FINANCIAL PERFORMANCE EVALUATION OF BEPZA REGULATED ENTERPRISES

M. Phil Thesis

Md. Monir Hossan

DEPARTMENT OF ACCOUNTING AND INFORMATION SYSTEMS,
FACULTY OF BUSINESS STUSDIES,
UNIVERSITY OF DHAKA,
DHAKA,
BANGLADESH.

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Md. Monir Hossan

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A DISSERTATION SUBMITTED TO THE UNIVERSITY OF DHAKA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTERS OF PHILOSOPHY IN ACCOUNTING AND INFORMATIONS SYSTEMS.

Supervisor

Professor Dr. Mahfuzul Hoque

DEPARTMENT OF ACCOUNTING AND INFORMATIONS SYSTEMS,
FACULTY OF BUSINESS STUDIES
UNIVERSITY OF DHAKA,
DHAKA, BANGLADESH.

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Dedication

To my mother
Rahana Begum

DECLARATION

I do hereby declare that the dissertation entitled "Financial Performance Evaluation of BEPZA Regulated Enterprises" submitted to the Department of Accounting & Information Systems, University of Dhaka, Dhaka for the Degree of Masters of Philosophy in Accounting & Information Systems is exclusively my original work. No part of it in any form, has been submitted to any other university or institute for any degree, diploma or for other similar purposes.

(Md. Monir Hossan)

Registration Number: 230, Session: 2009-2010
Department of Department of Accounting & Information Systems
University of Dhaka, Dhaka – 1000.

CERTIFICATE OF APPROVAL

I have the pleasure to certify that the dissertation entitled "Financial Performance Evaluation of BEPZA Regulated Enterprises" is the original work of Md. Monir Hossan. So far as my knowledge goes, this is the candidate's own achievement and is not a conjoint work. He has completed this dissertation under my guidance and supervision.

I also certify that I have gone through the draft and final version of the dissertation and found it satisfactory for submission to the Department of Accounting and Information Systems, University of Dhaka for partial fulfillment of the requirements for the degree of Masters of Philosophy in Accounting and Information Systems. I recommend the thesis for acceptance.

Professor Dr. Mahfuzul Hoque
Department of Accounting
and Information Systems,
Faculty of Business Studies
University Of Dhaka,
Dhaka, Bangladesh.
&
Supervisor

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Md. Monir Hossan

ABSTRACT

The study entitled "Financial Performance Evaluation of BEPZA Regulated Enterprises" is based on secondary and primary data with cross section analysis. This is a comparative and empirical study, which evaluates the relative performance of enterprises situated at different EPZs in Bangladesh. Seventy six (76) sample enterprises were selected out of population size of 428 enterprises through stratified non proportionate random sampling method. In this study, enterprises were classified from three view points like ownership structure, location of the industry and main product of business. Data were classified, organized, analyzed and interpreted in both qualitative and quantitative fashion through SPSS and Excel. A list of variables were analyzed for checking four types of performance, i.e., (a) Growth Analysis, (b) Productivity Analysis, (c) Profitability Analysis and (d) Value Addition measure.

The broad objective of the study was to critically evaluate the comparative financial performance of the BEPZA regulated industry in Bangladesh. To accomplish this objective, the following specific objectives had been set up in this study: i) Analyzing the overall growth of the BEPZA regulated Industry in Bangladesh, ii) Measuring the group wise productivity of different components of the enterprises, and iii) measuring the group wise profitability as well as value adding capability of the enterprises.

The main findings of the study are presented below:
I) Location wise analysis of total export, employment, value addition, ROI, and others related variables reveals that Dhaka and Chittagong EPZs are dominating over the other EPZs of the country. Karnaphuli, Adamjee and Comilla show relatively

competitive performance; though they are still far behind from CEPZ and DEPZ. After 2000-01, total export volume of BEPZs rose sharply; so, we can conclude that the overall export performance is remarkable.

II) Ownership type wise analysis of total export, employment, value addition, ROI, and others related variables reveals that fully foreign ownership enterprises are dominating over local and joint venture enterprises.

III) Industry wise analysis of total export, employment, value addition, ROI, and others related variables reveals that most of the time garments and garments accessories industry are dominating over other industries. It is, however, found that in few cases Knitting & Textile industries and Footwear & Leather goods industry show competitiveness.

IV) Though total employment of BEPZ dominated by Chittagong and Dhaka EPZ, their growth rate is very low. It indicates that Chittagong and Dhaka EPZ have reached in matured stage of their life cycle and other EPZs are in growing stage.

V) In the sphere of investment volume, Chittagong EPZ gets first position by contributing 39.59%, Dhaka EPZ gets second position by contributing 35.22% of total investment and others are in weak position. Chittagong EPZ is the first EPZ in Bangladesh history and it is internationally well known, cost competitive and very near from our prime seaport. Dhaka EPZ is the second EPZ in Bangladesh that is adjacent to capital city of Dhaka and international airport. National & international skill manpower, technicians and engineers are available in Dhaka EPZ. Besides, the offices of the foreign buyers of different brand are also available there. This is why the both EPZs are established firmly than other EPZs.

VI) In capital / investment productivity, Mongla EPZ has extra ordinary performance compare to other EPZs. As illustrated in figure 6.2.1, Mongla EPZ has no remarkable capital investment and most of the enterprises of Mongla EPZ purchase and re-export agro processing foods with minimum value addition, they just play a traders rule. This is why the export on investment rate is very high for Mongla EPZ.

VII) It was observed that garments accessories and Knitting and Textile industry defeated garments industry in a few cases. Because, two of those industries need limited manpower but huge capital investment, while the scenario of garments is fully reverse. So, per capita labor value addition of garments is lower than those industries.

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LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance.
BBS	Bangladesh Bureau of Statistics
BEPZA	Bangladesh Export Processing Zone Authority
CEPZ	Chittagong Export Processing Zone
DEPZ	Dhaka Export Processing Zone
EBIT	Earnings Before Interest & Tax.
EPZ	Export Processing Zone
FDI	Foreign direct investment.
FEZ	Free Economic Zone
FIZ	Free Industrial Zone
FY	Financial Year.
IBS	The Institute of Bangladesh Study
ILO	International Labour Organization
OECD	The Organization for Economic Co-operation and Development.
ROA	Return on Assets
ROI	Return on Investment.
ROS	Return On Sales.
SD	Standard Deviation.
SEZ	Special Economic Zone
SqM	Square Meter.
VA	Value Addition.
WEPZA	World Economic Processing Zones Association.

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CHAPTER 01: INTRODUCTION

1.1. Prelude

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1.6. Hypothesis of the Study

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1.1. Prelude

The BEPZA is the official organ of the government of the People's Republic of Bangladesh to promote, attract and facilitate foreign as well as local investment in the Export Processing Zones. An Export Processing Zone (hereafter EPZ) may be defined as a duty free special economic area in which goods may be imported, manufactured and reshipped under a rich infrastructure. Three types of ownerships are common under the Bangladesh Export Processing Zone Authority (BEPZA) supervision: 1) 100% foreign ownership, 2) joint venture (local and foreign), and 3) 100% local ownership. Within the zones, economic and foreign trade activities are free from outside controls. EPZs have become rather popular trade policy instruments since their modern revival in the late 1950s. While in 1970 only a handful of countries permitted a zone, a publication of the Organization for Economic Co-operation and Development (OECD) in 1996 places the total number of zones at 500 located in 73 countries.

An export processing zone, as defined by the World Bank is a territorial or economic enclave in which goods may be imported and manufactured and reshipped with a reduction in duties and/or minimal intervention by custom officials. Most Export Processing Zones provide for custom-free and tax exempted export-oriented manufacturing, investment incentives, cheap utilities, stream-lined administration, lower wages and better infrastructure. All of them involve conducting intermediate imports for the purpose of exports. Most of them engage in labor-intensive light manufacturing such as agro-based and garment productions, assembling of light electrical goods and electronics, chemicals etc. Zones also have goals such as promoting linkages with domestic economics, encouraging technology transfer and

promoting new industrialization strategies. Zones encourage employment and foreign direct investment (hereafter FDI).

Performance Evaluation is a justification by which we can understand that an organization is running successfully to achieve its goal or not. Management of an organization fixes its policy and takes necessary steps after evaluating their performance. A sound performance evaluation system provides the understanding of crucial factors of the failure or success of an enterprise.

1.2.   Characteristics of BEPZ Regulated Businesses:

As of today, eight EPZs have been established under BEPZA in different parts of Bangladesh for ensuring balanced economic development of the country. EPZs established by BEPZA are:

- Chittagong EPZ
- Dhaka (Savar) EPZ
- Comilla EPZ
- Karnaphuli (Chittagong) EPZ
- Adamjee (Narayanganj) EPZ
- Ishwardi EPZ
- Mongla (Bagerhat) EPZ
- Uttara (Nilphamari) EPZ

Common Features of the EPZs are:

- All enterprises running in EPZs under supervision of BEPZA are 100% export oriented.
- Unlimited, duty-free export and imports of raw, intermediate input and capital goods necessary for the production for exports.

- Less governmental red-tape. More flexibility with labor laws for the firms in the zone than in the domestic market.
- Generous and long-term tax holiday and concessions to the firms.
- Above average (compared to the rest of the host country) communications services and infrastructure. It is also common for countries to subsidize utilities and rental rates.
- Firms in the EPZs can be domestic, international or joint venture. The role of FDI is prominent in EPZ activities.
- Most of the firms are small and medium in size.

The locations of the EPZs in the geography of Bangladesh are given below:
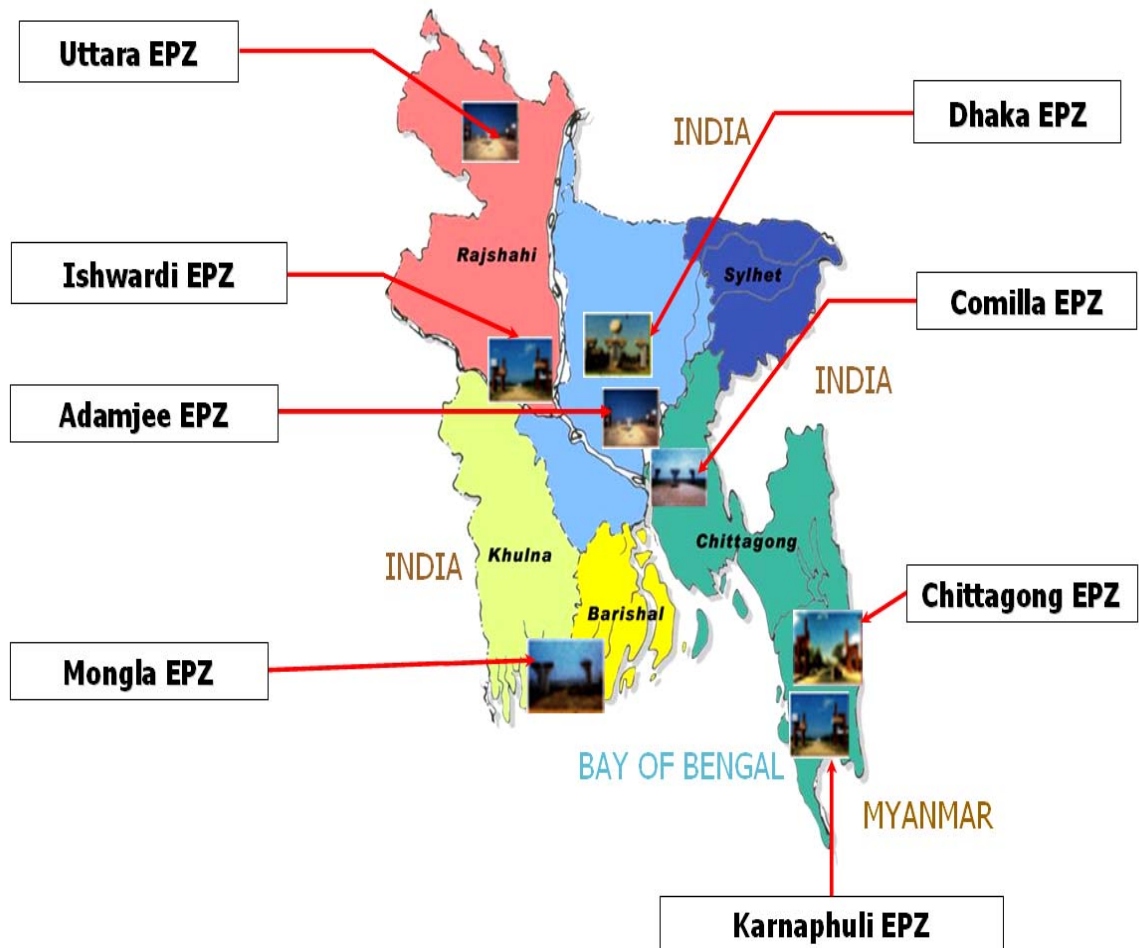
Figure: 1.1 Geographical location of EPZs in Bangladesh.

Sources: BEPZA Annual Report 2010-11.

BEPZA Investment initiatives:

BEPZA attracts investment in EPZs in three categories, which are

Type – A: Investment with 100% foreign ownership,

Type – B: Joint venture between Bangladeshi and foreign investors with no limit to the extent of equity share,

Type – C: 100% Bangladeshi ownership.

Total investment in the EPZs up to June, 2014 stands at US$ 3,188.07 million. Export from the EPZs is very much encouraging and for the last few years the figure is increasing significantly and crossed 40,027.67 million US Dollar. In the financial year 2009-2010 the EPZs enterprises made an export of US$ 21,737.28 million. An employment opportunity for 3,89,017 Bangladeshi Nationals has been created in the EPZs in a permanent pay roll, out of which 64% is female (BEPZA Bulletin, April-June, 2014).

1.3.   Statement of the Problem:

During the liberation war industrialization suffered badly, the Pakistan directed trade was also affected. As a result the growth of the industrialization could not advance with any significance. After the independence of Bangladesh, Government of the People's Republic of Bangladesh emphasized on industrialization for boosting the economy. During the period the economy was facing a number of obstacles in the process of industrialization. The problems are given below:

❖ Due to long colonial rule, economic discrimination and postliberation nationalization of industries, the growth of entrepreneurship had been slow in Bangladesh. Besides, due to bureaucratic red-tapes and lack of investment

climate, capital investment had not been encouraged here. This is one of the reasons of weak investment base.

❖ Limited access to credit, its high cost, legal or illegal and procedural complexities in obtaining credit from banks.

❖ Lack of modern technology and information.

❖ Low labor productivity and unhealthy trade union practices.

❖ Lack of appropriate production facilities.

❖ Lack of adequate investment in entrepreneurship development.

❖ Inadequate human resource development program.

❖ Lack of research and development facilities.

❖ Lack of knowledge about marketing technique for home and aboard.

❖ Insufficient of capital support.

❖ Export and import delays in ports, customs and non-tariff barriers.

❖ Insufficient Infrastructure; Power supply, telecommunication, transport, gas, water supply etc. – all facilities are not adequate which have hindered process of industrialization in Bangladesh.

❖ Lack of proper technological know-how is also another reason of our industrial backwardness.

❖ Lack of adequate raw materials, trade information and natural resources are also unfavorable for industrialization.

❖ Though Bangladesh has a huge population, most of them are unskilled. Country lacks skilled labor, specialists, professionals and technologists which also hamper the industrialization process.

❖ A good government policy and political stability are the preconditions for industrialization. Unfortunately, political instability has always been a common

phenomenon here. This is a major setback towards the advancement of the industrial sector of Bangladesh. Frequent strikes result in disruption of daily business. This hampers the smooth running of industries, they are unable to procure raw materials in time hence their production and even transportation is delayed. As such, our industry cannot progress and compete with the outside world.

❖ Labor Unrest is a common phenomenon of Bangladesh.

❖ There is a lack of trained workers in this country. Thus, there is a decline in the productivity of the company. The companies also need to provide training to this labor force. Therefore, quite an amount of money and time are required to spend on them. This challenge is faced by every company or firm in the country.

❖ Competition from dumped, smuggled and illegal imports.

❖ Industrial Collapse: Growing industrial accident and incidences extortion at every stage starting from production to distribution and marketing of the products.

❖ Poorly developed socio-economic structure.

❖ Corruption, administrative complexity, non-transparency and poor implementation of existing policies

❖ Inadequate policy reforms and frequent change in government policies

❖ Underdeveloped money and capital markets and regulations on these markets.

❖ Less improved seaport facilities and malpractices at the port.

❖ Lack of adequate law and order conditions, deteriorating law and order situation frequently.

❖ Absence of effective and transparent legal system.

❖ Inefficient local market etc.

In addition to that, unplanned change of economic system like capitalism to socialism and back again to the capitalism and privatization caused overall deterioration of local industrial environment. However, to bring the economic prosperities through increasing export volume and job creation. The Government of Bangladesh established few EPZs where foreign, joint venture and local enterprise are encouraged under rich infrastructural facilities. The government provides a significant number of facilities to the investors in the EPZs to eliminate the common barriers faced by the enterprises. Nevertheless, some companies in the EPZs are discontinued as they became sick in recent years.

Therefore, the study will explore and evaluate the performance of BEPZA regulated enterprises to find out the reasons of this sickness.

1.4.   Rationale of the Study

In order to stimulate rapid economic growth of the country, particularly through industrialization, the government has adopted an 'Open Door Policy' to attract foreign investment to Bangladesh. BEPZA is the controlling authority of EPZ industry in Bangladesh (an overview of BEPZA is furnished, Appendix – A, page no- I). The primary objective of an EPZ is to provide special areas where potential investors would find a congenial investment climate, free from cumbersome procedures. Since the BEPZ regulated enterprises produce exportable commodities, means of employment generation, earning foreign exchange and balancing trade deficit, it plays an important role in the economy. Total 428 enterprises are operating in 08 EPZs in Bangladesh. They invest about $3188.07 million Dollars and export about $40027.67 million Dollars and in these industries about 3,89,017 people recruited since incorporation of BEPZA. (BEPZA Bulletin, April- June 2014). It is hypothesized that,

the business in the EPZs area will boost continuously with proper guidance of BEPZA. To accomplish the sustainability, the performance of those industries linked to growth and profitability are the key areas of the proposed study. Moreover, the findings, literature reviews, recommendations, bibliography and reference of the study would be of great use to the prospective researchers and academicians. The data and information generated in this study would also have a great role in the context.

The performances of all types of enterprises are not the same. They differ verily in respect of management and operational systems, financial aspects etc. It is interesting to study the determinants of financial performance, as it is extremely useful for managers in improving organizational performance and it also helps the policy-making bodies to create, if needed, an appropriate regulatory environment. Despite the importance of financial performance studies, the literature on performance of enterprises in EPZs could not be found in the context of Bangladesh. Therefore, a comprehensive work is needed on measuring and evaluating the financial performance of enterprises in EPZs. From the above view, a study on financial performance of enterprises in EPZs is useful to various interest groups. Hence, the present study proposes to address this important issue on some selected enterprises in EPZs. Therefore, it creates a justification for study to address the area.

