns a basic wage of Tk. 1,500 or $37 per month. These figures exclude other benefits such as conveyance allowance, house rent, medical allowance and festival bonus.

The BEPZA oversees the enforcement of this minimum wage policy. The entrepreneur has to mention the wage offered at the time of appointment of a worker. This information has to be submitted to the Authority for the issuing of the identity card without which the worker cannot enter the zone. Understandably, there are inter-firm variations in wage levels. However, the BEPZA maintains that the minimum wage level is protected in all cases and there are no manifest signs of gender discrimination regarding the fixing of wages.

It goes without saying that wages in the EPZs in Bangladesh are much lower than those in industrialized countries. Moreover, the cost of Bangladeshi labour remains competitive, even after accounting for differences in productivity levels in comparable economies, particularly those of the region. But, how do wages in the EPZs compare with those in enterprises in similar activities in the DTA?

The minimum industrial wage rate set by the Government and wages in manufacturing as reported in different micro studies are presented in table 6.1. The table shows that even after making price adjustments to take care of differences in reference years, minimum wage rates in the EPZs are higher than the statutory minimum and those paid by comparable non-EPZ enterprises. Interestingly, the most recent wage rates announced by the Government for unskilled, semi-skilled and skilled industrial workers are, respectively, 40 per cent, 15 per cent and 50 per cent less than those fixed by the BEPZA.

Table 6.1. Wages in EPZ and non-EPZ enterprises in Bangladesh

Skill type	BEPZA minimum (1996)	National minimum wage (1995)	ISS "Garments study"(1992)	BIDS ready-made garments study (1995)	Cotton textile sector (1995-96)
Unskilled	38	27	24	25	41[a]
Semi-skilled	45	39	36	38	-
Skilled	63	42	46	49	48

[a] Includes semi-skilled workers.
Source: Compiled from BEPZA; Ministry of Labour, Government of Bangladesh, World Bank and USAID (1993); Bhattacharya (1996) and BBS (1996).

Since the majority of the units in the EPZs produce apparel, one may find it useful to compare the wages in these enterprises with those in the ready-made garment- producing enterprises in the DTA.

A representative sample survey of the Bangladeshi manufacturing sector, carried out on behalf of the World Bank and USAID in 1992 under the Industrial Surveys and Studies (ISS) Program found that the wages for unskilled, semi-skilled and skilled workers in the units making ready-made garments were $24, $36 and $46, respectively. Once we adjust these figures by industrial price index, the wage rates in 1995-96 prices work out to be $26, $38 and $50 respectively. A more recent study by the BIDS in 1995 produced similar figures: $25 for unskilled workers; $38 for semi-skilled workers; and $49 for skilled workers. In other words, the monthly wage rates in EPZ enterprises in Bangladesh are more than 46 per cent, 18 per cent and 28.5 per cent higher than wages in each of the aforementioned skill categories than wages in comparable manufacturing units operating elsewhere in the national economy.

It needs to be noted that the statutory minimum wage rates for industrial workers is not enforced in the private sector by the Government. Thus, the evidence cited in the case of private firms essentially reflects equilibrium price in a flexible labour market. Table 6.1 further shows that in 1995-96 the cotton textile mills, where the statutory wage rates are respected, the monthly wage rates were relatively higher — $41 for unskilled/semi-skilled workers ad $48 for skilled workers. In other words, even when compared with wage rates in that segment of the labour market that is characterized by structural rigidities, the wages in EPZ enterprises are relatively higher. The wage differential is slightly less for unskilled and semi-skilled workers.

It is worth noting that the EPZs have a separate labour recruitment centre — just outside the gates of the zones. An almost totally flexible labour market has emerged around each zone.

To sum up, wage data from various sources conclusively show that the basic compensation enjoyed by EPZ workers is higher than those received by their counterparts working elsewhere in the national economy. This would suggest that female workers in the EPZs earn higher pay than those employed in comparable garment manufacturing firms outside the zones as well as in the cotton textile industry where the national minimum wage rates prescribed by law are applied. It may be argued that such wage differentials are due largely to the higher labour productivity in EPZ units. However, in the absence of data on enterprise-level production, employment and labour costs, this particular line of reasoning could not be tested.

6.2 Non-wage entitlements

It has been mentioned earlier that apart from the basic wages, workers in the EPZs received allowances for transport, medical treatment, house rent, annual festivals, etc. There are also some non-cash benefits offered to the workers. The basis for the provision of such allowances and benefits is usually defined by national legislation, although the BEPZA is empowered to stipulate special provisions regarding terms of employment in the EPZ units. A comparative profile of the relevant legal provisions applicable to EPZ and non-EPZ units is set out in tabular form in table 6.2.

Table 6.2 reveals that the general provisions of the labour laws concerning industrial employment in Bangladesh are, by and large, applicable in the country's EPZs. These relate, inter alia, to the following: (a) working hours; (b) payment of overtime work; (c) paid holiday and leave; (d) maternity leave; (e) injury compensation; (f) rest room and canteen facilities; (g) health and sanitary requirements; and (h) termination of employment.

Given the current state of labour administration in Bangladesh, the legislation governing conditions of employment is hardly enforced in the country's private manufacturing sector, particularly in the case of small and medium-sized enterprises. On the other hand, due to the very nature of the operations of EPZ units and the quality of monitoring carried out by the BEPZA, these stipulated non-wage entitlements are essentially guaranteed for the workers in the zones. A number of large EPZ enterprises, cognizant of the fact that such additional costs will be recouped through productivity gains, offer supplementary benefits to their workers.

Since the EPZ units are located in customized buildings, the physical facilities at the workplaces are much superior to those in comparable enterprises in the DTA. The working conditions of EPZ employees are much better as the shop floors are well ventilated and adequately lit. Good conditions are maintained partly because there are occasional visits by representatives of the big buying houses or wholesalers to the EPZ units where products for well-known brand names are manufactured. Free lunches are provided in most of the enterprises. However, visits to enterprises and discussion with the workers revealed that not all enterprises had adequate space for the workers to take their meals.

The safety standards are observed in the EPZs. Free uniforms including indoor shoes as well as protective gear (e.g. gloves, goggles and headgear) are routinely supplied to the workers.

Minimum age rules are generally respected in the EPZ units. The incidence of sexual violence and harassment could not be determined during discussions with management and the workers.

There is a medical centre in each zone. However they are not equipped to handle large numbers of workers. The cost of maintaining the medical centre is shared by the enterprises. A number of big EPZ enterprises have their own in-house doctors. In some cases, enterprises have started hiring social counsellors to deal with work-related stress and medical problems as well as workers' personal problems. An international NGO provides mobile medical services to the EPZs, particularly in the areas of reproductive health and sexually transmitted diseases.

Most of the firms in the EPZ provide transport for their employees. This ensures that they arrive to the workplace on time. Most of the firms do not provide pension plans, provident funds and gratuity benefits. Three particular issues regarding non-wage benefits were raised by the female workers during our discussions. *First,* women workers, particularly those who are single, highlighted the problems they faced due to the lack of accommodation. *Secondly,* women workers complained about the absence of a day-care centre for their small children. *Thirdly,* they mentioned that most of the firms did not provide women workers with short-term loans, even in cases of emergency.

However, in almost all respects, working conditions in enterprises in the EPZs are, by far, better than those in enterprises operating in the DTA.

Table 6.2. Legal provisions governing terms of employment in EPZs and non-EPZ enterprises in Bangladesh

Provisions for Bangladesh EPZ units	Provisions for Bangladesh non-EPZ units
Factory Refers to a building or house within a boundary where ten or more workers are employed currently or were employed at least a day during the last 12 months and in which production process is carried out with or without electricity	**Factory** Means the factory of the company and shall include any premises or the precincts thereof located in EPZs of Bangladesh where ten or more workers are ordinarily employed.
Worker Means a person engaged in any production process or in cleaning/maintenance of machinery or building used in the production process or in any auxiliary works of the process, directly or through any agency with or without salary.	**Worker** Means any person including an apprentice employed in the office or factory of a company to do any unskilled, technical, trade, promotional or clerical or supervisory work for hire or reward, whether the terms of employment be expressed or implied, but does not include any person who is employed mainly in a managerial, executive or administrative capacity.
Working hours Daily nine hours, maximum 48 hours per week. An adult worker employed in a factory engaged in work, which for technical reasons must be continuous throughout the day, may work for 56 hours per week. No worker shall work for more than six hours continuously before he/she has an interval of rest of at least half an hour or for more than eight-and-a-half hours before at least two such intervals of rest. Women are allowed to work between 6 a.m. and 7 p.m. and can be extended to between 5 a.m. and 7.30 p.m.	**Working hours** Workers remain at their job for eight-and-a-half hours daily (including half an hour for meal and rest) in an office or factory. In a factory, total weekly working hours is 48 hours and for an office, 45 hours. Women — not allowed in the night shift.
Overtime Apart from a one-day weekly holiday, a worker is entitled overtime payment at the rate of twice his ordinary pay for work done in excess of normal working hours.	**Overtime** Work in excess of the above-mentioned working hours is paid for at overtime rates, i.e. two hours' pay for one hour's work.
Paid holiday/leave An adult worker after 12 months of continuous work in a factory is entitled to paid holiday at the rate of one day for every 22 days of work.	**Leave and holiday** Casual leave of ten days a year and annual leave of 17 days plus a one-day weekly holiday.
Injury compensation The Workmen's Compensation Act, 1923, excludes administrative/clerical persons. The employer is liable to pay compensation to a workman for personal injury caused by an accident arising in the course of employment. The contracting of some occupational diseases peculiar to the nature of work done is also considered injury by accident arising out of or in the course of employment. The Act also provides for the dependants of the workman, in case of fatal accident.	**Injury compensation** The relevant law of the country shall apply in regard to payment of compensation for injury sustained while on duty.
Maternity leave The Bengal Maternity Benefits Act, 1939, entitles female employees to maternity leave for six weeks before and six weeks after child birth.	**Maternity leave** A female employee is entitled to be paid maternity leave for a period not exceeding 12 weeks subject to fulfilment of certain conditions.
Rest room/canteen Generally, a factory with 100+ employees should have a rest room and a lunch room with drinking water facility. Factories with 250+ should have a canteen for employees where prices of food and drinking water will be determined on a non-profit basis.	**Rest room/canteen** In every company, there shall be a suitable rest room/canteen where employees can take rest or eat their meals.