1.5.   Objectives of the Study:

In EPZs, a good number of companies are functioning, but the performances of all the companies are not same. Though they are enjoying the equivalent facilities, they vary significantly in terms of their financial and other performance. The broad objective of the study is to critically evaluate the comparative financial performance of the

BEPZA regulated industry in Bangladesh. To accomplish this objective, the following specific objectives have been covered in this study:

1. To analyze the overall trend / Growth of the BEPZA regulated Industry in Bangladesh.

2. To measure the group wise productivity of different components of the enterprises at EPZs in Bangladesh.

3. To measure the group wise profitability as well as value adding capability of the enterprises at EPZs in Bangladesh.

4. To identify the appropriate factors which are contributing significantly on their performance.

1.6. Hypothesis of the Study

In line with the specific objectives of the study, the following hypotheses have been developed for the study purpose:

Ho_1 : The growth of Business in Export Processing Zones is not progressing.

Ha_1 : The growth of Business in Export Processing Zones is progressing.

Ho_2 : The Productivity of the enterprise in Export Processing Zones is not same.

Ha_2 : The Productivity of the enterprise in Export Processing Zones is same.

Ho_3: Value addition and Profitability of the BEPZ regulated enterprises (across ownership/location/ industry) are not same.

Ha_3: Value addition and Profitability of the BEPZ regulated enterprises (across ownership/location/ industry) are same.

1.7.   Scope of the Study:

To create job and boost our economy through increasing export volume government of Bangladesh established few EPZs where Foreign, joint venture and local enterprise are working under the same facilities. It is learnt earlier that shortage of capital, poor infrastructure, unskilled work force, inefficient management, tax barrier, etc. are the main weakness of our industrialization. In the EPZs, these barriers do not exist. However, some companies are discontinued as they became sick in recent years. The study will bring opportunity to identify the existing problems and to find out the possible immediate measures towards a prosperous and sustainable industrialization in Export Processing Zones. The problems in the managements of the enterprises viz. technical and mechanical, cultural, social, financial, marketing etc. including power, port facilities, political unrest and labor issues will be studied and pointed out and their outcome can be utilized by the stakeholders to overcome the problems. Necessary measures can be taken for sustainable industrialization and improvement the overall environment of the industrialization in Bangladesh. The researcher is an Ex-employee of Bangladesh Export Processing Zone Authority, familiar with the locations of EPZs and has personal communication with BEPZA officials and enterprises management as well as their employees. Besides, the Bangladesh Export Processing Zone Authority has a large data base also known to the researcher. It would be possible by the researcher to find out and collect all related primary and secondary data for the financial performance evaluation. The scope of the research will cover the existing as well as the sick industries at eight EPZs in Bangladesh. However, bank, insurance and others logistics service related with the EPZs shall not be covered by the study. Moreover, this study will show an unexplored dimension of research activity on BEPZA regulated enterprises.

1.8. Organization of the Study

The present study entitled "Financial Performance Evaluation of BEPZA Regulated Enterprises" has been organized into twelve chapters. Background and detailed information has been collected from the Bangladesh Export Processing Zones Authority (BEPZA), World Economic Processing Zones Association (WEPZA), Dhaka University Library, IBS Library of Rajshahi University, internet, books and journals, personal communication and interview etc. Detailed study has been conducted to fulfill the targeted parameters, in the enterprises of the different Zones. Pre-Structured questionnaire was use for interviewing managers and officials of the enterprises. The accumulated information and data were organized and structured through comparative and statistical analyses. Recent information and record were utilized for enrichment and validation of the research. The draft copy will be placed to the learned supervisor for further improvement and also for approval before submission to the controller of Examinations of the University of Dhaka. In the report, first chapter is used for introduction, second chapter for literature review and research methods are discussed in chapter three.

Sales and labor growths are analyzed in chapter four and five respectively. Productivity of capital, labor and land are furnished in chapter six, seven and eight respectively. Return on sales, Return on investment and value addition are furnished in chapter nine, ten and eleven respectively. Summary of findings, conclusions and recommendation are furnished in chapter no 12.

1.9.   Limitations of the Study:

This study is very complex in its nature. To collect real data from any enterprise, is almost a matter of winning a war and it should be mentioned here that reliance on the supplied data for drawing a conclusion, is a very risky matter. For every point of study, the researcher had to depend on experience, correct imagination, technique and mode of collecting valuable information from the managers, executives and their sub-ordinates. The managers, executives and their sub-ordinates are very reluctant to deliver information related to cost of goods sold, finance and also their business. It is just like a word of a detective who has to engage his total energy and intelligence in gathering secrets from a heap of rocks and debris. The owners and managers are pledge-bound not to speak about the financial and policy matters due to fear from the tax department as well as from competitors and stakeholders. During the study, the researcher endeavored hard and had a painful experience in overcoming all the obstacles in doing the work with authenticity, honesty and sincerity. The proposed study will cover enterprises working in various EPZs in Bangladesh only and it will focus on their financial performance. Therefore, the findings and the recommendations are of applicability in a control environment like EPZs, not for all industries of Bangladesh in general.

CHAPTER 02: LITERATURE REVIEW

2.1 Rationality and Economic Contribution of EPZs

2.2 Geographical and Demographical workers and EPZs

2.3 Performance Evaluations

2.4 Statistical Technique and previous Research

2.5 Value Addition and Performance

2.6 Performance Evaluation and related Work

2.1 Rationality and Economic Contribution of EPZs

Export Processing Zone (EPZ) is a category of Special Economic Zones (SEZs) where the government provides facilities and incentives to setup industries for foreign and local investors. SEZs consist of Free Industrial Zones (FIZs), Free Trade Zones (FTZs) and Free Economic Zones (FEZs). These all are similar in nature but there are some country wise minor differences in customs regulations and marketing style. The idea of EPZs came from the primitive concepts of industrial parks and free trade areas appeared in the late 1950s and early 1960s (Madani, 1999). The primary function of EPZs is to produce goods within the EPZ and sales its products to the international markets. Today the EPZ's functions have been changed and it can produce and sales goods locally as well (ILO, 2008).

EPZ is a trade policy instruments that can be used to attract foreign direct investment (FDI) which in turn may benefit the host country by increasing foreign exchange earnings, employment growth, technology transfer, and modern management skills (Bhuiya, Ahmed and Mahmud, 2014). Moreover, it can promote non-traditional exports of host country and also provide multiple advantages for host country and foreign investors. The host Country can take benefits of foreign investments, exports and local employment. Conversely, foreign investors can avail cheap labor, tax incentives and many other facilities (Bhuiya, Ahmed and Mahmud, 2014).

EPZ is an enclave where the government provides incentives to the participating enterprises to work smoothly and conveniently by providing infrastructures like proper roads and highway, railway, air and seaport access (Tantri, 2011). These facilities in turn bring EPZ success (Madani, 1999). Foreign Investors look for better

infrastructural facilities to invest in the foreign country and without having those, EPZs cannot be lucrative for foreign investors (Magnus, et al., 2000).

The export processing zone (EPZ) is the dynamic endeavor initiative to change many countries' economy. Its positive effects are expected to include modern management systems, changes in the country's exports, employment, investment and technology. EPZs have been shown to be one of the vital instruments in developing a country's economy over the last few decades (OECD, 2007; ILO, 2011; WEPZA, 2012). The literature on EPZs shows that these are a second-best solution compared with generalized countrywide reforms, but that, where countrywide reforms are difficult to implement, they can be a useful weapon in the development arsenal (World Bank, 2001). EPZs are an important attraction for potential investors who require that the host country have a well-organized policy mechanism, with good incentives, such as tax-free status and strong security (Kenkesu, 2003).

When Bangladesh experienced severe economic problems after independence in 1971, EPZs played an important role to create employment, exports and investment after 1990's particularly (OECD, 2007, BEPZA, 2008-09). Research supports that these Zones can change technology sector by technology transfer, decrease unemployment and increasing investment (WEPZA, 2012). These are particularly true in case of South Korea, Taiwan, Vietnam, and Malaysia (World Bank 2009), whereas some African EPZs achieved a little, especially in technology sectors but improved in employment and exports (World Bank 2009). In 1970s Malaysia, the annual growth was around 13.3 percent, EPZs contributed to this by increasing export earnings, employment and foreign direct investment (Furby, 2005).

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EPZ was established in 1983 and has been playing a vital role in economic development of Bangladesh since 1990s (BEPZA, 2013). It has been contributing very effectively in the economy in terms of the foreign direct investment (FDI), export and employment for the last ten years. After 1990s, the private sector in Bangladesh boomed with growing exports, employment, and investment encouraged by the government's liberalization of trade. Export Processing Zones were established in developing countries after 1960. However, in last two decades, the export-processing zones have been important for Bangladesh in terms of investment, exports and employment growth (Kenkesu, 2003).

The EPZs must have an important demonstration effects which should help to develop domestic industry's international competitiveness (Furby, 2005). Another crucial effect is the knowledge spilled over effect, which should lead local factories' raising production efficiency by adopting methods and technology used by MNCs in the EPZ. Development of backward linkages is an important indirect effect of EPZs. Johansson (1994) argues that the EPZ may be beneficial to a country because of their spillover and their catalytic impact. These spillovers include labor and management on-the-job training and learning by doing, copying, demonstration effects and catalyst factor, and impact the rate and level of human capital formation in host countries. These will occur when EPZ's companies buy inputs from companies in the host country (Furby, 2005). These effects help the country to produce their own raw materials, design their machinery and gain critical tactic to get higher output. If the host country government allows the sale of EPZs company products on the domestic markets, this can act as a forward linkage. For example in Mexico, (20-40) % EPZs'

Company output can be sold in the domestic market. Similarly, in the Dominican Republic 20% EPZs' Company output can be sold on the domestic market (Tantri, 2011). The sale of EPZ production in the domestic market produces more competition which promotes efficiency. Local firms are forced to make higher quality products and meet stricter delivery routines to be competitive with Multination Company (James, 2009).

2.2 Geographical and Demographical workers and EPZs

Jayanthakumaran (2002) conducted empirical research based on cost benefit analysis by using market price and shadow price. He concludes that EPZs have a positive economic impact for citizen of host country. It becomes more attractive policy for developing countries for economic development and employment generation (Aggarwal, 2005; Eusuf et al, 2007).

EPZs provide employment opportunities for female workers and the good sign is that female workers are increasing day by day. Currently, 64% female and 36% male workers are working in Export Processing Zones (BEPZA, 2014). The industry is not equally distributed geographically and Bangladesh has also some back-ward places where there is no such employment scope except agriculture. However, rural people are starving from poverty and demand for work opportunity. This opportunity can be fulfilled by establishing new EPZs in such back-ward region of Bangladesh. Women are engaged in traditional activities and if they are shifted to industrial activities, the economic development can be faster. In other words, situation of women is shifting from their traditional activities to more productive activities. Dowla (1997) showed that females who are working in the EPZs are almost 85% aged between 17 to 25 years. However, most of the males worked as administrators, accountants, and

managers, whereas females occupied most of the shop-floor jobs. It is the common pattern in export processing zones

2.3 Performance Evaluations

Performance means accomplishment of expected courses of action. Appraisal which is variously known as evaluation, measurement, assessment etc. refers to an ongoing evaluation of the quality, quantity and style. determinants of the present performance, growth, potential, etc. to provide control information leading to an action program and enabling feedback aimed at performance improvement, growth and satisfaction (Bhardwaj, 1978).

The debate on performance is unconcluded. A number of studies focus on financial while others focus on non-financial performance. Studies which used traditional performance measurements were based on traditional accounting systems, and were criticized for lack of objectivity, consistency and open to internal manipulations (Pun and White, 2005). Indeed in recent performance research, there has been a drift from exclusive use of financial performance measures to inclusion of non-financial performance measures. This approach is practically valuable and in line with the multidimensionality of performance construct. Hubbard (2009) argued that measuring performance played an important role in translating strategy into results. However, measuring performance is difficult especially when what has to be measured keeps changing and is multifaceted (Behn, 2003). The need for organizations to align their performance measures with goals are well documented in literature. The complexities of managing the organizations today require that managers analyze different dimensions of performance because performance itself is multidimensional.

Performance measurements do not end in themselves, but are useful tools through which managerial purposes are achieved. Kaplan (2001) outlined eight managerial purposes achieved through performance. He observed that performance is used in evaluation, control, motivation, promotion, celebration, learning and improvement of different processes. Therefore, no single performance measure is adequate in capturing all the eight performance.

It is important to note that no one measure of financial performance should be taken on its own. Rather, a thorough assessment of a company's performance should take into account many different measures. Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. This term is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation (Almazari, 2011). Chong (2008) revealed that a number of theoretical framework existed to evaluate how performance and effectiveness on usage of resources were measured. These frameworks can be achieved through a number of approaches. These are the goal approach, system resource approach, stakeholder approach and competitive value approach. The goal approach measures the extent an organization attains its goals while the system resource approach assesses the ability of an organization obtaining its resources (Yuchtman and Seashore, 1967). Both approaches measure the extent to which an organization achieves its goals and accesses to the resources. For the stakeholder approach and the competitive value approach, these evaluate performance of an organization based on its ability to meet the needs and expectations of the external stakeholders including the customers, suppliers, competitors (Daft, 1995). All

four approaches intend to measure the extent that an organization has met its planned targets; the first two approaches focus on meeting the internally-set targets while the latter two meeting the needs and expectations of the external stakeholders. Among these, goal approach is most commonly used method due to its simplicity, understandability and internally focused. Quinn and Rohrbaugh (1983) concluded that among the approaches, the goal approach was a better fit for the SMEs.

The goal approach directs the owners-managers to focus their attentions on the financial measures. These measures include profits, revenues, return on investment (ROI) (Smith, Bracker, and Miner 1987), returns on sales, and returns on equity (Barney 1997; Richard 2000) rather than the non-financial measures.

Financial measures are objective, simple and easy to understand and compute, but in most cases, they suffer from being historical and are not readily available in the public domain. Inaccessibility, confidentiality (Covin and Slevin, 1989), completeness (Sapienza and Grimm 1997), accuracy and timeliness (Sapienza, Smith and Gannon 1988) of data make comparisons among the sectors challenging and futile. Further, profits are subject to manipulations and interpretations. A possible way forward is to apply the non-financial measures, though subjective in nature, as supplements to the financial measures. Islam and Mukhtar (2011) stated that significant promotional investments were made through zones in Bangladesh by setting up a large number of small and medium sizes of industrial units. Eusuf, Faruque and Rahman (March 2007) found that In the case of BEPZA, these investments were of comparatively small-sized, consumer-goods production orientation, highly labor intensive and thus directly employing a large numbers of people. The most common non-financial measures

adopted by the SMEs are number of employees (Orser, Scott, and Riding 2000; Mohr and Spekman 1994; Robinson and Sexton 1994; Loscocco and Leicht 1993; Davidsson 1991; O'Farell 1986), growth in revenue across time (Miller, Wilson and Adams 1988) and revenue per employee (Johannisson 1993).

Islam, Mukhtar (2011) considered three variables for the analysis containing investment, export and employment respectively towards economic growth. Islam Bhuiya, Ahmed and Mahmud (2014) tried to find out the positive and negative relationships between various progressive indicators such as investment, export volume and number of workers among the Zones.

Bhuiya, Ahmed and Mahmud (2014) Realized that scarcity of land in the Zones was crucial factor for comparisons among the Zones but they did not consider it in their analysis. Like that they did not consider type of ownership, nature of business, profitability and return on investment in their comparisons. Namada (2014) revealed that firm ownership was associated with sustainability and probable success. Foreign operated firms had operated for a longer duration of time compared to the local firms. Through the grounded theory approach Chong, (2008) also reveals that the key financial measures for short term include turnover, profit before tax, ROI, turnover or profit per employee and for a long term include growth in revenue and number of employees on the other side the non-financial measures focus on issues pertaining to customers' satisfaction and customers' referral rates, delivery time, waiting time and employees' turnover. Namada and others (2014) pointed out that financial performance measures were operationalized in terms of sales growth rate ratio and return on investment ratio. Almazari (2011) applied various ratios and he ranked the firm according to ratios during the study period.

Dowla (2012) used Investment, Export and Employment volume for evaluating performance but he revealed that gross export earnings, however, may not be a good evaluation criterion given the high import content of EPZ production and significant foreign ownership in the zone. A better criterion could be net export earnings, that is, the difference between exports and imports or net value added. They did not have detailed information to calculate either net value added or net export's earnings, but they disclosed that value added is around 25% or slightly less. The annual average export per worker in the Chittagong EPZ was $4,584 in the past 12 years, which is comparable to other EPZs.

Chong, (2008) reveals that the owners-managers use a hybrid approach combining both the financial and non-financial measures to evaluate performance against the predetermined goals and time. Time axis is based on the durations of completing a project. Time approach is a useful measurement to all business organizations, irrespective of their sizes, structures and nature of activities. The findings have implications to both the SMEs and large organizations.

In the current global economy, small and medium enterprises (SMEs) are progressively being regarded as powerful engines for economic performance and development of most economies (Islam, Khan, Obaidullah and Alam, 2011). In light of the view that research on performance of SMEs has dominated policy discussions on the theme of industrial development (Akhtar, 1997), In an effort to boost performance of SMEs, rising numbers of public, private and academic institutions are extending considerable support to SMEs across numerous sectors of industries (Ahmed, 2000). Such support is enhanced to be successful through investigation of factors affecting performance of SMEs through investigation of the impacts of

entrepreneur attributes and firm characteristics on performance of such SMEs (Woldie, Leighton and Adesua, 2008).

From the business view point, the concept of business performance frequently refers to the firm's financial performance. However, no universally accepted definition of business performance has been arrived at yet and as such; business performance is therefore interpreted in several ways from different dimensions (Foley and Green, 1989). Different dimensions that are covered by the concept of business performance include number of employees, survival, profit, and sales performance. Muzenda, A. (2014) indicates the factors that determine performance of SMEs can be grouped into entrepreneur characteristics, firm characteristics, management, markets, financial resources, and external environment. Moreover, Fairoz, Hirobuni and Tanaka (2010) accentuate that the entrepreneurs' demographic profiles have a positive influence on performance of SMEs. From the dimension of enterprise characteristics, factors that determine performance of small and medium enterprises include length time an enterprise has been operating in the specific industrial sector, size of the enterprise, sector within which the enterprise operates and source of capital (Smallbone, Leig and North, 1995). Additionally, Kristiansen, Furuholt and Wahid (2003) found that length time in operation had a significant effect on business performance. With regards to size of the enterprise, McMahon (2001) indicated that enterprise size had a significant effect on performance of the enterprises. The results confirmed that entrepreneur attributes, firm characteristics and external environmental factors had some significant effects on performance of small and medium enterprises

By summering the above views about performance measurement, it is observed that different scholars, researchers and academicians opine different views and use various

measurement tools (variables) according to their aim depending on business size, nature, location and etc. It also depends on the demand of owners, managers, stakeholders and other users of information of the business.

Like above, considering the following points, under mentioned variables were selected for the study towards total performance of Enterprises.

- Scope: A controlled economy operating by BEPZA in eight EPZs in Bangladesh

- Availability of data and information: The enterprises do not publish annual report in public domain and reluctant not to provide financial data.