Provisions for Bangladesh EPZ units	Provisions for Bangladesh non-EPZ units
Health and sanitary requirement Separate toilet for male and female workers at a suitable place of the factory. Facilities for quick disposal of production wastage. Proper ventilation facility and maintenance of normal temperature. Adequate light and protection of workers from dust and smoke. Availability of proper facilities for fire protection and evacuation from the factory.	**Health and sanitary requirement** Employers are required to ensure that workplaces (both office and factory) are adequately lit and sufficiently ventilated. Satisfactory sanitary and washing facilities are also required to be provided in all workplaces. The factory building should provide adequate working space, fire protection system, waste disposal system and the like. Effective measures for preventing accidents and occupational diseases should also be taken by the employers in the factory premises.
Termination In case of termination of employment by the employer, all wages due are to be paid on a working day and contracting out is not permitted.	**Termination** For termination of services by the employer, 120 days' notice in the case of permanent and 60 days in the case of temporary employee shall be given by his/her employer; provided that pay for 120 days or 60 days, as the case may be, shall be paid in lieu of such notice; provided further that the rate of one month's pay for every completed year of service or for any part thereof in excess of six months in addition to any other benefits to which he/she may be entitled under the terms of employment.

Source: BEPZA and Ministry of Labour, Government of Bangladesh.

6.3 Labour-management relations

The formation of trade unions, and activities by such organizations are prohibited in EPZs in Bangladesh. Article 11A of the BEPZA Act allows the Authority to exempt the zones from all or many provisions of a number of important laws relating to labour and industrial relations. The BEPZA has sought exemption from certain articles of the Employment of Labour (Standing Orders) Act (1965) and the Industrial Relations Ordinance (1969) relating to the organization of workers for the purpose of collective bargaining. This implies that workers cannot go to any court of law to seek redress for any perceived or actual injustice done to them. This constitutes a violation of their fundamental human rights. Attempts to organize trade unions in the Chittagong EPZ in the late 1980s did not succeed in the face of government actions. Nonetheless, initiatives in this regard have continued over the years. Given the preponderance of apparel producing units in the EPZs, it is the trade unions representing workers in this industry which have demonstrated an interest from time to time in organizing the workers in the zones. There are currently four registered and ten unregistered garment workers' federations in Bangladesh. Apart from the Bangladesh Independent Garments Workers' Union (BIGWU), most of the federations have explicit affiliation with mainstream political parties. However, the BIGWU has been established with the sponsorship of the Asia-American Free Labor Institute which is not a trade union.

Attempts by workers' federations to organize primary unions in the EPZs are constrained by a number of factors, apart from the legal prohibition. Trade union activists have very little opportunity to interact with the EPZ workers since outsiders are not allowed into the premises of the zones. It is also difficult to organize the workers once they are outside the zones, because of the hours of shift work, limited number of holidays, high turnover of the workers and the fact that the zone is far from the metropolis. The structured trade union movement in Bangladesh regularly complains about the lack of enforcement of the regulations of the EPZ authority with respect to wages and non-wage benefits. However, there is no documented evidence in this regard.

With respect to the settlement of labour disputes, under existing conditions, the power of arbitration is vested in the BEPZA. The Industrial Relations Department (IRD), headed by a Manager in each zone, is entrusted with the task of handling grievances. The authority of the

Manager of the IRD in the EPZ is enormous, given the responsibility of acting as Director of Labour, Chief Inspector of Factories and Director of the Labour Court, simultaneously.

An aggrieved worker has to register his/her complaint first with the firm. The aggrieved party has to allow seven to ten days for the firm to address the issue. If the aggrieved party is not satisfied with the outcome, the grievance can be submitted to the IRD.

The IRD, after checking the relevant documents, takes up the issue with the firm concerned. During the handling of the grievance, both sides are given a hearing in the presence of the Manager, IRD. No advocates are allowed and the ruling is binding on both sides. There is no opportunity to appeal for a revision of the ruling, although, theoretically, the complaint may be sent to the BEPZA Board. In the course of discussions with the BEPZA officials, it was revealed that on average 12 to 15 cases are filed daily in the Chittagong EPZ. Unfortunately, given the way in which records of such grievances are maintained, it was not possible to extract relevant information for further analysis. It appeared, in the majority of cases, that the complaints related to the termination of employment. It is mostly men who seek intervention on the part of the BEPZA in such cases. There were instances where workers were reinstated as a result of such interventions, although the BEPZA's verdict usually goes against the plaintiff.

The other two important issues over which labour disputes arise relate to alleged misconduct and non-payment of dues on the part of the management of certain enterprises. There are virtually no complaints relating to working conditions.

The IRD uses a checklist to monitor compliance with the BEPZA's guidelines concerning benefits and privileges to be accorded to the workers. The BEPZA management reported that type A enterprises complied with almost 80 per cent of the requirements on the checklist, while type C units had the most problems in that regard. Type C units often did not pay salaries regularly. Non-compliance related largely to the failure to give letters of appointment to workers.

In cases of problems involving local people external to the zone, these are handled with the help of police or political leaders. In the absence of trade union activities, the Bangladesh EPZs have developed an alternative mechanism for dispute settlement. Apparently, this system is working fine. However, there is much scope for strengthening its capacity, which may contribute to the maintenance of a congenial atmosphere in the zones, leading to increases in productivity and a greater inflow of investment.

In conclusion, it is worth pointing out that labour relations in the EPZs are likely to come under fresh public scrutiny when the unified Bangladesh Labour Code comes into effect. Promulgation of the Code was recommended by the National Labour Law Commission (NLLC) which was constituted in March 1992. The NLLC examined 44 labour laws covering subjects under four broad headings: (a) wages and conditions of employment; (b) trade unions and industrial disputes; (c) working conditions; and (d) labour administration and related matters. The Commission submitted its report to the Government in March 1994. Since then, a new Government was formed in Bangladesh and the new incumbents remain politically committed to considering the recommendations made by the NLLC in 1992.

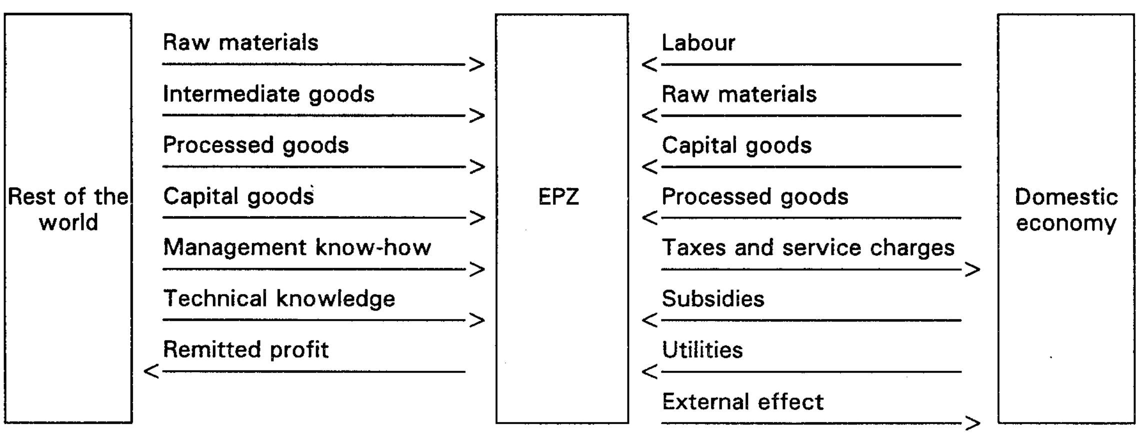
The proposed unified Labour Code neither identifies enterprises in EPZs as comprising a special category with respect to the enforcement of labour laws, nor does it state that these units will be equally covered by the general provisions of the regulatory framework. The fact that the proposed Labour Code is silent on this question leaves the way open for workers to argue in favour of the enforcement of ILO Convention (No. 87) concerning Freedom of Association and Protection of the Right to Organise, in EPZ units, and for entrepreneurs to remain protected by the derogation in the BEPZA Act regarding trade union activities in the zones.

7. Welfare impact of EPZs in Bangladesh: A cost-benefit analysis

An estimation of the welfare effects of EPZs based on an assessment of their costs and benefits is attempted in this section, from the perspective of the host country. The aim is to compare the actual situation in Bangladesh in which the EPZs are present with a hypothetical one in which they are absent.

The analytical framework has been derived from Corden's "enclave approach". Figure 7.1 shows two sets of flows of goods, services and finance: one between the EPZs and the rest of the world, and the other between the EPZs and the domestic economy. For our purpose, the second set of flows (i.e. between the EPZs and the domestic economy) is relevant for estimating the welfare impact on citizens of Bangladesh. The thrust of the enclave approach is that all transactions between the EPZ firms and the outside world are irrelevant for an evaluation of the effects of the zones on economic welfare within the host country, except in so far as they impinge on linkages between the EPZs and the domestic economy.

Figure 7.1. The enclave model of EPZs



Source: Adapted from Warr (1990).