- Time: Study period (FY 2009-10 to 2013-14).

- Size of business: The most of the enterprises are small and medium in size

- Nature: All enterprises are 100% export oriented, and

- Others conditions

The study, therefore, covers export, employment, capital productivity, export per employee, return on sales, return on investment, export per square meter land, export growth rate, growth of employee and value addition ratio respectively as variables towards various strata of those enterprises.

2.4 Statistical Technique and previous Research

Like many researchers Almazari (2011) applied various Statistical Techniques like Correlation Analysis and ANOVA to test the Hypothesis. In addition, mean, standard deviation and rank are simply used in different researches (Mostafa, 2012).

Analysis of variance (ANOVA) is a statistical procedure concerned with comparing means of several samples. It can be thought of as an extension of the t-test for two

independent samples to more than two groups. The purpose is to test for significant differences between class means, and this is done by analysis of variances. The ANOVA test of the hypothesis is based on a comparison of two independent estimates of the population variance. In performing an ANOVA procedure the following assumptions are required:

ANOVA is the most commonly quoted advanced research method in the professional business and economic literature. This technique is very useful in revealing important information particularly in interpreting experimental outcomes and in determining the influence of some factors on other processing parameters. The original ideas of analysis of variance were developed by the English statistician Sir Ronald A. Fisher (1890-1962) in his book "Statistical Methods for Research Workers" (1925).

The standard deviation is by far the most important and widely used measure of studying variation. Its significance lies in the fact that it is free from those defects from which the earlier methods suffer and satisfies most of the properties of a good measure of variation. It is a measure of how much "spread" of "variability" is present in the sample. If all the members in the samples are very close to each other, the standard deviation is close to zero. If the numbers are well dispersed, the standard deviation will tend to be large. Standard Deviation is also known as root mean square deviation for the reason that it is the square root of the means of square deviations from the arithmetic mean (Gupta and Gupta, 2010; Zikmund et al., 2011)

2.5 Value Addition and Performance

The overall performance of and organization can be measured in terms of several indicators. However, the performance of a business enterprises measured in terms of profit earned which can be assessed in absolute term or it may be measured in terms of percentage on sales or return on investment etc. Such performance measurement in terms of profits can be useful to owners and lenders (Thavraj, 1978). But profit as a yardstick of measurement is not free from criticism. However, in recent years, there has been a considerable interest in 'Value Added' technique as an alternative or additional approach to measure the operational efficiency of business (Matheur, 1989). In fact, contribution made by an enterprise, whether it is in the public or in private sector can be measured in terms of value added which may be of importance to national income accounting and to the owners, managers, employees and others stakeholders of the concerned enterprises.

The concept of value added is not a new one, since long the concept is being used in estimating national income. But in the performance evaluation of business concerns, interest has increased since the publication of the corporate Report by the Accounting Standard Steering Committee, London in 1977 (Mathur, 1989) although the concept was first applied in U.S.A. in 1940 and in Europe in 1947. Moreover, the concept is more important as it brings closer the accountant's approach and economist's approach to profit although there is a bit differences in these approaches.

In Bangladesh, Value added concept is used in national income computation. Business enterprises in general except, except a few, do not use the concept in their performance evaluation. However, this technique can be used beneficially to serve the purpose of all interested parties and the introduction of value Added Tax (VAT)

warrants the introduction of this concept in our business enterprises urgently after 1991.

Against this backdrop, this study has been undertaken to apply the technique to the enterprises in EPZ of Bangladesh and evaluate their performance through some important value added ratios.

2.6 Performance Evaluation and related Work

Dorsati Madani in his paper on **"A Review of the Role and Impact of Export Processing Zones" in 1999,** has been discussed as below:

The cost-benefit approach is a commonly used tool to evaluate the performance of export processing zones (Warr, 1987, 1989). The methodology calls for calculations of all costs and benefits associated with the zones. It involves discounting and calculating of net present values of streams of revenues and costs for the government, the workers and the society at large. Though a painstaking process, this methodology provides an opportunity to think rigorously about costs and benefits.

The main draw-back to this approach is the lack of adequate data for the cost-benefit calculations. Assumptions regarding rates of returns to capital, social discount rate and social benefits may also be easily questioned. More generally, while costs may be more readily observable, the extent of the benefits may not be.

New growth approach, another popular methodology has risen to EPZ analysis. It highlights the impact of spillovers from FDI and zone activities on the host economy. According to Johansson (1994), the new growth approach provides that i) Domestic firms lack the technical, marketing and managerial know-how ii) Domestic firms seldom have access to international distribution channels on their own, and iii) they

are to connect with an established multinational corporation with wide international business dealings.

Gurhan Gunday , Gunduz Ulusoy, Kemal Kilic , Lutfihak Alpkan jointly published a research paper titled **" Effects of Innovation Types on Firm Performance**" have specially dealt with some variables on performance measures. These have been discussed below:

In many recent studies, different criteria of performance are used to measure firms' competitiveness, productivity and efficiency. Financial, marketing, production and innovative performance constitute quantitative firm performance measures. Frequently, financial measures such as Return on Sales (ROS), Return on Investments (ROI) and Return on Assets (ROA) are favored for performance evaluation. In addition to these measures, respondents are asked to provide objective data (sales, exports, total sales, market share, and innovation outlay) for the last three years.

Decramer, S., Fuss, C. and Konings, J. (2015) wrote a paper titled **"How do exporters react to changes in cost competitiveness",** Working Paper Research, No 276, National Bank of Belgium. The study found that ignoring the import content of exports in analyzing competitiveness might result in wrongly attributing gained in export performance of firms to improve cost competitiveness. High export growth might just reflect the fact that some firms imported products to re-export them. Or when firms only add limited value to imported inputs, exports reflect mainly the value of the intermediate inputs. They therefore analyzed net exports to capture firm-level competitiveness, although they also reported results based on gross export numbers as a strength check.

Furthermore, they found that exports and imports are highly correlated with a correlation co-efficient of 0.66. This demonstrates that most exporters rely on imports of intermediate inputs in their production process or that exporters simply re-export imported products. Hence, ignoring the import content of exports may lead to wrongly concluding that firms and sectors are highly competitive when they have strong export growth, while this may merely reflect high import growth. This suggests that measuring export compositeness as net exports. The average net exporter firm has net exports which are about half of gross exports and the growth in gross exports (0.05 when considering only net exporters) is higher than the growth in net exports (0.007) on average.

As a second robustness check, they used value-added exports as the dependent variable. Value-added exports are thus defined as gross exports minus the intermediate inputs used for these exports. They only observed inputs at the firm level and hence did not observe the inputs corresponding to the exports. An approximation of the value-added exports is obtained by subtracting the share of exports in intermediate inputs from the gross exports. They concluded that a higher elasticity (in absolute value) for value-added exports was in line with their expectations. Furthermore, they analyzed net exports of firms, i.e. exports adjusted for their import content, for which firm-level data seemed more appropriate.

Hossain, M. Z. established in his paper that the productivity of EPZs' worker and Export on Investment in EPZs were high. He argued that **d**uring 2004-2005 the export performance of EPZ workers in textile cluster did stand US $ 9952.00 per worker, whereas export performance of one DTA worker in the same sector recorded US $ 2886.43. He also showed that EPZ enterprises earned highest dividend in terms of

their investment. During 2004-2005 fiscal, average export performance of enterprises stands around 1.79 times of their actual investment.

As far as the researcher's knowledge goes, all researches on EPZ in the context of Bangladesh are read, and presented in the above section. However, related comprehensive researches have not been visible on financial performance evaluation against the backdrop of Bangladesh for EPZs study. So, a complete empirical work is demanded on measuring and comparing the financial performance of enterprises in EPZs. As mentioned earlier, study towards total performance of enterprises to address this important issue on some selected enterprises as well as overall business condition in EPZs adopts the variables, i. e., investment, export, employment, Export per Employee, Return on Sales, Return on Investment, Export per Square meter land, Export Growth rate, Growth of Employee, value addition regarding various strata of those enterprises.

CHAPTER 3: METHODOLOGY OF THE STUDY

3.1 Prelude

3.2 Sampling Design of the Study

3.3 Procedure of Data Collections

3.3.1 Primary Data

3.3.2 Historical (Secondary) Data

3.4 Data Rearrange and Analysis

3.4.1 Variable and Analysis Matrix

3.4.2 Analysis of variance (ANOVA)

3.4.3 Standard Deviation (SD)

3.1 Prelude

The Research design has three dimensions such as explanatory, exploratory, and descriptive (Saunders et al, 2003). This research has followed the explanatory and descriptive approaches. It is empirical in the sense that it will explore indicators of financial performance of BEPZA regulated enterprises. It also conduct a cross sectional analysis among the enterprises in EPZs. Bangladesh Export Processing Zone Authority (BEPZA) is designed facilities to attract Foreign Direct Investment (FDI), increase export volume and job creation in order to improve economic performance. Therefore, this study analyzed how successful the EPZs and their enterprises are in terms of investment, employment, exports, value addition and profitability. It might be termed a comparative and empirical study, because the research evaluated the relative performance of enterprises situated at different EPZs in Bangladesh and check how they related to factors such as location, size, nature, age, origin, and infrastructure.

3.2 Sampling Design of the Study

The study examined BEPZA regulated enterprises situated at different territory in Bangladesh, i.e., Dhaka, Chittagong, Comilla, Narayanganj, Pabna, Nilphamari and Bagerhat district. There are different methods available for sampling. Hundred (100) samples were selected out of population size of 428 enterprises through stratified non proportionate random sampling belongs to different subgroups. Sekran (2009) states that stratified random sampling involves stratifying the elements among meaningful levels and taking proportionate or disproportionate samples from the strata. This sampling design is more efficient than the simple random sampling design because,

for the same sample size, each important segment of the population is better represented, and more valuable and differentiated information is obtained with respect to each group.

In this study researcher has classified the enterprises from three view points like Ownership Structure, Location of the Industry and Main Product of Business. In the first point of view researcher has selected three categories consisting of

1. Type – A: 100% foreign ownership

2. Type – B: Joint venture between Bangladeshi and foreign investors with no limit to the extent of equity share, and

3. Type – **C**: 100% Bangladeshi ownership.

In the second point of view it was selected eight location, consisting of-

1. Chittagong EPZ

2. Dhaka (Savar) EPZ

3. Comilla EPZ

4. Karnaphuli (Chittagong) EPZ

5. Adamjee (Narayanganj) EPZ

6. Ishwardi EPZ

7. Mongla (Bagerhat) EPZ, and

8. Uttara (Nilphamari) EPZ.

In the third point of view it was selected seven categories consisting of-

1. Garments industry

2. Garments Accessories industry

3.   Textile and Knitting industry

4.   Footwear and Leather industry

5.   Electronics and Electrical goods industry, and

6.   Service and other industries.

As mentioned above initially, it was classified the total enterprises into eight locations (EPZs) then each EPZ into three types, i.e., type- A, B and C. Total 100 samples were collected from   24 (8 X 3)   sub-categories or groups through stratified non proportionate random sampling method. Researcher firstly, allocates 100 samples among eight EPZs non-proportionately. If researcher chose the number proportionately, few EPZs could not find a reprehensive number of samples due to their small size (in number of enterprises). For collecting more representative information, researcher distributed target number of samples to the sub- strata, i.e., type A, B, and C purposively that are arranged below at a tabular form. Then researcher has classified the enterprises to respective strata, sorted them alphabetic-ascending order and numbered the enterprise with order and sequence in each strata. Finally, researcher has selected the name of enterprises from each sub-group randomly with the help of random table. After completing the tabulation researcher has tried hard to collect data from the all target enterprises but 76 enterprises respond to the questionnaire completely.

Table 3.1: Selection of target numbers of respondents and success number of samples.

Name of EPZS	Target Sample Size	Name of Types	Success Sample Number
Adamjee	15	Type-A Foreign	9
		Type-B Joint Ven.	2
		Type-C Local	2
Chittagong	21	Type-A Foreign	8
		Type-B Joint Ven.	3
		Type-C Local	4
Comilla	12	Type-A Foreign	4
		Type-B Joint Ven.	3
		Type-C Local	2
Dhaka	20	Type-A Foreign	10
		Type-B Joint Ven.	4
		Type-C Local	5
Ishwardi	5	Type-A Foreign	1
		Type-B Joint Ven.	1
		Type-C Local	1
Karnaphuli	13	Type-A Foreign	6
		Type-B Joint Ven.	1
		Type-C Local	2
Mongla	9	Type-A Foreign	3
		Type-B Joint Ven.	1
		Type-C Local	1
Uttara	5	Type-A Foreign	1
		Type-B Joint Ven.	1
		Type-C Local	1
Total	100		76

3.3 Procedure of Data Collection

The study is both theoretical and empirical in nature. Both primary and secondary

data were used in the study.

3.3.1 Primary Data

In order to collect primary data, a structured questionnaire (Appendix- C, page-XXIV) was prepared. The questionnaire was pre-tested by piloting among four of the firms at DEPZ and after discussion with some of the academics at universities. In this study, direct approach adopted for the collection of primary data. Attempt was made to conduct interviews of 100 samples enterprises. Researcher has tried hard to conduct interview of concerned officials of all 100 sample enterprises. Finally, the researcher has been successful in conducting interviews of 76 samples enterprises. So, the success rate was 76%. Here, the researcher made appointment with the Managers or his Assistant of different sample enterprises as the case may be. For accounts related data, respective accounts personnel have been interviewed. The interviewees were given assurance on confidentiality of data and identity.

3.3.2 Historical (Secondary) Data

There has been used a large quantity of secondary data in this study. Secondary data were collected from published sources, official records of enterprise and unpublished data from the data base of Bangladesh Export Processing Zone Authority (BEPZA). This research is using the data from the BEPZA. BEPZA is the authority for any EPZ related issues. Among various available data sources in Bangladesh, BEPZA data could be considered the most reliable in relation to EPZs.

Secondary data for the study have been collected from the following published sources:

❖ Annual Reports of BEPZA.
❖ Annual Reports of enterprises
❖ BEPZA Bulletin.

❖ BEPZA Brochure

❖ Website of BEPZA and

❖ Related Websites

In addition, some unpublished data were also collected from official record of BEPZA and some sample enterprises.

3.4 Data Rearrange and Analysis

The data thus collected have been tabulated. The collected data and information have been carefully scrutinized and processed sequentially. Data have been classified, edited, analyzed and interpreted in both qualitative and quantitative fashion. Qualitative data have been analyzed in descriptive explanation. Quantitative data have been analyzed by using different relevant techniques through SPSS and Excel. The study has used different techniques such as financial, statistical and economical for analysis of data; and some parametric tests for testing hypothesis. Financial techniques have been used in the study which covers Return on Sales, Return on Investment and Sales per Employee, etc. Statistical techniques have been used in the study, such as Mean, Standard Deviation, ANOVA and trend analysis. Economical analysis covers Growth of Export, Growth of Employment and Efficiency rate of land uses (Export per Square Meter Land uses in EPZ), Value addition etc. Moreover, like Almazari (2011) researcher ranks the enterprises according to those ratios, values and percentages. At last, the findings of the research work have been presented in a thesis form with tables and graphs.

3.4.1 Variable and Analysis Matrix

Table: 3.2: Variable and Analysis Matrix of the study

Name of Analysis		Name of Variables	Name of Analysis Groups		
			A. Location (EPZ)	B. Type of Business	C. Line of Business
A. Growth Analysis		Export Growth rate	%	%	%
		Growth of Employee	%	%	%
B. Productivity Analysis	Investment	Export on Investment	%	%	%
	Labor	Export Per Employee	('000 USD)	('000 USD)	('000 USD)
	Land	Export Per SqM	(USD)	(USD)	(USD)
C. Profitability Analysis		Return on Sales	%	%	%
		Return on Investment	%	%	%
D. Value addition		Contribution of Value adds.	%	%	%
		Value Add per Employee	('000 USD)	('000 USD)	('000 USD)

As it is furnished in the table 3.2, researcher analyzes each variable from three view points, i.e., location of business, type of ownership of the business and industry wise business. The variables are used for checking four types of performance, i.e., (a) growth analysis, (b) productivity analysis, (c) profitability analysis and (d) value addition measure.

3.4.2 Analysis of variance (ANOVA)

Analysis of variance (ANOVA) is a statistical procedure concerned with comparing means of several samples. It can be thought of as an extension of the t-test for two independent samples to more than two groups. The purpose is to test for significant differences between class means, and this is done by analysis of variances. The ANOVA test of the hypothesis is based on a comparison of two independent estimates of the population variance.

ANOVA is the most commonly quoted advanced research method in the professional business and economic literature. This technique is very useful in revealing important information particularly in interpreting experimental outcomes and in determining the influence of some factors on other processing parameters.

3.4.3 Standard Deviation (SD)

The standard deviation is by far the most important and widely used measure of studying variation. Its significance lies in the fact that it is free from those defects from which the earlier methods suffer and satisfies most of the properties of a good measure of variation. It is a measure of how much "spread" of "variability" is present in the sample. If all the members in the samples are very close to each other, the standard deviation is close to zero. If the numbers are well dispersed, the standard deviation will tend to be large. Standard Deviation is also known as root mean square deviation for the reason that it is the square root of the means of square deviations from the arithmetic mean (Gupta and Gupta, 2010; Zikmund et al., 2011)

$$SD = \frac{\sum (X - \overline{X})}{N}$$

Where,

$\overline{X}$ =Mean of the series

$X - \overline{X}$ = Deviation from the mean

N = Number of items.