Notwithstanding the fact that the environment within the Bangladesh EPZs is less "distorted" than that existing elsewhere in the DTA, the net outcome of the actual financial flows depicted in figure 7.1 may not necessarily raise welfare in the host country. Only an item-wise assessment of the benefits and costs involved may allow us to resolve the question in quantitative terms. This has been attempted by adapting a methodology developed by Warr (1990) to the concrete circumstances of Bangladesh.

The description of the data used in the exercise has been provided in the annex to this section. The present estimation of net benefits of the EPZs relates to the years 1995-96. A time series of net annual flow of benefit could not be estimated because of the lack of relevant data.

Based on the elements identified for estimating the costs and benefits in figure 7.1 and described in the annex to section 7, we can express the relationship in the following algebraic form in the context of Bangladesh EPZs. In a given year (1995-96), the net economic benefit (NB) to Bangladesh from the EPZs,

$$NB = (WB + DImp + UB + DPr + SInc + Exp_F + RInc)\ S^*F$$
$$- (WB^* + DImp^* + UB^* + DPr^* + DBor^* + SInc^* + Exp_F^* + RInc^*)$$
$$- KC - AC + OInc$$

where:

WB	=	annual wages and salaries paid to local employees;
DImp	=	procurement from the DTA;
UB	=	bill paid for utilities (electricity, water and gas);
DPr	=	return on equities of Bangladesh origin;
SInc	=	service charges paid to bank, insurance, C and F agents, auditors, etc.;
Exp_F	=	consumption expenditure by the foreign employees;
RInc	=	rental income of the CEPZ from industrial plots and buildings;
S*F	=	ratio of the social value of foreign exchange to the official exchange rate;
WB*	=	shadow value wage bill;
DImp*	=	shadow value of DTA procurement;
UB*	=	shadow value of electricity, gas and water consumed based on net tariff rate;
DPr*	=	shadow value of return on domestic equities;
DBor*	=	domestic borrowing adjusted by ratio of the shadow price of capital to its market price;
SInc*	=	shadow value of service charges of banks, insurance, C and F agents, auditors;
KC	=	capital cost (including maintenance) of the physical infrastructure of the CEPZ;
AC	=	administrative costs of the BEPZA; and
OInc	=	rental income of the CEPZ from the shopping complex.

The first set of terms in brackets represents payments made by the EPZ units to employ local labour, purchase materials from sources in the DTA, procure services from public utilities (electricity, gas and water), and support services from outside the zones, and to pay rents to the BEPZA. This set of terms also includes the profit earned on domestic equity. Since these payments are made through conversion of foreign exchange to domestic currency, the total amount within the bracket has been multiplied by the ratio of the social value of foreign exchange to the official exchange rate.

The second set of terms in brackets indicates the social opportunity cost of labour in the zones, local material inputs, utilities, financial capital and returns on domestic equity.

The last three terms KC, AC and OInc, denote the capital and administrative costs incurred by the BEPZA to maintain the zones and rental income from the BEPZA shopping complex.

Tables 7.1 and 7.2 summarize the contributions of each of the identified benefit-cost categories. It appears that the total amount of local currency spent by the EPZ units in 1995-96 was Tk. 1,563.61 million. Once we adjust the figure by the shadow exchange rate, it goes up to Tk. 1,743.11 million indicating an immediate gain of Tk. 179.50 million. If we add at the margin the other rental income, *the value of gross benefits adds up to Tk. 1,565.34 million.*

The above-mentioned gross benefits have been achieved at an *estimated cost of Tk. 1,267.93* of which Tk. 1,175.70 million represent the social opportunity costs of the goods and services absorbed by the EPZ units, and Tk. 57.40 million and Tk. 34.83 million account for the capital and recurrent costs, respectively.

Table 7.1. Itemized benefit of the EPZs in Bangladesh (1995-96) (Tk. million)

WB	DImp	UB	DPr	SInc	Exp_F	RInc	OInc
639.15	128.74	18.4	356.25	175.49	96.0	149.58	1.73

SF=1,1148.

Source: Computed from BEPZA data.

Table 7.2. Itemized costs of the EPZs Bangladesh (1995-96) (Tk. million)

WB*	DImp*	UB*	DBor*	DPr*	SInc*	Exp_F	RInc*	KC	AC
479.38 (0.75)	112.0 (0.87)	18.33 (0.996)	57.23 (0.38)	153.80 (0.43)	173.74 (0.99)	82.5 (0.86)	98.72 (0.66)	57.4	34.83

* Figures in parentheses denote the conversion factors.

Source: Computed from BEPZA data.

Taking note of the total cost estimated above, the net benefit (welfare effect) attributable to the EPZs for 1995-96 amounts to Tk. 476.83 million. The sources of the net benefits are given in table 7.3. As may be expected, the largest share (49 per cent) comes from income generated through jobs created in the EPZs. Surprisingly, benefits accrued from the real and financial (local) capital come out very strongly (39 per cent). The linkage effect depicted by procurement from the DTA (6.6 per cent) and of services (9.7 per cent) from institutions outside the zones has been estimated to be more than 16 per cent. In financial terms BEPZA is a profitable organization since its income (i.e. income from renting out industrial plots) exceeds its capital and administrative costs. But in economic terms (i.e. once the opportunity cost of the resources deployed is taken into account) the benefit figures go down by more than 4 per cent. Even if we include the benefit (0.5 per cent) derived from the sale of utilities (which is essentially service charges to BEPZA), the BEPZA operation still registers a net loss of about 4.7 per cent. However, one should appreciate that the BEPZA is a promotional agency — not a commercial venture.

From a national perspective, the net overall welfare effect of EPZs in Bangladesh is a positive one, even after accounting for the BEPZA's loss, based on economic prices. Thus, one has strong reason to believe that investment in the creation of the two EPZs has been worthwhile.

Table 7.3. Composition of net benefits accrued to the EPZs in Bangladesh (1995-96)

	Tk. (million)	Share (%)
Direct employment[a]	33.16	48.90
Domestic input procurement	31.52	6.61
Utility services	2.18	0.46
Return to real and financial (local) capital	186.12	39.03
Indirect service income	46.42	9.74
BEPZA operation (capital and recurrent cost)	-22.57	(-)4.73
Total	476.83	100.00

[a] This employment figure does not cover the government staff employed in the BEPZA itself.

Source: Calculated from tables 7.1 and 7.2.

Annex to section 7

Technical note on the data used for cost-benefit analysis of the EPZs in Bangladesh

Source of data. Apart from some readily available information from the BEPZA's files (e.g. rate charged and amount received for electricity, gas and water supplied), other relevant data for the exercise were obtained by an analysis of balance sheets of 22 CEPZ sample firms for 1992 which provided estimates on rate of return on equity, payments made for supporting services, etc. In the absence of data on domestic borrowing and on the wage bill, a complete census of the CEPZ units, carried out for 1992-93, provides estimates for these indicators. Interviews with key informants also provided useful information, e.g. on the expenditures made by expatriate employees. Unfortunately, estimates of economic prices for the variables used in the present exercise were not available for 1995-96. As a result, in most cases we have used the conversion factors estimated by Shahabuddin and Rahman for 1991 and, in some instances, proxies were generated.

Foreign exchange earnings. Although it is common wisdom that foreign exchange earnings are a considerable benefit derived from EPZs, it should be recognized that the difference between the firms' officially declared exports and imports for a given year cannot be automatically considered as foreign exchange earnings for Bangladesh. The portion of foreign exchange earnings of the EPZ firms which is held in liquid form within or outside Bangladesh has little welfare importance. The share of foreign exchange which is used by the firms to import goods and services from abroad can also be disregarded. Only that amount of foreign exchange earnings which is converted into domestic currency to be spent on the procurement of goods and services from the local economy is relevant for the drawing up of our estimates. The value of foreign exchange thus received means an addition to the national foreign exchange holding which is equal to domestic value (opportunity cost) of the additional traded goods and services that Bangladesh may absorb. Where the social value of foreign exchange in terms of the domestic currency exceeds the official exchange (which is still true in the case of Bangladesh), the value of the additional traded goods and services that the Bangladeshi economy is able to absorb, needs to be adjusted by the shadow price of foreign exchange by the official exchange rate. It needs to be pointed out that when a certain amount of foreign currency is converted by the EPZ firms, there is immediately a net gain arising from the difference between the official exchange rate (however flexible it may be) and shadow price of foreign exchange. In short, for an *ex post* measurement of Bangladesh's actual gains, the EPZ firms' *actual* foreign exchange conversion is the relevant indicator.

Since no figure is readily available to indicate the amount of foreign currency converted into domestic currency for a particular year by the EPZ firms, one has to derive the figure by identifying the goods and services procured by the firms from the domestic economy. To this one may have to add the profits earned by local entrepreneurs.

Firms' profits and losses. The profits retained (remitted) and losses incurred by foreign firms do not enter into our calculations directly. We are interested in the profits and losses of domestic enterprises. It is expected that the domestically owned portion of the profits are totally retained in the country. Rate of returns to the investments, in both type B and type C category enterprises, are not readily available. Our calculations based on a sample of five type B and four type C units show that rates of returns on local equity are 26.7 per cent and 22.4 per cent respectively. While calculating the net contribution from this source, the shadow value of return on domestic equities is estimated by adjusting the profit figure by the ratio of normal profit rate (10 per cent) to the revealed profit rate.