CHAPTER 04

GROWTH OF SALES/EXPORT IN EXPORT PROCESSING ZONES

4.1. Preamble of Export

4.2. Analysis of Export and its Growth Rates as per location of the Business

4.2.1 Analysis of Export Volume as per location of the Business

4.2.2 Analysis of Export Growth Rates as per location of the Business

4.3. Analysis of Export and its Growth Rates as per Ownership Type of the Business

4.3.1 Analysis of Export Volume as per Ownership Type of the Business

4.3.2 Analysis of Export Growth Rates as per Ownership Type of the Business

4.4 Industry Wise Export

4.4.1 Industry Wise total Export

4.4.2 Export Growth Rate

4.5 Findings

4.1. Preamble of Export

Potential benefit of EPZs is that their production will be exported. So export volume is a measure of EPZ performance. As enterprises operating in EPZs are 100% export oriented, the researcher used the sales and the export as the same term. Adding value to EPZ exports adds value to the overall country economy, as well as providing valuable foreign exchange. BEPZs have generated US$ 34.21million in 1989-90 compared to US$5,525.34 million in 2013-14, which is a fourfold increase in the volume of exports.
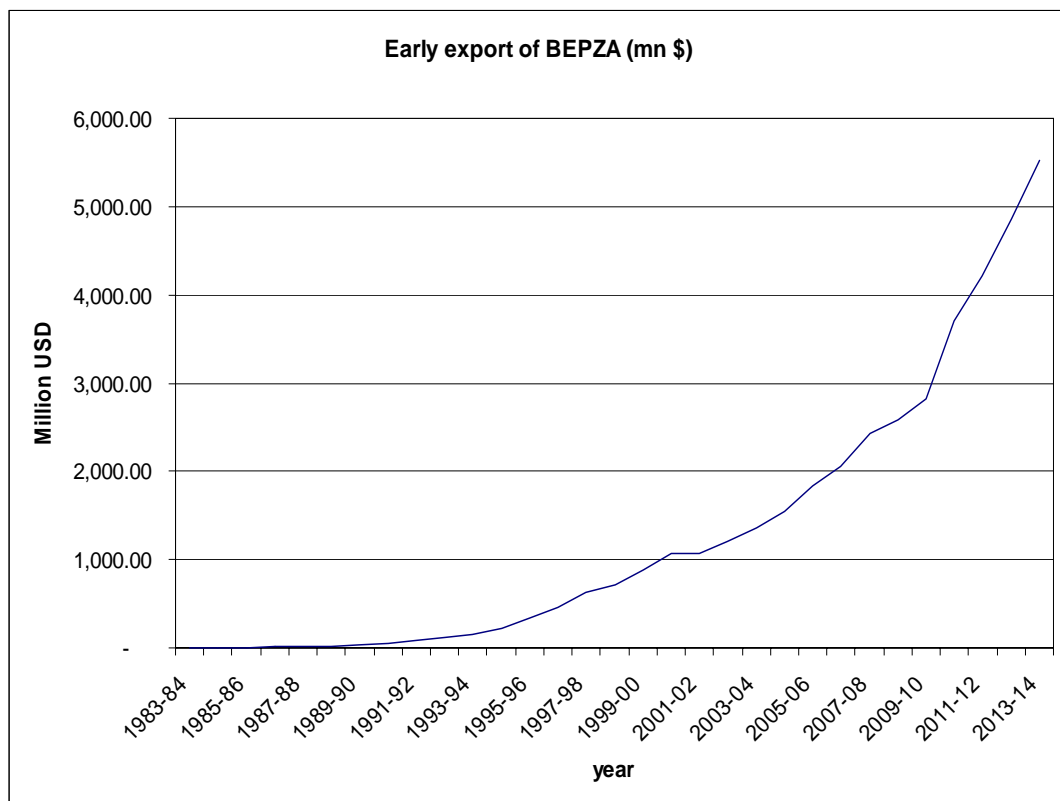
Figure 4.1.1: Yearly Export in Million US$ during financial year 1983-84 to 213-14.

Figure 4.1.1 shows the total exports of BEPZs from 1983-94 to 2013-14. BEPZs have generated US$ 34.21 million in 1989-90, US$ 228.25 million in 1994-95, US$

890.81million in 1999-00, US$ 1,836.17million in 2005-06, US$ 2822.53 million in 2009-10 and US$ 5,525.34 million in 2013-14. The trend was clearly upward and the individual EPZ's export was rising, the number of EPZs was also increasing and these two factors led to total export expanding. From 1983-93 when there was only one export processing zone, the total export volume increased at a relatively slow pace, after this export volume rose sharply.

4.2. Analysis of Export and its Growth Rates as per location of the Business:

As it is discussed in chapter 3, export was analyzed through two fashions - one is EPZ wise export volume and another is EPZ wise export growth rate for better understanding of the performance of BEPZA regulated enterprises in Bangladesh during study period (FY 2009-10 to 2013-14).

4.2.1 Analysis of Export Volume as per location of the Business:

Table 4.2.1 shows the average exports of individual EPZs from FY 2009-10 to FY 2013-14 in million US Dollar. As total export of BEPZs are dominated by the Chittagong and Dhaka EPZs. During the study period (FY 2009-10 to FY 2013-14) average export of Chittagong, Dhaka, Karnaphuli, Adamjee, Comilla, Mongla, Ishwardi and Uttara were US$1,860.47, US$1,614.20, US$ 269.33, US$ 227.20, US$ 155.11, US$ 48.18, US$ 44.96 and US$15.66 million respectively. However, total exports of individual enterprise are increasing year- by- year like total export of EPZs.

Table 4.2.1: Export Volumes in Million US$ of different EPZs in Bangladesh with average and rank.

EPZs	Financial Year					Mean	Rank
	'09-10	'10-11	'11-12	'12-13	'13-14		
Chittagong	1,333.54	1,667.07	1,942.82	2,097.30	2,261.62	1,860.47	1
Dhaka	1,216.49	1,521.79	1,614.46	1,780.73	1,937.51	1,614.20	2
Karnaphuli	56.99	138.16	245.06	379.61	526.85	269.33	3
Adamjee	103.66	164.68	207.33	274.1	386.24	227.2	4
Comilla	95.34	145.47	148.36	176.94	209.42	155.11	5
Mongla	7.29	27.94	54.25	74.11	77.29	48.18	6
Ishwardi	7.54	25.97	41.54	56.58	93.17	44.96	7
Uttara	1.89	6.78	16.03	20.39	33.23	15.66	8

Source: BEPZA Data base.
Note: Data has been compiled by the researcher

Figure 4.2.1 shows the average export of individual EPZs from FY 2009-10 to FY 2013-14 in percent. In term of total export volume, Chittagong (43.93%) stood first position, Dhaka (43.93%) stood second   position, Karnaphuli (43.93%) stood third position, Adamjee (43.93%) stood 4th position, Comilla (43.93%) stood 5th position, Mongla (43.93%) stood 6th position, Ishwardi (43.93%) stood 7th position and Uttara (43.93%) stood 8th position as their rank. It also shows that Chittagong and Dhaka EPZs accounted for over 82% of BEPZs exports. The other EPZs have been established since 2000, within the last decade. Among them, Karnaphuli, Adamjee and Comilla show a relatively competitive performance, though they are still far behind from CEPZ and DEPZ. Other three EPZs: Mongla, Ishwardi and Uttara show very poor contribution in term of export volume.

EPZ wise Average Export Contributions

Mongla 1.14%

Uttara 0.37%

Karnaphuli 6.36%

Ishwardi 1.06%

Adamjee 5.36%

Chittagong 43.93%

Dhaka 38.11%

Comilla 3.66%

Figure 4.2.1: Average exports contribution of individual EPZs.

4.2.2 Analysis of Export Growth Rates as per location of the Business:

From the above discussion researcher considers only export volume as an indicator of performance but volume of export or sales always does not show the well condition of a company, but increase of export volume year- by- year gives a strong financial message to the stakeholders of a company. The percent sales growth is one of many financial analysis tools used to assess a company's overall strength in the marketplace. As discussed in literature review, Chong (2008) and other researchers gave opinion that growth rate of sales was well-defined indicator in the area of performance evaluation. Export Growth Rate can be determined as follows:

$$\text{Export Growth Rate} = \frac{\text{Current year Export} - \text{Previous year export}}{\text{Previous year export}} \text{X} 100$$

From the analysis of the table 4.2.2, it has been found that year wise export growth rate was the highest in FY 2010-11 and the lowest in FY2012-13 over the study periods. All the EPZs showed the highest growth rate in FY 2010-11. Adamjee, Comilla and Dhaka EPZs showed the lowest export growth rate in FY 2011-12, whereas Chittagong, Karnahpuli and Mongla EPZ showed the lowest export growth rate in FY 2013-14. On the other hand, Uttara and Ishwardi EPZ showed the lowest export growth rate in FY 2012-13. After calculating the mean, it is seen that Uttara stood first position (121.29), Mongla second position, Ishwardi (101.31) third position, Karnaphuli (78.38) 4th position, Adamjee (39.47) 5th position, Comilla (23.05) stood 6th position, Chittag. (14.33) stood 7th position and Dhaka (12.57) stood 8th position as their rank. Unlike export volume, export growth rate of, Uttara, Mongla, Ishwardi and Karnaphuli are high. They increase their export volume year-by- year than other EPZs. On the other hand, it has also been found that export growth rate of Dhaka and Chittagong EPZs was low and export growth rate of Adamjee and Comilla EPZ was moderate. The study has also disclosed that the standard deviations in export growth rate for Uttara, Mongla, and Ishwardi are high; for Karnaphuli, Adamjee and Comilla are moderate and Dhaka and Chittagong EPZs are low. This has indicated that export growth rate of Uttara, Mongla and Ishwardi has been more volatile than other EPZs and Dhaka and Chittagong are steadier across the study period.

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Table 4.2.2: Export growth rate in percentage, with average, standard deviation and rank of enterprise.

Financial Year	Adamjee	Chittagong	Comilla	Dhaka	Ishwardi	Karnaphuli	Mongla	Uttara
2010-11	58.87	25.01	52.57	25.10	244.40	142.44	283.19	258.46
2011-12	25.90	16.54	1.99	6.09	59.95	77.37	94.19	136.52
2012-13	32.21	7.95	19.26	10.30	36.21	54.90	36.59	27.18
2013-14	40.91	7.83	18.36	8.80	64.68	38.79	4.29	62.99
	Descriptive Measures							
Mean	39.47	14.33	23.05	12.57	101.31	78.38	104.57	121.29
SD	14.32	8.20	21.22	8.53	96.20	45.55	124.75	102.15
Rank	5	7	6	8	3	4	2	1

Source: BEPZA Data base.
I. Note: Data has been compiled by the researcher.
II. Export Growth Rate $= \dfrac{\text{Current year Export} - \text{Previous year export}}{\text{Previous year export}} \times 100$

From the observation of figure 4.2.2, it has been found that export growth rate was the highest in FY 2010-11 and decreased by year and the lowest in FY2012-13 over the study periods. *As their mean export growth rate is high, Uttara, Mongla, Ishwardi and Karnaphuli shall increase their export quicker than other EPZs, specially newly established Karnaphuli EPZ is showing competitiveness very quickly.*

Table 4.2.2 shows the data regarding export growth rate of eight EPZs for different financial years. From the observation of data, it is found that there are many differences among the variables. In the mean export growth rate, Uttara (121.29)

stood first position and Dhaka (12.57) stood 8th position as their rank. But it should check whether the difference is statically significant or not. For this purpose the researcher deploys the statistical method of Analysis of Variances (ANOVA) for testing the significance.
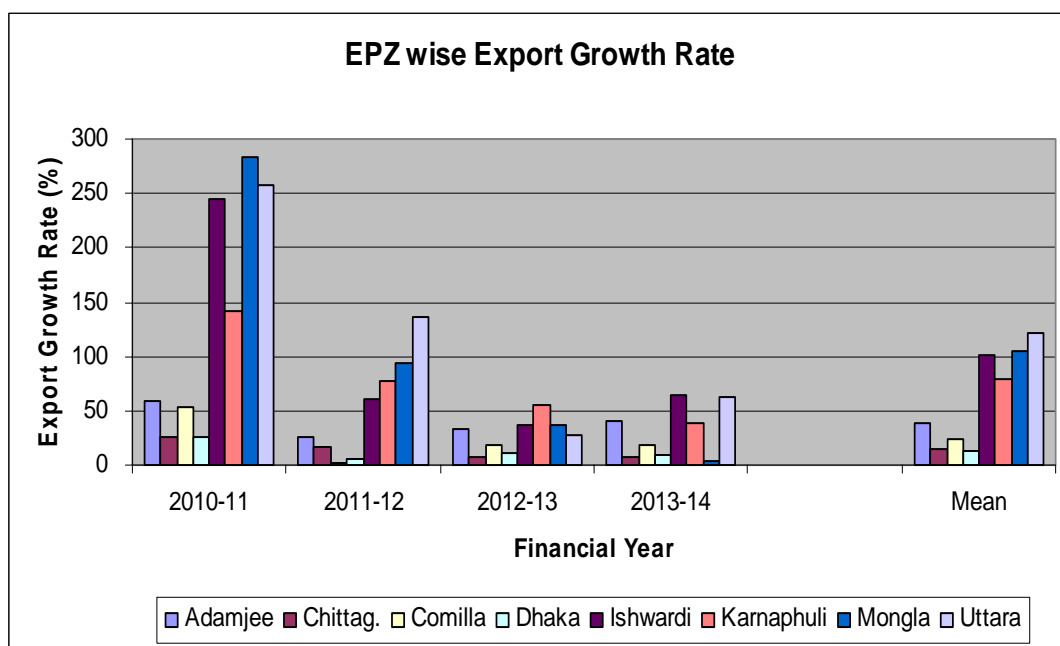
Figure 4.2.2: EPZ wise Export Growth Rate

Table 4.2.3: Analysis of variances of   export growth rate:

ANOVA					
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*
Between Groups	55523	7	7931.9	1.6645	0.165666
Within Groups	114367	24	4765.3		
Total	169890	31			

Table 4.2.3 shows the overall significance of the model with a p-value of 0.16166 which is grater than 0.05. So, it is concluded that there is no significant difference among the export growth rate of EPZs across the study period.

04.3. Analysis of Export and its Growth Rates as per Ownership Type of the Business:

As it was discussed in the chapter 02, there are three types of ownership business available at different EPZs in Bangladesh. Type – A: 100% foreign ownership, Type – B: Joint venture between Bangladeshi and foreign investors, Type – C: 100% Bangladeshi ownership. In this section, researcher wants to analyze export through two fashions- one is ownership Type of the Business wise export volume and another is Ownership Type of the Business wise export growth rate for better understanding of the performance of BEPZA regulated enterprises in Bangladesh during study period (FY 2009-10 to 2013-14).

04.3.1 Analysis of Export Volume as per Ownership Type of the Business:

Table 4.2.1 below shows the Export Volumes in thousand US$ of three types of business in EPZs with average and rank. In the table it is clear that 10% foreign ownership business is dominating over the other two in the term of export contribution. Export contribution of A- type 100% foreign ownership business in 2009-10 was 2,140,406.58 thousand USD and continued with a steady progress by 4,157,605.28 thousand USD in the 2013- 14 financial year. Again, joint venture's export contribution also enjoyed steady progress from 1,81,380.99 thousand USD to 4,23,702.75 thousand USD by the financial year 2009-10 to 2013-14 respectively. Export contribution of C-type 100% local ownership business (500,949.78 thousand USD, in 2009-10 and 944,018.68 thousand USD, in 2013-14) held the second position as their rank.

Table 4.3.1: Export Volumes in thousand US$ of three types of business in EPZs with average and rank.

YEAR	100% Foreign	Joint Venture	100% Local
	'000 USD	'000 USD	'000 USD
2009-10	2,140,406.58	181,380.99	500,949.78
2010-11	2,833,569.27	251,375.82	612,899.78
2011-12	3,252,253.98	290,068.16	727,522.46
2012-13	3,625,836.26	421,807.18	812,109.60
2013-14	4,157,605.28	423,702.75	944,018.68
	Descriptive Measures		
Mean	3,201,934.27	313,666.98	719,500.06
Rank	1	3	2

Source: BEPZA Data base.
Note: Data has been compiled by the researcher.

The table 4.3.1 also shows the average export contribution of A-type 100% foreign ownership business is 3,201,934.27 thousand USD, B-type Joint venture business is 313,666.98 thousand USD, and C-type 100% Bangladeshi ownership business is 719,500.06 thousand USD during the study period (form FY 2009-10 to 2013-14).

Figure 4.3.1 below shows the average exports of individual business type from FY 2009-10 to FY 2013-14 in percentage. The pie chart shows A-type 100% foreign ownership has the lion portion of export contribution, this type belonged to first position with remarkable percentage (75.60%) of total export in EPZ business during the study period which is ten times to B type business and about five times to C type business. Both B and C type business are far behind from A- type business individually and jointly, though the C-type 100% local ownership business stood

second position with 16.99% and B type joint venture business stood third and last position with 7.41%. .

Ownership type wise Average Export Contributions

Local 16.99%
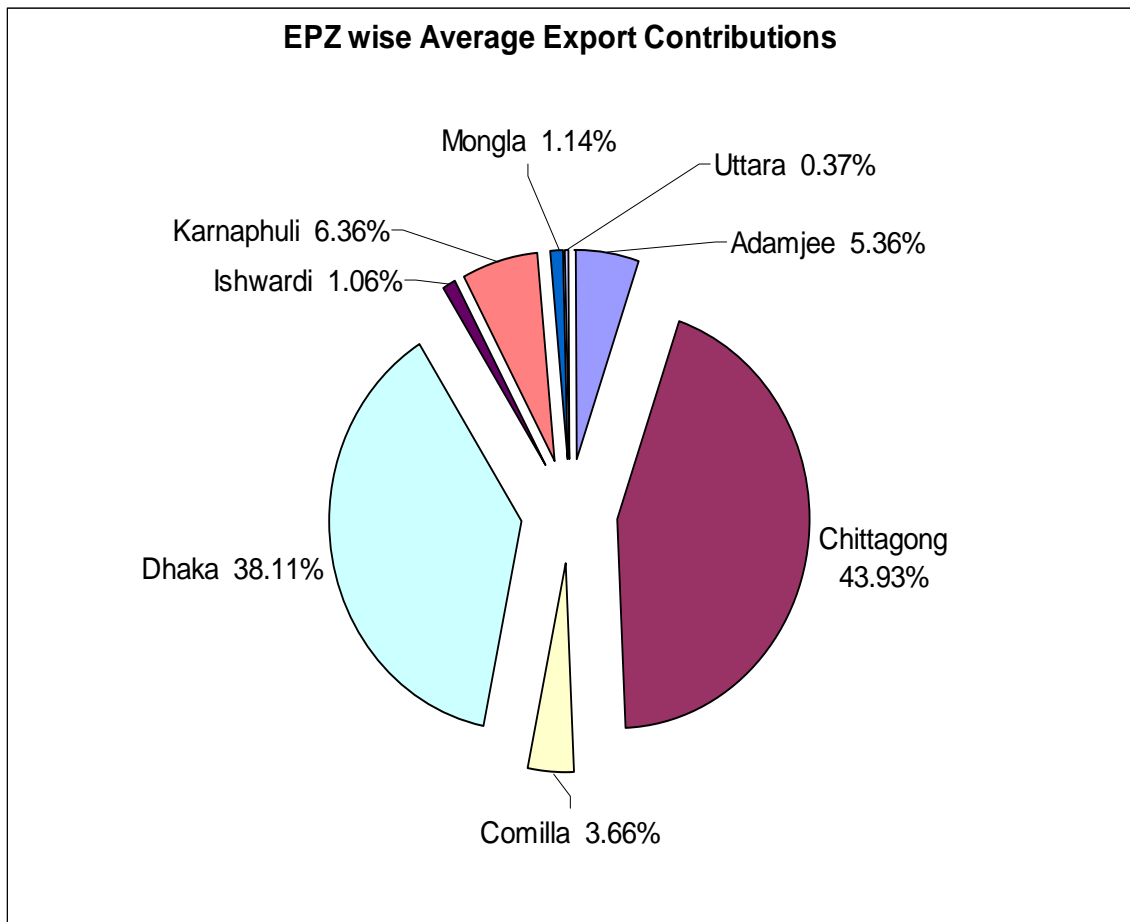
Joint Venture
7.41%

Foreign 75.60%
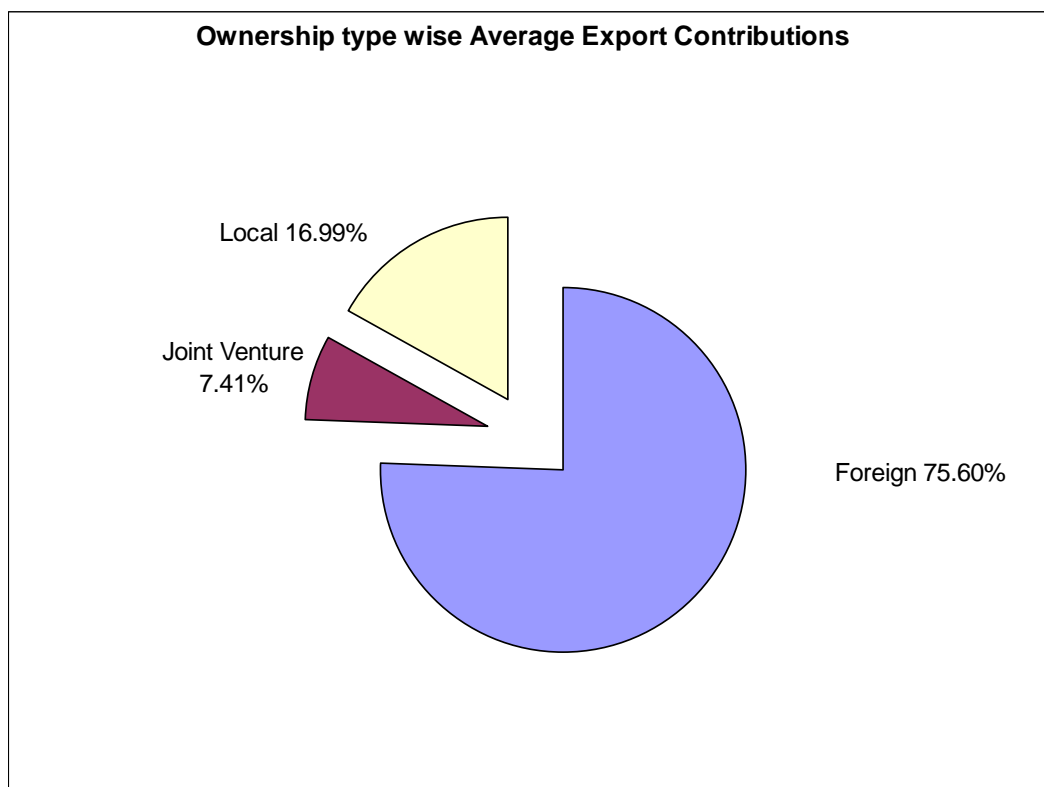
Figure 4.3.1: Average exports contribution of individual EPZs.