Employment. It is believed that the social benefits derived from generating an additional job in the EPZ units outweigh the costs. In other words the social opportunity cost of employment in the EPZ is less than the wages received by the workers. Although disaggregated wage rates of the CEPZ units are not available, it has been established that the wages paid in the EPZ firms are usually higher than estimates of the social opportunity cost (shadow price) of skilled and unskilled labour in Bangladesh. One may like to reduce the estimated parameter of the opportunity costs of labour in order to accommodate the value of the transfer of skills which is supposed to take place in the EPZ firms. In this context, given the productivity level of EPZ workers, we have assumed that all of them are of skilled category and by treating the fresh recruits as skilled we can accommodate the skill transfer aspect. Thus, the conversion factor for skilled labour in the domestic economy has been used on the total wage bill for the local employees of EPZ firms.

Domestic procurement. EPZ firms are encouraged to use local raw materials, intermediate inputs and capital goods, on the assumption that the marginal social costs of supply are less than the prices received for them. EPZ firms are expected to purchase their inputs from the cheapest source which is reliable as regards delivery dates and quality. As procurement from the DTA is also considered as imports, the local inputs have to compete with the imported substitutes.

Currently, domestic firms supplying goods to EPZ firms receive "duty drawback" from the Government (as their outputs are considered to be exports) equivalent to the duty which they paid on imported inputs. Once duty drawback is received, there remains no net welfare effect from these domestic sales to EPZ firms. However, there is still the issue of revenue foregone with respect to VAT and other sales taxes. This provides the basis for estimating the social opportunity cost of providing these domestically produced goods, by calculating the difference between their border (cif) prices and the prices that would otherwise have been paid net of import duties. It is true that we do not have itemized domestic procurement figures, but the current rate of 15 per cent VAT may very well be taken as a proxy in this regard.

Utilities. The EPZ firms do consume a host of public utilities, viz. electricity, gas and water. For our purpose we need to compare the rates paid by the EPZ firms with estimates of the long-run marginal cost (LMRC) of supplying the additional unit of utilities. If the average rates exceed the LMRC of the particular type of utility, the use of the same would entail a tax and vice versa. In reality, the EPZ firms pay approximately a 10 per cent service charge along with the rates used for the industries in the DTA. In calculating the benefits we consider the actual amount billed to the EPZ units for consumption of electricity, gas and water. However, while estimating the costs, the 10 per cent service charge has been deducted before applying the conversion factor. The conversion factors indicate that electricity is a subsidized item — which is true for the whole economy.

Income to support services. Thanks to the operation of EPZ units, a sizeable amount of income accrues to a number of support services outside the zone. These include banks, insurance companies clearing and forwarding (C and F) agents and auditors. Our estimate indicates that expenditure on these services amounted to about 1.27 per cent of the value of exports during 1992. Given the nature of these services (including their close interaction with external economy), their shadow price is usually close to unity. Although a significant income accrues to the transport sector as well, there was no basis to estimate it — consequently, the income to support services is underestimated.

Domestic borrowing. Up to 1992, foreign investors in the CEPZ were not allowed to borrow from local capital markets including the banking sector. Now, both local and foreign investors can resort to borrowing from local banks and can float shares in the Dhaka Stock Exchange under the "non-discriminatory" provision of the Foreign Investment Act. Bangladesh's capital markets are, in principle, open to international capital flows — although such inflows are very meagre both in absolute and relative terms. Due to the above-mentioned and other factors (e.g. suppressions of domestic interest rates, particularly for export-oriented industries, vis-à-vis informal credit market rates), the value of domestic output foregone as a result of additional borrowings by the EPZ units is considered to exceed the value of the compensation ultimately received from these firms in the form of interest and principal payments. Accordingly, one needs to consider the amount of domestic borrowing as a cost, and adjust it to the extent that the shadow price of capital exceeds its market price. In the absence of dependable estimates of the free market cost of borrowing (i.e. price of capital), we approached the issue from the viewpoint of commercial banks' opportunity cost of fund. Thus the adjustment factor is derived by estimating the ratio of the "base rate" of the Central Bank of Bangladesh to the rate charged by the commercial banks on working capital loans to their borrowers.

Expenditure by foreigners. The only form of external effect we consider in our estimate relates to spending in the local economy by foreign employees in the EPZs. It has been suggested that foreigners in the CEPZ, on average, earn total monthly emoluments (cash and non-cash) to the tune of $1,000. In order to derive the total expenditure by the 149 expatriates employed in the EPZs, it has been assumed that they spend around 50 per cent of their income on goods and services from the domestic economy.

Rental income of the CEPZ. The EPZ earns a sizeable income from three sources: by leasing industrial plots, and by renting out factory premises and a shopping complex (Bay Shopping Centre). Two

[1] This wage bill does not include the earnings of persons employed in the BEPZA.

forms of rental incomes — i.e. rents from land and buildings — need to be adjusted by the shadow prices of this form of fixed capital, namely buildings.

Capital and recurrent costs of the BEPZA. In order to offer the package of services to the CEPZ units, the BEPZA has to incur two types of direct costs, viz. capital cost and recurrent costs. The capital cost is in fact the annual depreciation cost of the fixed assets created by the BEPZA. The recurrent expenditure is the amount spent by the BEPZA annually for maintaining its administrative personnel.