04.3.2 Analysis of Export Growth Rates as per Ownership Type of the Business:

The rationality of growth analysis for the study has been discussed in literature review and previous section (4.2.2). In the above section researcher considers only export volume as an indicator of performance but volume of export or sales always does not show the well condition of a company, though increase of export volume year- by-year gives a strong financial message to the stakeholders of a company for a long run. Now, the researcher will discuss the growth rate of export according to ownership type of business. Export Growth Rate can be determined as follows:

$$\text{Export Growth Rate} = \frac{\text{Current year Export} - \text{Previous year export}}{\text{Previous year export}} \text{X} 100$$

From the analysis of table 4.3.2, it has been found that year wise export growth rate was the highest in FY 2010-11 and the lowest in FY2013-14 over the study periods. After calculating the mean, it is seen that the B-type Joint venture business stood first position with 24.96% growth rate, A- type 100% foreign ownership business stood second position with 18.33% growth rate, C-type 100% Bangladeshi ownership business stood third position with 17.23% growth rate as their rank. Unlike export volume, export growth rate of B-type Joint venture business was high. They increased their export volume year- by- year than A and C types business. On the other hand it has also been found that export growth rate of C-type 100% Bangladeshi ownership business was low and A- type 100% foreign ownership business was moderate. The study has also disclosed that the standard deviations in export growth rate for B-type Joint venture business was high; A- type 100% foreign ownership business was moderate and C-type 100% Bangladeshi ownership business was low. This indicates that export growth rate of B-type Joint venture business had more fluctuations than others and C-type 100% Bangladeshi ownership business had been steadier across the study period.

Table 4.3.2: Export growth rate in percentage with average, standard deviation and rank of enterprise.

Financial Year	100% Foreign	Joint Venture	100% Local
2010-11	32.38	38.59	22.35
2011-12	14.78	15.39	18.70
2012-13	11.49	45.42	11.63
2013-14	14.67	0.45	16.24
	Descriptive Measures		
Mean	18.33	24.96	17.23
SD	9.49	20.79	4.50
Rank	2	1	3

Source: BEPZA Data base.
I.   Note: Data has been compiled by the researcher.
II. Export Growth Rate $= \dfrac{\text{Current year Export} - \text{Previous year export}}{\text{Previous year export}} \times 100$
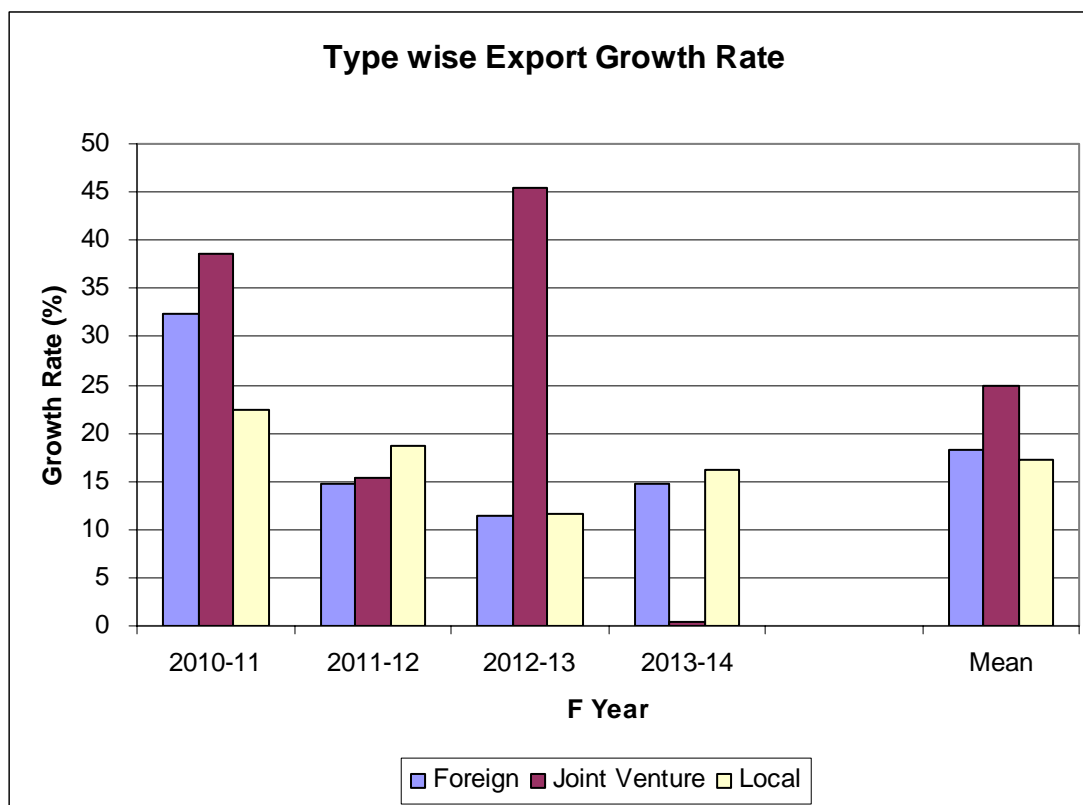
Figure 4.3.2: Ownership type wise Export Growth Rate

Figure 4.3.2 shows the information about ownership type wise (Foreign, Joint venture and Local) export growth rate over consecutive four financial years (from FY 2010-11 to 2013 – 14) in percent.

In the financial year 2010-11, it is clear that joint venture ownership enterprises' export growth rate (38.59%) dominated the others, While foreign ownership enterprises' export growth was (32.38%) and local ownership enterprises' export growth rate was (22.35%) stood second and third respectively. In 2011-12, both Foreign and Joint venture ownership enterprises' export growth rates were almost same and local ownership enterprises' growth rate (18.70%) was somewhat progressive, though total ownership growth rate decreased.

In 2012 -13, Joint venture ownership enterprises' growth rate (45.42%) outnumbered foreign ownership enterprises' (11.49%) and local ownership enterprise' export

growth rate (11.63%), though in 2013-14, joint venture had fallen at the lowest point (0.45%).

The mean shows that there was no such difference between foreign ownership enterprises' (18.33%) export growth rate and local ownership enterprise' export growth rate (17.23%), whereas Joint venture ownership enterprises' export growth rate was much more higher (24.96%) , while the whole Industry export growth rate was 20.17%.

4.4 Industry Wise Export:

As is described in chapter 03, the researcher wants to explore the performance of every stratum from three points of view like- location of the Business, types of ownership of enterprise and the types of industry which are furnished below:

BEPZA records twenty three types of industry are operating in EPZs like Garments, Garments Accessories, Knitting and Textile, Textile, Footwear and Leather, Terry Towel, Electronics and Electrical, Plastic Goods, Metal Products, Agro Products, Jewelry, Tent, Service Oriented Industries, Cap, Chemical, Furniture, Ropes, Power Industry, Paper Products, Fishing Reel and Golf items, Sports Goods, Toys and Miscellaneous (BEPZA Bulletin, April-June 2014). The researcher has observed that a few types of industry have no remarkable investment and export as well as employment from the very beginning to FY 2013-14. Therefore, researcher re-grouped the industry by six groups as per their sharing of business in EPZ-

1.Garments and Cap, 2. Garments Accessories, 3. Knitting, Textile, Tent and Terry towel, 4. Footwear and Leather goods, 5. Electronics and Electrical goods, 6. Service and others. Of them, the industries which show better performance will be discussed in this section through three approaches (i.e., total Export, new job creation and Export growth rate).

4.4.1 Industry Wise total Export:

Industry wise export assessment is one of the key analyses for this chapter as well as my work that has been discussed in this sub section. Table 4.4.1 below shows the information of business line wise Export Contribution of the different sectors over the five financial years (2009-10 to 2013-14) in million US$ with their average and rank. It is seen that in the financial year 2009-2010, Export contribution of Garments (1,399.53 million US$) was the highest while Electronics and Electrical (45.90 million US$) stood at the lowest point. In the next years the trend remained almost same, though every sector enjoyed a constant progress. In 2013-14, garments' export contribution was 3,174.91 million US$ and knitting and textile was of 1,193.95 million US$, garments accessories was of 483.91 million US$, service and others was of 352.03 million US$, footwear and leather was of 256.84 million US$ and electronics and electrical export contribution was of 63.65 million US$. Export was dominated by the Garments and Cap industry and followed by Knitting and Textile industries then other industries came to the view. The mean of business line wise export contributions shows that garments export contribution was (2,290.16 million US$) stood 1st, knitting and textile (1,075.472 million US$) stood second, garments accessories (372.03 million US$) stood third, service and others (253.07 million US$)

stood 4th, footwear and leather (59.31 million US$) stood 5[th] and the export contribution of electronics and electrical (21.40 million US$) stood in 6th position.

Table 4.4.1: Export in million USD and their distributions among the individual industry with their rank during the study period.

Financial Year	Garments	Garments Accessories	Knitting & Textile	Footwear & Leather	Electronics & Electrical	Service and Others
2009-10	1,399.53	288.45	861.75	96.65	45.90	130.35
2010-11	1,848.97	315.73	1,102.38	146.10	63.40	221.27
2011-12	2,379.95	336.60	1,023.45	170.00	82.28	277.56
2012-13	2,647.47	435.45	1,195.82	194.84	102.05	284.12
2013-14	3,174.92	483.92	1,193.95	256.84	63.66	352.04
	Descriptive Measures					
Mean	2,290.17	372.03	1,075.47	172.89	71.46	253.07
SD	690.36	83.59	139.31	59.31	21.40	82.81
Rank	1	3	2	5	6	4

Source: BEPZA Data base.
Note: Data has been compiled by the researcher.

The figure 4.4.1 (pie chart) shows the business line wise average export contributions of six different sectors over the five consecutive financial years in percent. In the pie chart, it is found that the most dominating garments industry contributed 54.08%, knitting and textile industry 25.39% stood first and second respectively, while garments accessories industry 8.78%, service and others industry 5.98%, footwear and leather industry 4.08% and electronics and electrical industry 1.69% stood third , 4th, 5th and 6th respectively. The lion portion of the Export belongs to garments and cap industry (54.08%) then Knitting and textile industry belongs to 25.39% and the contributions of other industries are not competitive.
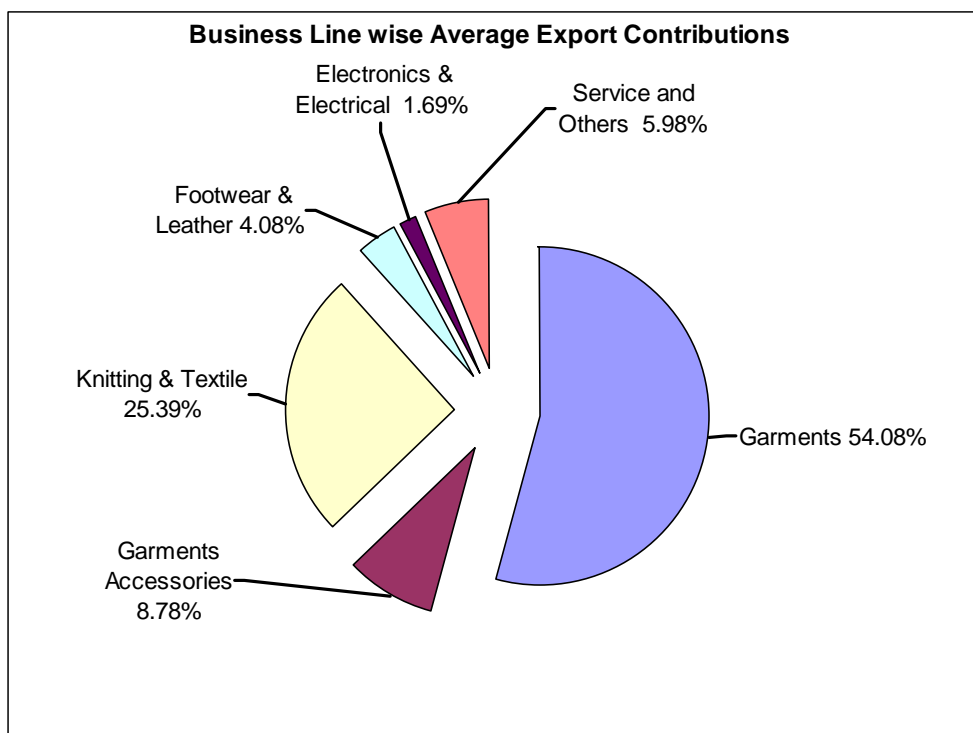
Figure 4.4.1: Contribution of Average Export of individual Industry in percent for five financial Year (2009/10 – 2013/14).

4.4.2 Export Growth Rate:

As it is discussed in literature review, Chong (2008) found out that growth rate of export was a well define indicator in the area of performance evaluation for the long term perspective. On the above discussion researcher considers total export contribution in thousand US Dollar and percentage as a marker of performance evaluation but those do not always show potential state of a company due to their size, nature and others (i.e. a large enterprise should have a good volume of export) but growth of export year- by- year gives a strong message to the stakeholders about an enterprise. Therefore, researcher judges the growth rate of six kinds of industries in this section in percent.

The table 4.4.2 of Business line Industry wise export Growth rate (%) shows different sectors' growth in consecutive four financial years (FY 2010-11 to FY 2013-14). In

2010-11 financial year, it is observed that Garments industry enjoyed 32.11%, Garment Accessories industry 9.45%, Knitting and Textile industry 27.92%, Footwear and leather industry 51.16%, electronics and electrical industry 38.12% and service others industry 69.75%, However, in the next three years' Export growth rate seemed shrinking. Knitting and Textile industry went down to negative growth rate (-7.16%) in 2011-2012, and in 2012-13 service others industry' growth rate suffered the worst by (2.36%). In the 2013-14 financial year, knitting and textile industry remained almost marginal (0.16%) and Electronics and Electrical industry suffered the worst negative growth rate by (-37.62%).

Table 4.4.2: Industry Wise Export Growth Rate in Percent with Average, Standard Deviation and Rank.

Financial Year	Garments	Garments Accessories	Knitting & Textile	Footwear & Leather	Electronics & Electrical	Service and Others
2010-11	32.11	9.45	27.92	51.16	38.12	69.75
2011-12	28.72	6.61	(7.16)	16.36	29.79	25.44
2012-13	11.24	29.37	16.84	14.61	24.03	2.36
2013-14	19.92	11.13	(0.16)	31.83	(37.62)	23.90
						Descriptive Measures
Mean	23.00	14.14	9.36	28.49	13.58	30.36
SD	9.37	10.32	15.96	16.98	34.62	28.29
Rank	3	4	6	2	5	1

Source: Unpublished BEPZA Data base and Primary Data through questionnaire.
I.   Note: Data has been compiled by the researcher

II. Growth Rate =

$$\frac{\text{No. of Current year Export} - \text{No. of previous year Export}}{\text{No. of previous year Export}} \times 100$$

The average export growth rate of different sectors shows that service & others industry (30.36%) dominated over other sectors, stood 1st, Footwear and leather industry (28.49%) second , Garments industry (23.00%) third , Garments and Accessories industry (14.14%) 4th, Electronics and Electrical industry(13.58%) 5th and Knitting and Textile industry stood 6th by (9.36%).

The study finds a different picture compare to the total export with export growth rate. The highest export contributing garments industry becomes third in growth rate. Conversely, minimum export contributing service and others industry becomes first in term of growth rate. The table shows that mean Export growth rate is the highest for service and others business but it does not represent any basic industry, it is of ungrouped various industry. So, the researcher does not give any concentration on it, though it becomes 1st. Electronics and electrical industry and service and others have greater standard deviation 34.62 and 28.29 respectively. It explains growth of these industries is more volatile than others. Garments and garments accessories industries have minimal standard deviation 9.37 and 10.32 respectively which show the smooth continuation of growth rate of these industries than other industries.

The figure 4.4.2 shows yearly and average export growth rate of six kinds of industries in percent for four financial years. By analyzing the figure, it is found that growth rates are decreasing year- by- year among the industries within the EPZs. The export growth is the highest in FY 2010-11 for services and others industry (69.75%) and the lowest in FY 2013-14 for electronics and electrical industry (-37.62%). But in average growth rate of the industries there is no negative growth for any industry, it means all six kinds industries in EPZs are boosting day by day.