8. Conclusion

Even though in Bangladesh's industrial development and export promotion strategy, the EPZs have drawn special attention, their contribution to the national economy in terms of investment, employment and export earnings remains modest. However, since the 1990s, with favourable changes in policies, EPZ firms have demonstrated enhanced dynamism in comparison to the rest of the economy.

The ownership patterns of enterprises in the zones as well as investment trends are showing an increasingly high profile of foreign investors, as the zones mature. The investment landscape remains dominated by a handful of countries from East and South-East Asia. As far as the sectoral distribution of products is concerned, the labour-intensive garment and textile industries dominate the industrial structure of the Bangladesh EPZs.

The vast majority of employees in the EPZs are of local origin and female workers constitute the major proportion of the workforce. The data show a positive relationship between foreign capital and the labour intensity of certain operations.

While the trade balance of the EPZs has steadily improved over the years, joint ventures and local enterprises have been found to be less relatively dependent on exports than wholly foreign-owned enterprises. Integration of the zones with the national economy continues to be insignificant. The EPZs have failed to act as a vehicle for the transfer of technology although they have made some contribution to the diffusion of skills.

The basic wages of EPZ employees are higher than those of their counterparts in non-EPZ enterprises in the national economy. The EPZ workers enjoy better non-cash entitlements and working conditions. In the absence of any trade union activities in the zones, the EPZ Authority has been able to put in place an alternative mechanism for the settlement of labour-management disputes.

An analysis of the cost and benefits has revealed that the EPZs have yielded positive economic effects with the single, largest benefits accruing to labour.

References

Bangladesh Bureau of Statistics. 1995. *Labour force survey, 1990-91.*

—. 1994. *Census of manufacturing industries, 1989-90.*

—. *Statistical yearbook of Bangladesh*, various volumes.

Bhattacharya, D. 1994. *An evaluation of the export processing zones in Bangladesh*, Bangladesh Institute of Development Studies.

Kumar, R. 1989. *India's export processing zones*, Oxford University Press.

Lee, E. (1984). *Export processing zones and industrial employment in Asia,* International Labour Organization, Asian Employment Programme (ARTEP), Bangkok.

Warr, P. 1990. "Export processing zones", in *Export promotion strategies theory and evidence from developing countries*, edited by Chris Milner, Harvester, Wheatcheaf.

World Bank and USAID. 1994. *The structure and performance of Bangladesh manufacturing, 1992.*

Annex

The monographs and working papers are published under the ILO's Programme on Multinational Enterprises in response to requests made by the ILO's constituents at meetings of the Governing Body Subcommittee on Multinational Enterprises and sectoral meetings held under the ILO's Sectoral Activities Programme. The working papers, which are signed by their authors, are intended to stimulate discussion and critical comment. [1]

List of publications on specific industries or sectors, under ILO's Programme on Multinational Enterprises

Monographs [2]

Social and labour practices of some European-based multinationals in the metal trades (Geneva, ILO, 1976), 143 pp.
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Social and labour practices of some US-based multinationals in the metal trades (Geneva, ILO, 1977), 172 pp.
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ISBN 92-2-206519-0

Multinational banks and their social and labour practices (Geneva, ILO, 1991), 160 pp.
ISBN 92-2-107285-1
ISBN 84-7434-726-2 (Spanish version published by the Ministry of Labour and Social Security, Madrid, Spain)

[1] All working papers published between 1980 and 1986 are available on microfiche. Price: Sw.frs.500 or $450 (including a special binder with wallets permitting quick retrieval and systematic filing of microfiches). Working papers that are out of stock are not included in the lists that follow.

[2] The studies carried out in the 1970s are included since they may be useful to those persons wishing to examine developments in a given industry or sector over the decades. They are listed in the language(s) for which there are still stocks.

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Safety and health practices of multinational enterprises (Geneva, ILO, 1984, 2nd impr. 1986), 90 pp.
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Multinationals and employment: The global economy of the 1990s, edited by Paul Bailey, Aurelio Parisotto and Geoffrey Renshaw (Geneva, ILO, 1993), 325 pp. [1]
ISBN 92-2-107105-7
ISBN 84-7434-906-0 (Spanish version published by the Ministry of Labour and Social Security, Madrid, Spain)

Working papers focusing on specific industries or sectors

Les effets des entreprises multinationales agro-alimentaires sur l'emploi en Amérique latine (Document du travail N° 4, 1982) 42 pp.
by G. Arroyo, S. Gomes de Almeida and J.M. von Der Weid
ISBN 92-2-202268-8
ISBN 92-2-302268-1 (Spanish version)

[1] This updates the two earlier studies: *Employment effects of multinational enterprises in industrialised countries* and Employment effects of multinational enterprises in developing countries (published in 1981, 2nd impr. 1985).

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Other working papers (listed by theme)

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Employment effects of MNEs in developing countries

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by Yasuo Kuwahara, Teruo Harada and Yoshihiro Mizuno
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