Business line wise Export Growth Rate
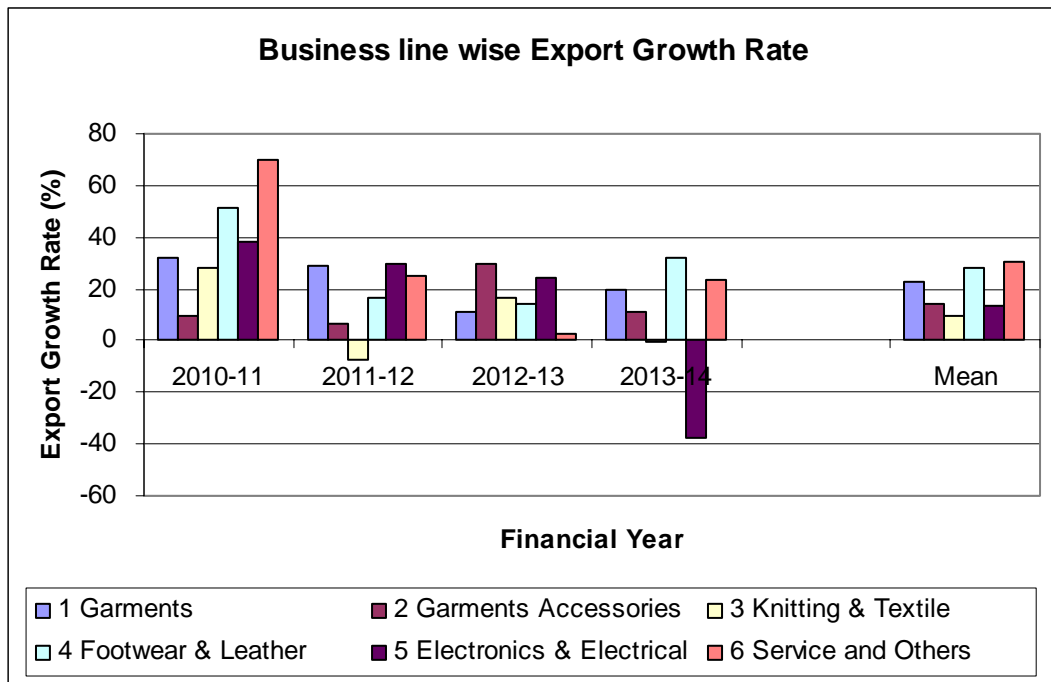
Figure 4.4.2: Industry wise Export Growth Rate

4.5 Findings:

The total export of BEPZs is dominated by the Chittagong and Dhaka EPZs. The other EPZs have been established since 2000, within last decade. Among them, Karnaphuli, Adamjee and Comilla show a relatively competitive performance, though they are still far behind from CEPZ and DEPZ; other three EPZs; Mongla, Ishwardi and Uttara show very poor contribution in term of export volume. After 2000 total export volume of BEPZs rose sharply; so, we can conclude that the overall export performance is remarkable.

Unlike export volume, weak EPZs like Uttara, Mongla and Ishwardi increase their export year- by- year than other EPZs. On the other hand, it has also been found that export growth rates of Dhaka and Chittagong EPZs were low but steady and Karnaphuli, Adamjee and Comilla were moderate. However, there is no negative

growth in the EPZ during the study period and differences of export growth rate among the EPZs are not statistically significant.

A-type 100% foreign ownership has the lion portion of export contribution, this type belongs to first position with remarkable percentage (75.60%) of total export volume of EPZ business, during the study period A-type enterprises is ten times to B type business and about five times to C type business. Both B and C type business are far behind from A- type business individual and jointly, though the C-type 100% local ownership business stood second position with 16.99% and B type joint venture business stood third and last position with 7.41%.

It is seen that the B-type Joint venture business stood first position with 24.96% growth rate, A- type 100% foreign ownership business stood second position with 18.33% growth rate, C-type 100% Bangladeshi ownership business stood third position with 17.23% growth rate as their rank. Unlike export volume, export growth rate of B-type Joint venture business is high. They increase their export volume year-by- year than A and C types business. On the other hand, it has also been found that export growth rate of C-type 100% Bangladeshi ownership business is low and A-type 100% foreign ownership business is moderate. However, there is no negative growth in the EPZ during the study period.

Export (industry wise) is dominated by the Garments and Cap industry and followed by Knitting and Textile industries then other industries come to account. The lion portion of the Export belongs to garments and cap industry (54.08%), then Knitting and textile industry belongs to 25.39% and contributions of other industries are not so competitive.

The study finds a different picture compare to the total export with export growth rate. The highest export contributing garments industry becomes third in growth rate. Conversely, minimum export contributing service and others industry becomes first in term of growth rate. The table shows that the mean Export growth rate is the highest for service and others business but it does not represent any basic industry, it is of ungrouped various industry. So, the researcher does not give any concentration on it, though it becomes 1st.

CHAPTER 05:

GROWTH OF MANPOWER EMPLOYED IN EXPORT PROCESSING ZONES

5.1 Preamble of Employment:

5.2 EPZ Wise Employment:

5.2.1 EPZ wise total employment:

5.2.2 New Job Creation:

5.2.3 Employment Growth Rate:

5.3 Ownership Type Wise Employment:

5.3.1 Ownership Type wise total employment:

5.3.2 New Job Creation:

5.3.3 Ownership Type Wise Employment Growth Rate:

5.4 Industry Wise Employment:

5.4.1 Industry Wise total employment:

5.4.2 Employment Growth Rate:

5.5 Findings:

5.1 Preamble of Employment:

The purpose of EPZs is to aid economic development. One way this could be judged is by employment and its growth. The number of jobs creation can be an indicator of measurement. Like export, employment of BEPZs is sharply increasing year- by- year but the study intends to find out the condition of individual strata.

As it is described in chapter 03, researcher intends to explore the performance of every variable from three points of view like- location of the Business, types of ownership of enterprise and the types of industry which are furnished below:

5.2 EPZ Wise Employment:

As it is discussed in chapter 01, there are eight EPZs operating in different territory of Bangladesh. Among them, the EPZ which show better performance will be discussed in this section with three approaches (i.e., total employment, new job creation and employment growth rate).

5.2.1 EPZ wise total employment:

EPZ wise total employment is one of the key analysis for this chapter as well as my thesis is discussed in this sub section. Table 5.2.1 below shows the total 3,89,017 local employees have been working in BEPZs and their distributions among the individual EPZ with their rank in June 2014. According to individual EPZ, Chittagong (1,82,621) stood first position, Dhaka(88,521) stood second   position, Karnaphuli (45,645) stood third   position, Adamjee (36,007) stood 4th position, Comilla (16,474) stood 5th position,   Uttara (11,139) stood 6th position, Ishwardi (7,194) stood 7th   position and Mongla (1416) stood 8th   position as their rank. The total

employment creation is dominated by the Chittagong EPZ and followed by Dhaka EPZ; Karnaphuli and Adamjee show competitiveness. On the other side, Comilla and Uttara show weak position but Ishwardi and Mongla are very poor in employment creation. However, a few numbers of foreign personnel are working in different Zones under BEPZA. BEPZA gives them work permit and others facilities so that our local workers can learn foreign technology by working with them. Total 1,999 foreign employees were working in 2013-14 financial year that figure was 1,278 in 2009-10 financial year.

Table 5.2.1: Total No. of Employee and their distributions among the individual EPZ with their rank as on June 2014.

Name of EPZ	No. of Employee		
	Local	Foreign	Rank
Chittagong	182,621	406	1
Dhaka	88,521	595	2
Karnaphuli	45,645	409	3
Adamjee	36,007	174	4
Comilla	16,474	199	5
Uttara	11,139	157	6
Ishwardi	7,194	49	7
Mongla	1,416	10	8
Total	3,89,017	1,999	

Source: BEPZA Data base.
Note: Data has been compiled by the researcher.

Figure 5.2.1 below shows the percent of employment of individual EPZ to the total job creation as on June 2014. Chittagong, Dhaka, Karnaphuli, Adamjee, Comilla, Mongla, Ishwardi and Uttara EPZ created 46.94, 22.76, 11.73, 9.26, 4.23, 2.86, 1.85, and 0.36 percent job respectively of total 3.89 million job creation by BEPZA regulated enterprise up to June 2014. The lion portion of the employment belonged to Chittagong (46.94%) EPZ then Dhaka acquired 22.76% and then other six EPZs were standing.
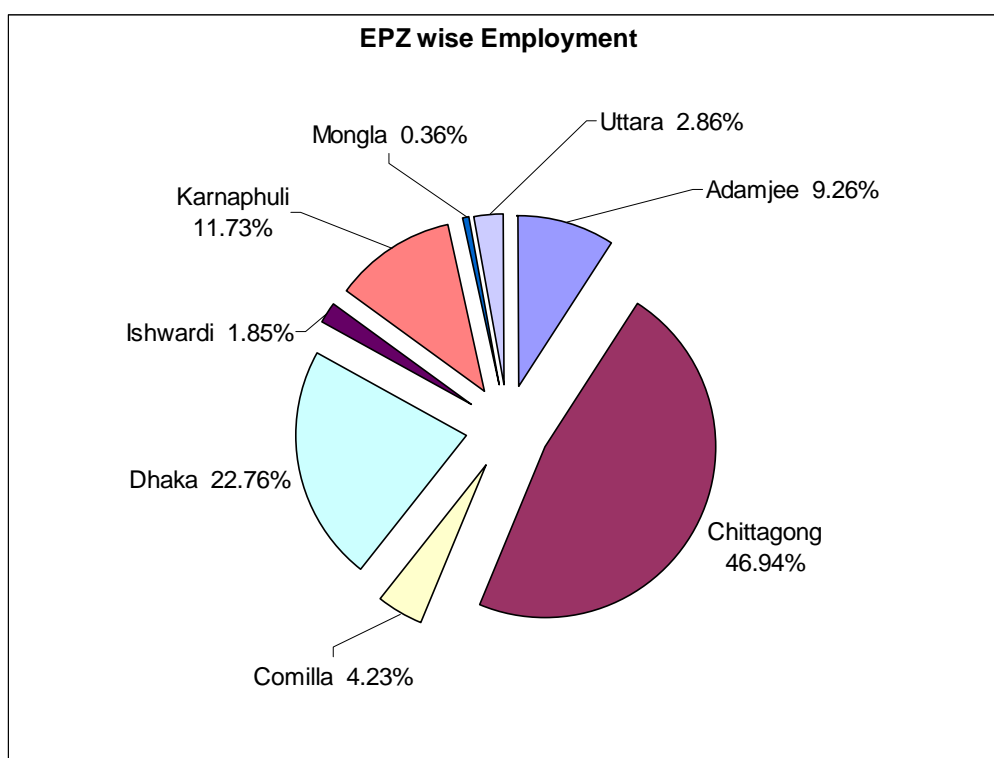
Figure 5.2.1: Contribution of Job creation of each individual EPZ up to June 2014.

5.2.2 New Job Creation:

Data on employment in BEPZs were obtained from the BEPZA. It assumes that old and established business has a large number of employees. So it is not rational to compare with new one, in the context of operational period, i.e., Chittagong was established around 31 years ago, while Karnaphuli was 8 years ago. Thus, researcher wants to compare cross-sectional data for last 5 fiscal years of all eight EPZs created new employment.

Table 5.2.2 below shows the yearly and average employment of each individual EPZ from FY 2009-10 to FY 2013-14 in number of employee. As cumulative employments of EPZs were dominated by the Chittagong EPZ, it also continued its

first position but Dhaka EPZ lost her second position in term of new employment. During the study period (FY 2009-10 to FY 2013-14) average number of new employment of Chittagong, Karnaphuli, Adamjee, Dhaka, Uttara, Comilla, Mongla and Ishwardi are 8,802 persons, 8,048 persons, 5,647 persons, 3,412 persons, 1,839 persons, 1,752 persons, 1,131 persons and 233 persons respectively. However, some negative figures were found in the table that means Chittagong EPZ cut 2,385 jobs in FY 2013-14, Comilla EPZ cut 748 jobs in FY 2009-10, Ishwardi EZP cut1,582 jobs in FY 2012-13 and Mongla EPZs cut 146 jobs in FY 2013-14. Other EPZs never cut any job during the period. On the other hand, Karnaphuli and Adamjee EPZs were very hopeful in the view of new job creation.

Table 5.2.2: EPZ wise yearly new employment with their mean and rank during the period.

YEAR	Chittagong	Karnaphuli	Adamjee	Dhaka	Uttara	Comilla	Ishwardi	Mongla
2009-10	12171	6271	4017	3165	1598	(748)	1491	99
2010-11	15669	8107	4367	8271	1172	3877	2032	171
2011-12	9822	7049	4861	2595	3795	1935	2593	948
2012-13	8732	12240	9857	2543	169	1937	(1582)	91
2013-14	(2385)	6575	5133	488	2460	1761	1123	(146)
Mean	8,802	8,048	5,647	3,412	1,839	1,752	1,131	233
Rank	1	2	3	4	5	6	7	8

Source: BEPZA Data base.
Note: Data has been compiled by the researcher.

Figure 5.2.2 shows the average new jobs creation by each individual EPZ in percent from FY 2009-10 to FY 2013-14. It is quiet clear that Chittagong continued with (28.52%) first position, from far behind Karnaphuli (28.08%) stood second position, Adamjee (18.30%) stood third   position, Dhaka (11.06%) stood 4th position, Uttara

(5.96%) stood 5th position, Comilla (5.68%) stood 6th position, Ishwardi (3.67%) stood 7th position and Mongla (0.75%) stood 8th position as their contribution in the view of new jobs creation during the study period.
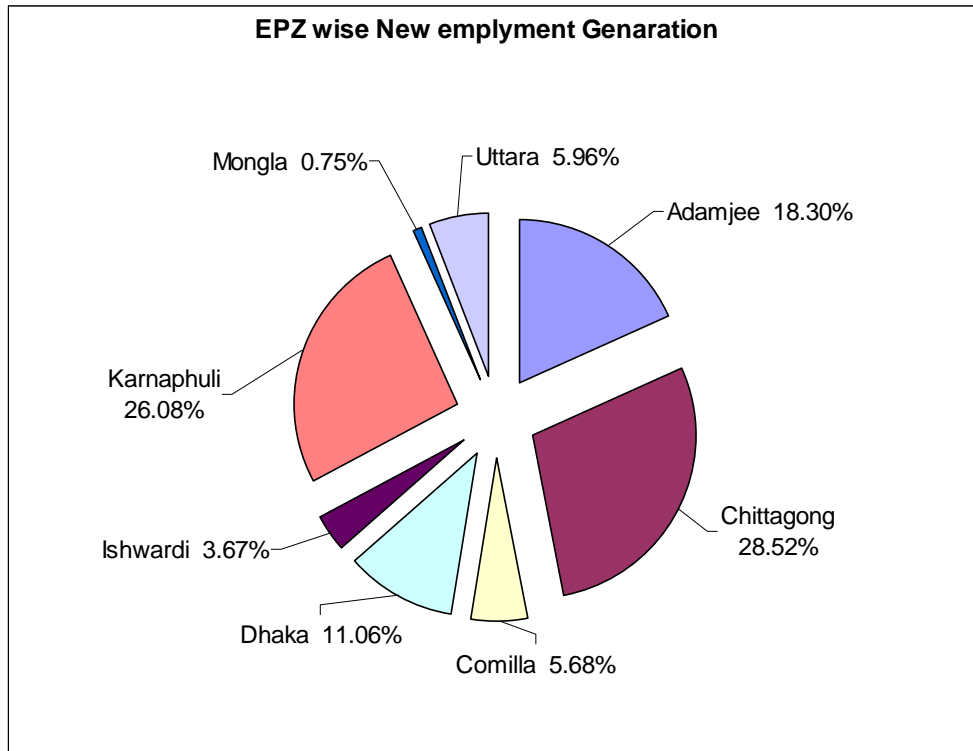
Figure 5.2.2 Average new employment contribution of each individual EPZ in percent.

5.2.3 Employment Growth Rate:

In the above discussion, researcher considers total employment contribution and new jobs creation in number and percentage as an indicator of performance evaluation. However, those do not always indicate potential condition of a company due to their size, nature and others (i.e. a big enterprise should have a good number of employees) but growth of employees year- by- year gives a strong message to the stakeholders about an enterprise. As discussed in literature review, Chong (2008) discovered that growth rate of employee is a well defined indicator in the area of performance

evaluation for the long term perspective. Growth Rate of Employee can be determined as follows:

Growth Rate of Employee =

$$\frac{\text{No. of Current year Employee} - \text{No. of previous year Employee}}{\text{No. of previous year Employee}} \text{X} 100$$

Table 5.2.3: Employment growth rate in % with average, standard deviation and rank of EPZs.

Financial Year	Adamjee	Chittagong	Comilla	Dhaka	Ishwardi	Karnaphuli	Mongla	Uttara
2009-10	51.69	8.78	(9.70)	4.43	97.01	116.07	39.13	82.16
2010-11	37.04	10.39	55.67	11.08	67.11	69.44	48.58	33.08
2011-12	30.09	5.90	17.85	3.13	51.25	35.64	181.26	80.49
2012-13	46.90	4.95	15.16	2.97	(20.67)	45.62	6.19	1.99
2013-14	16.63	(1.29)	11.97	0.55	18.50	16.83	(9.35)	28.34
	Descriptive Measures							
Mean	36.47	5.75	18.19	4.43	42.64	56.72	53.16	45.21
SD	13.92	4.50	23.62	3.97	45.33	38.22	75.40	35.03
Rank	5	7	6	8	4	1	2	3

Source: BEPZA Data base.
Note: Data has been compiled by the researcher.
Growth Rate =

$$\frac{\text{No. of Current year Employee} - \text{No. of previous year Employee}}{\text{No. of previous year Employee}} \text{X} 100$$

From the analysis of table 5.2.3, it has been found that year wise employment growth rate was almost same during earlier three fiscal years with a little fluctuation, especially Mongla EPZ showed an uneven growth rate more then 180%.Growth rate of latter two fiscal years fell off very quickly and it was the lowest in FY 2013-14 over the study periods. However, the research is designed for evaluating EPZ wise performance during period. After calculating the average growth rate, it was seen that the Karnaphuli (56.72%) stood first position, Mongla (53.16%) stood second

position, Uttara (45.21%) stood third   position, Ishwardi (42.64%) stood 4th position, Adamjee (36.467%) stood 5th position, Comilla (18.19%) stood 6th position, Chittag. (5.75%) stood 7th position and Dhaka (4.43%) stood 8th position as their rank. It was notable that Comilla EPZ suffered 9.70% negative growth rate in FY 2009-10, Ishwardi EPZ showed 20.67% negative growth rate in FY 2012-13, Chittagong EPZ suffered a little (1.29%) negative growth rate and Mongla EPZ showed 9.35% negative growth rate in FY 2013-14.

The study found a different scenario compare to the total employment with employment growth rate. Employment growth rate of Karnaphuli, Mongla, Uttara, Ishwardi and Adamjee were high. They created more new job year- by- year than other EPZs. On the other hand, it has also been found that growth rate of employment of Dhaka and Chittagong EPZs was low and Comilla was moderate. The study has also disclosed that the standard deviations in employment growth rate for Mongla, Ishwardi, Uttara and Karnaphuli are high; for Adamjee and Comilla are moderate and Dhaka and Chittagong EPZs are low. This has indicated that employment growth rate of Mongla, Ishwardi, Uttara and Karnaphuli have been more volatile than other EPZs and Dhaka and Chittagong have been steadier across the study period.

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From the observation of figure 5.2.3, it has been found that the highest average employment growth rate was 56.72% for Karnaphuli EPZ and the lowest 4.43% for Dhaka EPZ. As their mean employment growth rate is high, Karnaphuli, Uttara, Mongla, Ishwardi and Adamjee EPZ increased their employment quicker than other EPZs. Comilla EPZ showed 18.19% average employment growth but it was belowing the BEPZ average. Especially average employment growth of Dhaka and Chittagong EPZ were very poor which were 4.43% and 5.75% respectively. Though total

employment of BEPZ dominated by Chittagong and Dhaka EPZ but their growth rate was very low; it can be said that Chittagong and Dhaka EPZ reached in matured stage of their life cycle and others EPZ are in growing stage.
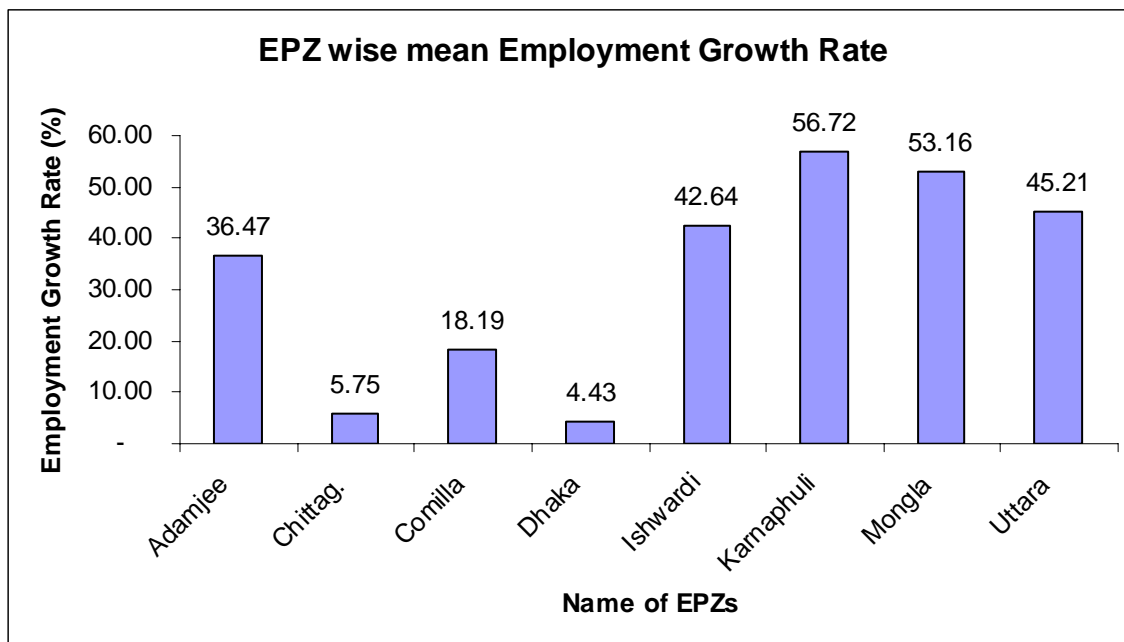
Figure 5.2.3: EPZ wise Employment Growth Rate

Table 5.2.3 shows the data regarding employment growth rate of eight EPZs for different financial year. From the observation of data, it is found that there are many differences among the variables. The mean employment growth rate shows that Karnaphuli EPZ (56.72%) stands first position and Dhaka EPZ (4.43%) stands 8th position as their rank. But it should be checked out whether the difference is significant or not. For this purpose the researcher deploys the statistical method of Analysis of Variances (ANOVA) for that testing;

Table 5.2.4: Analysis of variances of   employment growth rate:

ANOVA

Source of Variation	SS	df	MS	F	P-value
Between Groups	15004	7	2143.49	1.5289	0.1931
Within Groups	44864	32	1401.99		
Total	59868	39			

Table 5.2.4 shows the overall significance of the model with a p-value of 0.193109723 which is grater than 0.05. So, it may conclude that there is no significant difference among the employment growth rate of EPZs across study period.

5.3 Ownership Type Wise Employment:

As it was discussed in chapter 02, there are three types of ownership business operating at different EPZs in Bangladesh- Type – A :Investment with 100% foreign ownership, Type – B :Joint venture between Bangladeshi and foreign investors with no limit to the extent of equity share, Type – C : Bangladeshi ownership. Among them, which Type showing better performance will be discussed in this section with three fashions (i.e., total employment, new job creation and employment growth rate).

5.3.1 Ownership Type wise total employment:

Ownership Type wise total employment is a related analysis for this chapter. After analyzing the sub-section it will in light which type of business ownership which is running much better than other types of business.

Table 5.3.1: Total No. of Employee and ownership type wise distributions with their rank as on June 2014.

Ownership Type of enterprises	Local Labor (Number)	Fore. Labor (Number)	Total (Number)	Rank
Fully Foreign Firms	274,641.00	1,853.00	276,494.00	1
Joint Venture Firms	33,705.00	92.00	33,797.00	3
Fully Local Firms	80,671.00	54.00	80,725.00	2
Total	389,017.00	1,999.00	391,016.00	

Source: BEPZA Data base.
Note: Data has been compiled by the researcher

Table 5.3.1 below shows the total 3,91,016 Employee have been working in BEPZs and their distributions according to ownership type with their rank in June 2014.

According to type of ownership, 100% foreign owned enterprises create total 276,494 jobs, local-foreign Joint Venture enterprises create total 33,797 jobs and 100% local owned enterprises create total 80,725 jobs up to June 2014. Therefore, 100% foreign owned (A-type) enterprises stood first position, 100% local owned (C-type) enterprises stood second position and Joint Venture (B-type) enterprises stood third position as their rank in term of total employment up to June 2014 among the sub-groups. The total employment was dominated by the 100% foreign owned (A-type) enterprises and the 100% local owned (C-type) enterprises held second   position but weak volume in the same way Joint Venture (B-type) enterprises showed very weak position compare to 100% foreign owned (A-type) enterprises.

Ownership Type Wise Employment

Type -C
20.64%

Type -B
8.64%

Type -A
70.71%
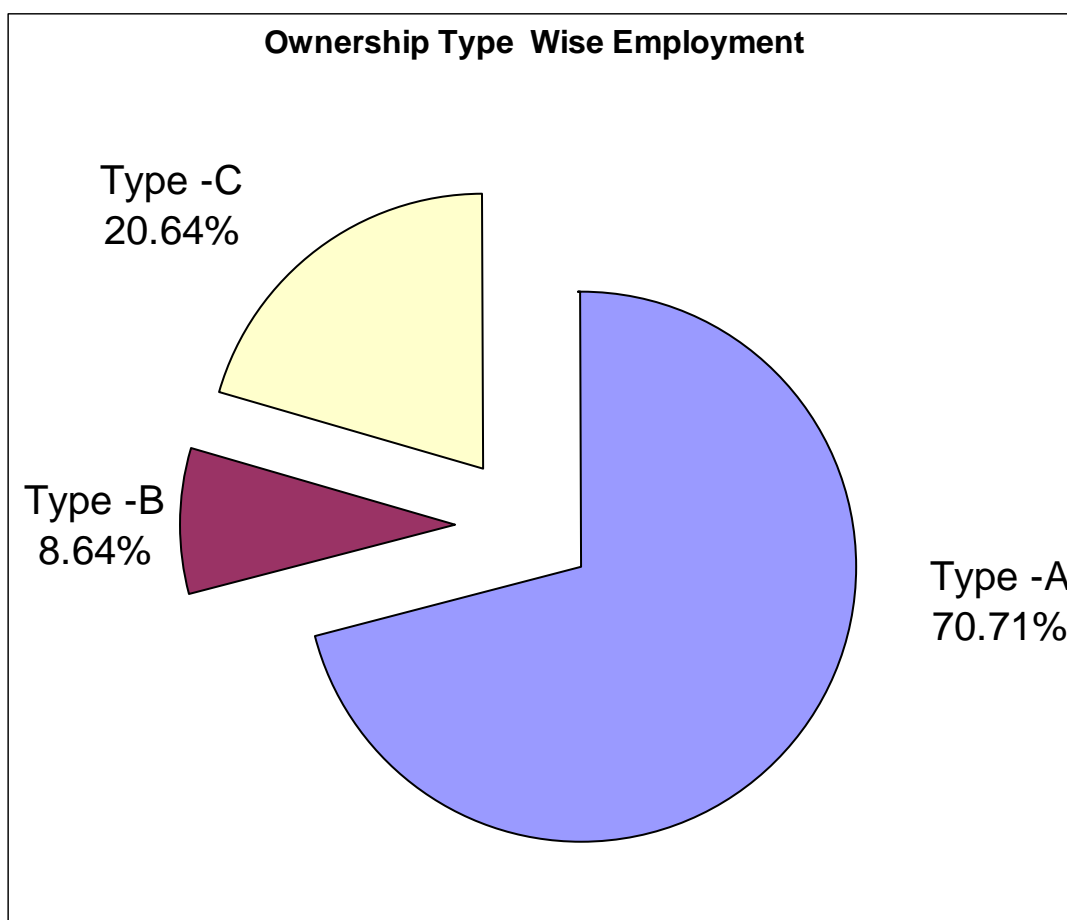
Figure 5.3.1: Ownership Type Wise Job creation in EPZs up to June 2014.

Figure 5.3.1 below shows the percent of ownership type wise employment of EPZs to the total job creation as on June 2014. 100% foreign owned (A-type) enterprises, Joint Venture (B-type) and 100% local owned (C-type) enterprises created 70.71%, 8.64%, and 20.64% job respectively of total 3.91 million job creation by BEPZA regulated enterprise up to June 2014. The lion portion of the employment belonged to 100% foreign owned (A-type) enterprises (70.71%) and others two type of enterprise acquired 29.28% only of total 3.91 million job creation

5.3.2 New Job Creation:

Total job creation is dominated by A-type enterprises from launching of EPZ to June 2014 but it is not clear what type of enterprises created more new job during the study period (2009-10 to 2013-14). Thus researcher intends to compare cross-sectional data for the last 5 fiscal years over three types of enterprises created new employment.

Table 5.3.2 below shows the yearly and average new employment of A, B, and C type enterprises from FY 2009-10 to FY 2013-14 in number of employee. As cumulative employments of EPZs are led by the 100% foreign owned business enterprises, it also continued its first position compared to other types of business enterprises in EPZs. During the study period (FY 2009-10 to FY 2013-14) average number of new employment of A, B, and C type business are 22,327, 2,732, and 6,206 workers respectively. However one negative figure is showed in the table that means C type business cut 1,221 jobs in FY 2013-14 and others business enterprises never cut any jobs during the period.

Table 5.3.2: Ownership Type wise yearly new employment with their mean and rank during the period.

YEAR	Type -A	Type -B	Type -C
2009-10	16,991	3,397	8,954
2010-11	38,855	2,705	2,480
2011-12	19,505	1,850	12,336
2012-13	21,216	4,471	8,479
2013-14	15,070	1,235	(1221)
Descriptive Measures			
Mean	22,327	2,732	6,206
Rank	1	3	2

Source: BEPZA Data base.
Note: Data has been compiled by the researcher.
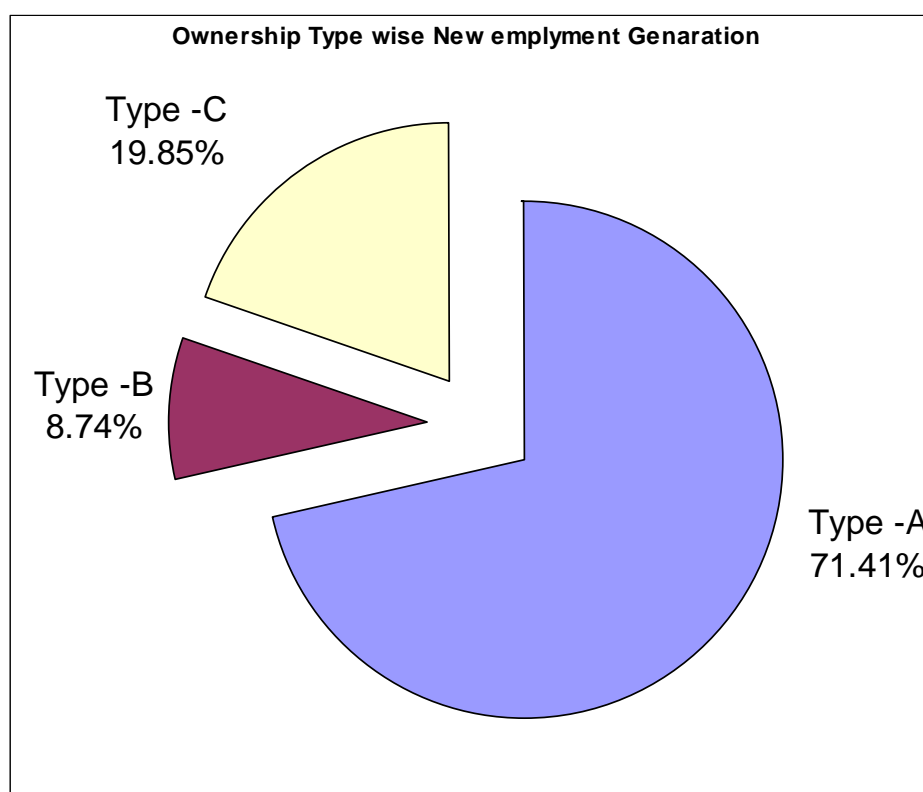
Figure 5.3.2 Average new employment contribution of A, B, and C type Business in percent.

Figure 5.3.2 shows the ownership type wise average new jobs creation by the EPZs in percent from FY 2009-10 to FY 2013-14. 100% foreign owned A type business

continued with (71.41%) first position, from far behind C type business enterprises (19.85%) stood second   position and B type business enterprises (8.74) stood third position as their contribution in the view of new jobs creation during the study period.

5.3.3 Ownership Type Wise Employment Growth Rate:

On the above discussion, the researcher has considered the total employment contribution and new jobs creation in number and percentage as an indicator of performance evaluation but those do not always show potential condition of a company due to their size, nature and others (i.e. a big enterprise should have a good number of employee) but increase or growth of employee year- by- year gives a strong message to the stakeholders about a enterprise. As discussed in literature review, Chong (2008) discovered that growth rate of employee is a well define indicator in the area of performance evaluation for the long term perspective. Growth Rate of Employee can be determined as follows:

Growth Rate of Employee =

$$\frac{\text{No. of Current year Employee} - \text{No. of previous year Employee}}{\text{No. of previous year Employee}} \times 100$$

From the analysis of table 5.3.3, it has been found that year wise employment growth rate fluctuate randomly by business type and falling gradually year- by- year. As a result, the value is the lowest in FY 2013-14; especially C type business enterprises show a negative growth rate in FY 2013-14 on the other hand they show highest (20.18%) in FY 2012-13. A type business enterprises show highest (21.37%) in FY 2010-11 and lowest (5.76%) in FY 2013-14. However, in this sub section our concern is evaluating performance the business enterprise by ownership type during study

period. After calculating the average growth rate, it was seen that the A type enterprises (11.20%) stood first position with the standard deviation 6.93, B type enterprises (9.56%) stood second position with the standard deviation 5.28 and C type enterprises (8.61%) stood third position with the standard deviation 9.37. Values of the SD mean that growth of B -type business enterprises is steadier than A-type and C -type business enterprises are more unstable than the others.

Table 5.3.3: Ownership Type Wise Employment Growth Rate in Percent (%) with Average, Standard Deviation and Rank.

Financial Year	Type -A	Type -B	Type -C
2010-11	21.37	11.49	4.23
2011-12	8.84	7.05	20.18
2012-13	8.83	15.92	11.54
2013-14	5.76	3.79	(1.49)
Descriptive Measures			
Mean	11.20	9.56	8.61
SD	6.93	5.28	9.37
Rank	1	3	2

Source: BEPZA Data base.
I. Note: Data has been compiled by the researcher
II. Growth Rate =

$$\frac{\text{No. of Current year Employee} - \text{No. of previous year Employee}}{\text{No. of previous year Employee}} \text{X} 100$$

From the observation of figure 5.3.3, it has been found that employment growth rate of the study period highest 21.37% for A type business in FY 2010-11 and lowest - 1.49 % for C type business in FY 2013-14. The average employment growth rate of the study period highest 11.20% for A type business and lowest 4.43% for C type business; B type business are in middle position with 9.56%. Whatever, it is shows that all type of business have positive trend in average employment growth rate that is good sing for EPZs' business as well as our national economy.

Ownership wise Employment Growth Rate
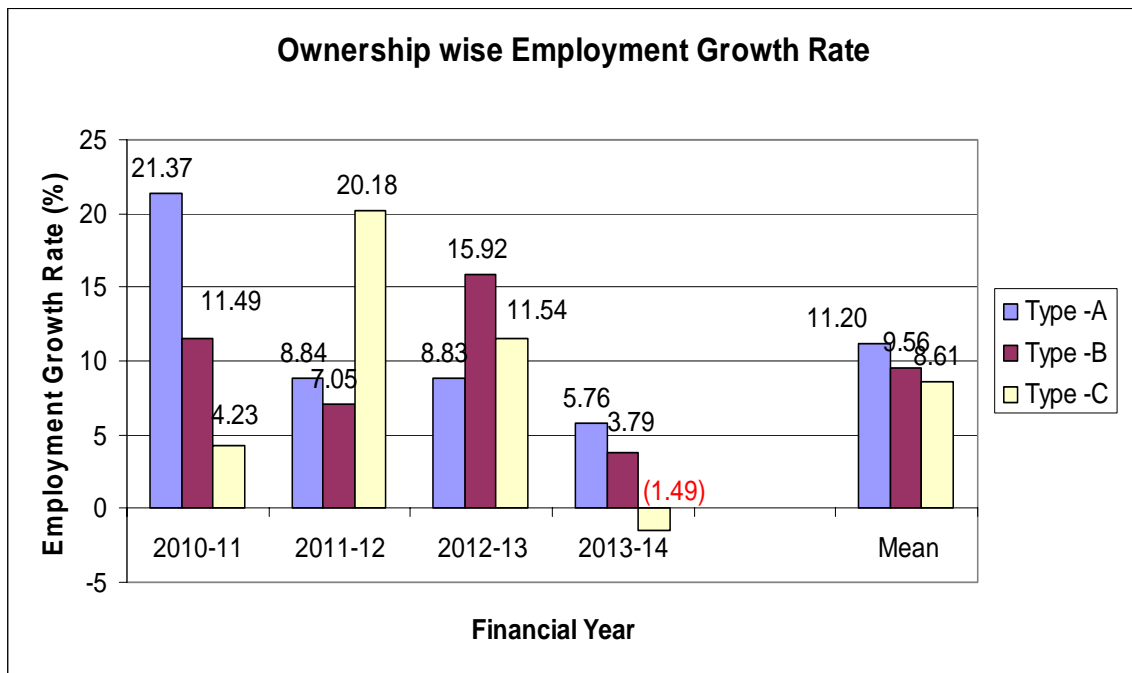
Figure 5.3.3: Employment Growth Rate by Ownership Type

5.4 Industry Wise Employment:

The researcher re-grouped the industry by six groups as per their sharing of business in EPZs in accordance with section 4.4. Industry wise employments have been discussed in the following section.

5.4.1 Industry Wise total employment:

Industry Wise employment generation is one of the key analyses for this chapter that has been discussed in this sub section. Table 5.4.1 below showed employment distributions among the individual six industries with their rank in June 2014. The highest 2,39,716 employees worked in garments and cap industry and stood first position but other industries were far behind from garments industry. The Knitting and Textile industry became second with 70,955 employees, Footwear and Leather goods industry got third position with 27,626 employees, Service and Others industry got 4th position with 26973 employees, Garments Accessories industry held fifth

position with 19101 employees and Electronics and Electrical goods industry secured 6th position with 4109 employees as their rank. In that case, employment was dominated by the Garments and Cap industry and followed by Knitting and Textile industries; Footwear and Leather goods industry showed competitiveness. On the other side, Garments Accessories industry showed weak position but Electronics and Electrical goods industry was very poor in employment creation.

Table 5.4.1: Total No. of Employee and their distributions among the individual industry with their rank as on June 2014.

Name of Industries	No. of Employee	Rank
Garments & Cap	239,716	1
Garments Accessories	19,101	5
Knitting, Textile & Terry towel	70,965	2
Footwear & Leather goods	27,626	3
Electronics & Electrical goods	4,109	6
Service and Others	26,973	4

Source: BEPZA Data base.
Note: Data has been compiled by the researcher.

Figure 5.4.1 below shows the percent of employment of individual industry to the total job creation up to June 2014. Employment contribution of garments industry was 61.70% of the total employment and rest other five industries contributed 38.30% only. However, the contributions of Knitting and Textile, Footwear and Leather goods, Service and Others, Garments Accessories and Electronics and Electrical goods industries were 18.27, 7.11, 6.94, 4.92, and 1.06 percent job respectively by BEPZA regulated enterprise up to June 2014. The lion portion of the employment belonged to garments and cap industry (61.70%) EPZ then Knitting and textile

industry belonged to 18.27% and the contributions of other industries were nominal in industry wise employment.
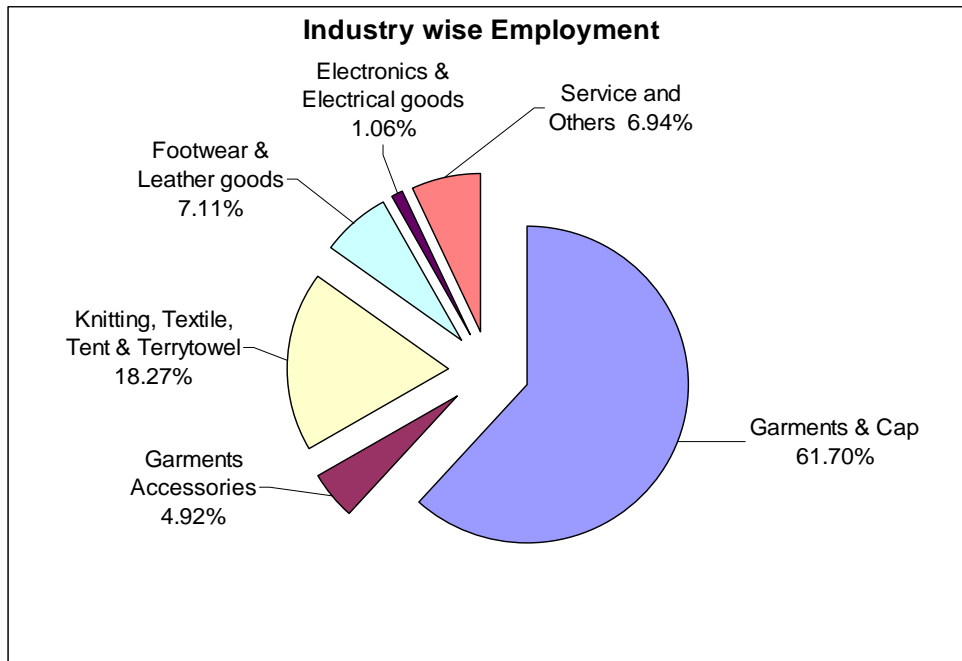
Figure 5.4.1: Contribution of Job creation of individual Industry in percent up to June 2014.

5.4.2 Employment Growth Rate:

From the above discussion, researcher considers total employment contribution and new jobs creation in number and percentage as an indicator of performance evaluation but those do not always show potential condition of a company due to their size, nature and others (i.e. a big enterprise should have a good number of employee) but increase or growth of employee year- by- year gives a strong message to the stakeholders about a enterprise. As discussed in literature review, Chong (2008) discovered that growth rate of employee was a well define indicator in the area of performance evaluation for the long term perspective. Growth Rate of Employee can be determined as follows:

Growth Rate of Employee =

$$\frac{\text{No. of Current year Employee} - \text{No. of previous year Employee}}{\text{No. of previous year Employee}} \text{X} 100$$

From the analysis of table 5.4.2, it has been found that year wise employment growth rate was the highest in FY 2010-11, which decreased year- by- year and was the lowest in FY 2013-14. After calculating the average growth rate, it is seen that the Service and Others industry got first position with 17.45%, Footwear and Leather goods industry stood second position with 14.21%, Garments Accessories industry held third position with 12.46%, Garments and Cap industry got 4th position with 10.67%, Electronics and Electrical goods industry got 5th position with 6.06% and Knitting and Textile industry secured 6th position with 3.38% as their rank.

Table 5.4.2: Employment growth rate in % with average, standard deviation and rank of EPZs.

Financial year	Garments & Cap	Garments Accessories	Knitting & Textile	Footwear & Leather goods	Electronics & Electrical goods	Service and Others
	%	%	%	%	%	%
2010-11	13.66	13.20	10.05	37.47	2.09	23.03
2011-12	13.56	23.75	7.02	(9.48)	13.58	17.33
2012-13	11.91	6.69	2.87	14.74	4.59	11.50
2013-14	3.55	6.19	(6.42)	14.12	3.99	17.95
Descriptive Measures						
Mean	10.67	12.46	3.38	14.21	6.06	17.45
SD	4.81	8.18	7.17	19.17	5.12	4.72
Rank	4	3	6	2	5	1

Source: BEPZA Data base.
I. Note: Data have been complied by the researcher
II. Growth Rate =

$$\frac{\text{No. of Current year Employee} - \text{No. of previous year Employee}}{\text{No. of previous year Employee}} \text{X} 100$$

It is notable that footwear and leather industry showed 9.48% negative growth rate in FY 2011-12 and Knitting and Textile industry showed 6.42% negative growth rate in FY 2013-14.

The study found a different scenario compare to the total employment with employment growth rate. Footwear and leather industry has highest standard deviation (19.17) that means growth of the industry is more volatile than other industries.

From the observation of figure 5.4.2, it has been found that employment growth rate of footwear and leather industry was the highest (37.47%) in FY 2010-11, conversely the same industry was the lowest (-09.48%) with negative value in FY 2011-12. The figure shows that mean employment growth rate was the highest for service and others business but it does not represent any basic industry, it is of ungrouped various industries. So, the researcher does not have any concern about it, though it becomes 1st.
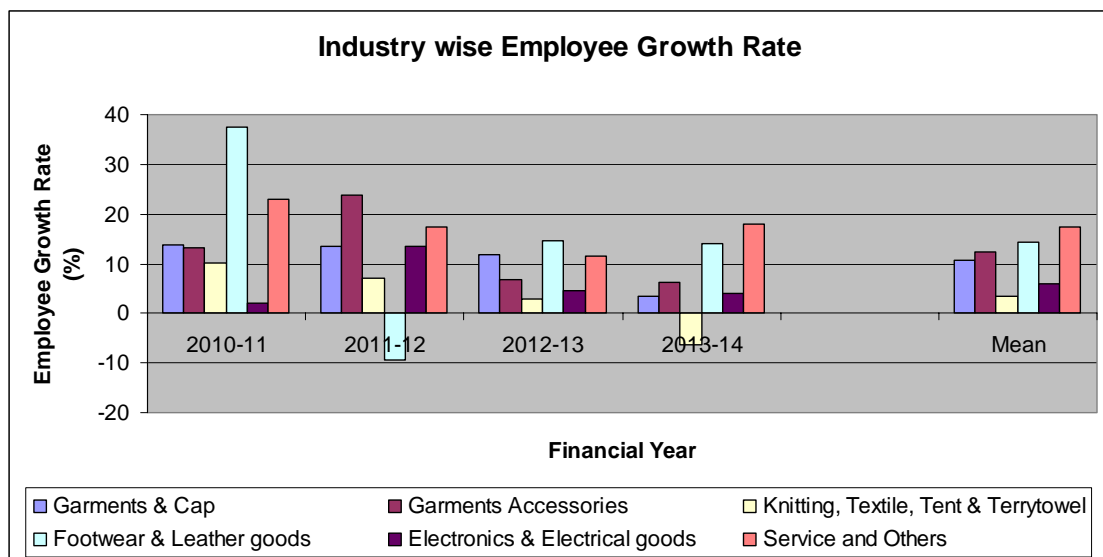
Figure 5.4.2: Employment Growth Rate

Average employment growth rates of Footwear and Leather industry, Garments Accessories and Garments industry were showing competitiveness. On the other side, electronics and Electrical goods industry and knitting and textile industry showed very weak condition compare to others.

Though total employment of BEPZ was dominating by garments industry but its growth rate was not so high. Therefore, garments industry had reached in a matured stage and footwear and leather and garments accessories industries were in growing stage at the EPZs in Bangladesh.

5.5 Findings:

The total Employment volume was dominated by the 100% foreign owned (A-type) enterprises and the local owned (C-type) enterprises showed second position with weak volume. In the same way, Joint Venture (B-type) enterprises showed very weak position compared to 100% foreign owned (A-type) enterprises. As cumulative employments of EPZs were led by the 100% foreign owned business enterprises, it also continued its first position compared to other types of business enterprises in EPZs. The average employment growth rate of the study period the highest 11.20% for A type business and the lowest was 4.43% for C type business; B type business were in middle position with 9.56%. By observing three sub section, it has found that *100% foreign owned A type business enterprises were the pioneer group in the context of total job creation, new job creation as well as employment growth rate during the study period*.

The total employment of BEPZs was dominated by the Chittagong EPZ and followed by Dhaka EPZs; Karnaphuli and Adamjee experienced competitiveness on the other side Comilla and Uttara were in weak position but Ishwardi and Mongla were very poor in total employment. On the other hand, in the view point of new job creation

Chittagong and Karnaphuli EPZ led the total BEPZs during the study period. Adamjee and Dhaka EPZ showed modest condition; Uttara, Comilla and Ishwardi experienced poor contribution while Mongla EPZ shows very week position in term of new job creation. Though total employment of BEPZ dominated by Chittagong and Dhaka EPZ, their growth rate was very low; it can be added that Chittagong and Dhaka EPZ had reached in matured stage of their life cycle, while other EPZs were in growing stage. However, there was no negative average growth in the EPZ during the study period and differences of employment growth rates among the EPZs were not statistically significant.

In industry wise analysis, employment is dominated by the Garments industry and followed by Knitting and Textile industries; Footwear and Leather goods industry shows competitiveness. On the other side, Garments Accessories industry shows weak position but Electronics and Electrical goods industry is very poor in employment creation. The lion portion of the employment belongs to garments and cap industry (61.70%) EPZ then Knitting and textile industry belongs to 18.27% and contributions of other industries are not mentionable. Average employment growth rates of Footwear and Leather industry, Garments Accessories and Garments industry are showing competitiveness. On the other side, electronics and electrical goods industry and knitting and textile industry show very weak condition compare to others.

CHAPTER 06: INVESTMENT PRODUCTIVITY

Analysis of Export Volume on Investment in EPZs

6.1. Preamble of Export on Investment

6.2. Analysis of Export on Investment as per location of the Business.

6.3. Analysis of Export on Investment as per the Ownership Type of Business.

6.4. Industry wise Analysis of Export on Investment.

6.5 Findings

6.1. Preamble of Export on Investment

It is one of the key analyses of the research work to explore the investment or capital productivity of BEPZA regulated enterprises during study period (FY 2009-10 to 2013-14). Like previous chapter, researcher tends to check the ratio from three view points, are as follow:-

6.2. Analysis of Export on Investment as per location of the Business.

Export on Investment can be calculated as follows:

$$\text{Export on Investment} = \frac{\text{Export}}{\text{Investment}} \times 100$$
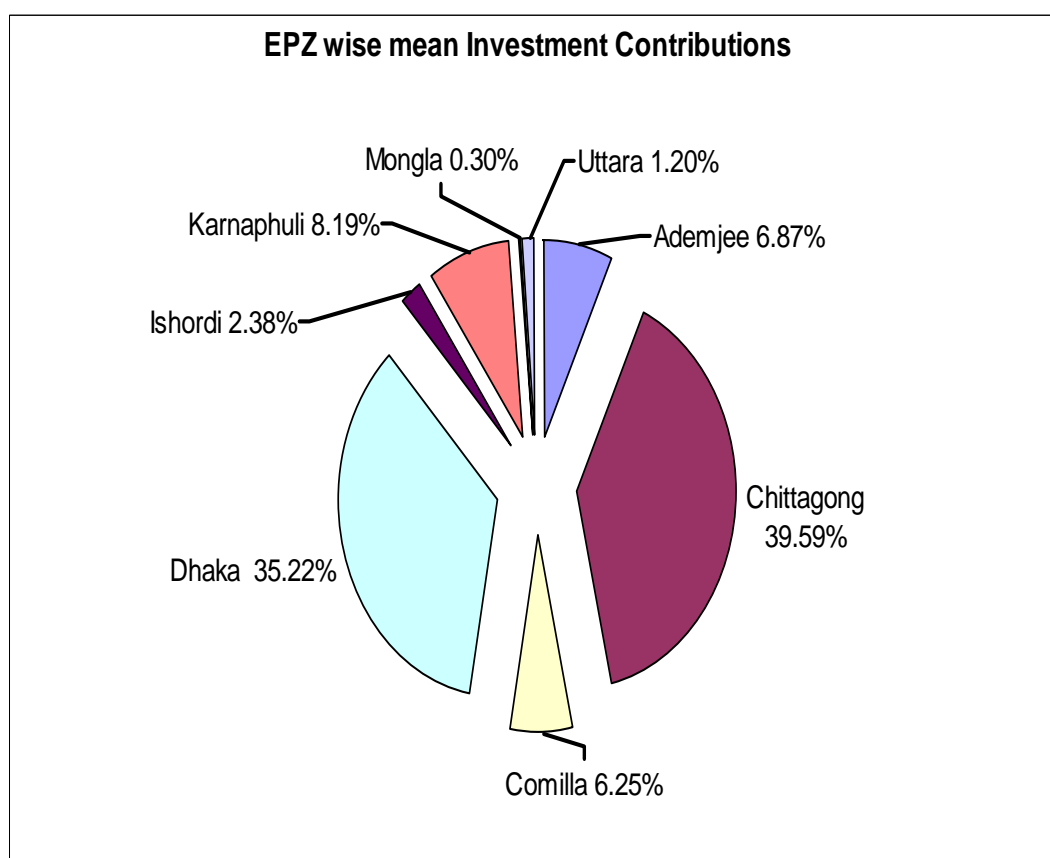
Figure 6.2.1: EPZ Wise average investment contribution during Study period.

Figure 6.2.1 (pie chart) showed EPZ wise average investment contribution in percent during study period. Observing the pie chart it is found that Chittagong EPZ got first position by contributing 39.59%, Dhaka EPZ got second position by contributing 35.22%, Karnaphuli EPZ secured third position by contributing 8.19%, Ademjee EPZ secured 4th position by contributing 6.87%, Comilla EPZ got 5th position by contributing 6.25%, Ishordi EPZ secured 6th position by contributing 2.38%, Uttara EPZ gets 7th position by contributing 1.20% and Mongla EPZ secured 8th position by contributing 0.30% as their rank.

Table 6.2.1 shows the information about EPZ wise Export on investment in percent over the five financial years for eight EPZs in Bangladesh. It is obvious that in the financial year (2009 – 10), every EPZ remained under 200%. However, in the next year Mongla EPZ increased up to 544% while Dhaka EPZ was of 193.63% and Chittagong of 194.19%. In the financial year 2011– 12, Mongla reached the peak by 1039.73% and decreased gradually in the next two years. It is noteworthy that all other EPZs remained under 200% but Mongla EPZ had exceptional export on investment ratio with over 1000%.

The mean of EPZ wise Export on investment shows that Mongla EPZ exported 631.57% on investment stands 1st. Chittagong exported 189.75% on investment stands second and Dhaka exported 185.23% on investment stands third. In the next, Adamjee exported 130.08% on investment stands 4th Karnaphuli (119.10%) 5th, Comilla (100.00%) 6th, Ishwardi (68.18) 7th and Uttara (50.56%) 8th in the EPZ wise Export on investments.

Table 6.2.1: Export on Investment in Percent as per location of the Business during Study Period.

FY	Adamjee	Chittagong	Comilla	Dhaka	Ishwardi	Karnaphuli	Mongla	Uttara
2009-10	111.90	172.59	95.05	171.05	26.47	64.98	167.09	39.79
2010-11	126.99	194.19	106.52	193.63	52.05	102.12	544.00	40.51
2011-12	126.24	202.33	94.72	187.05	61.32	112.87	1,039.73	70.61
2012-13	141.13	191.70	99.57	191.16	78.46	144.31	848.28	47.06
2013-14	144.14	187.92	104.14	183.24	122.59	171.21	558.75	54.84
Descriptive Measures								
Mean	130.08	189.75	100.00	185.23	68.18	119.10	631.57	50.56
SD	12.98	10.95	5.30	8.86	35.75	40.64	332.52	12.74
Rank	4	2	6	3	7	5	1	8

Source: BEPZA Data base.
I. Note: Data has been compiled by the researcher.

II. $\text{Export on Investment} = \dfrac{\text{Export}}{\text{Investment}} \times 100$

The table 6.2.1 also shows that the standard deviation (SD) of Mongla EPZ was very high (552.52). So, its ratio of export on investment by the years was more volatile than others. Besides, Dhaka, Comilla, Chittagong, Uttara and Adamjee EPZs have lower SD. So, the ratios of these EPZs are steadier than Karnaphuli and Mongla EPZ. And the condition of Karnaphuli is moderate.

Figure 6.2.2 shows EPZ wise export on investment in percent with average during study period through bar char. The chart explains that Mongla EPZ has extra ordinary performance compare to other EPZs and all other EPZs remain under 200% far behind from Mongla EPZ. As illustrated in figure 6.2.1, Mongla EPZ has no remarkable capital investment and most of the enterprises of Mongla EPZ purchase and re-export agro processing foods with minimum value addition, they just play a traders rule. This is why the export on investment rate is very high for Mongla EPZs.
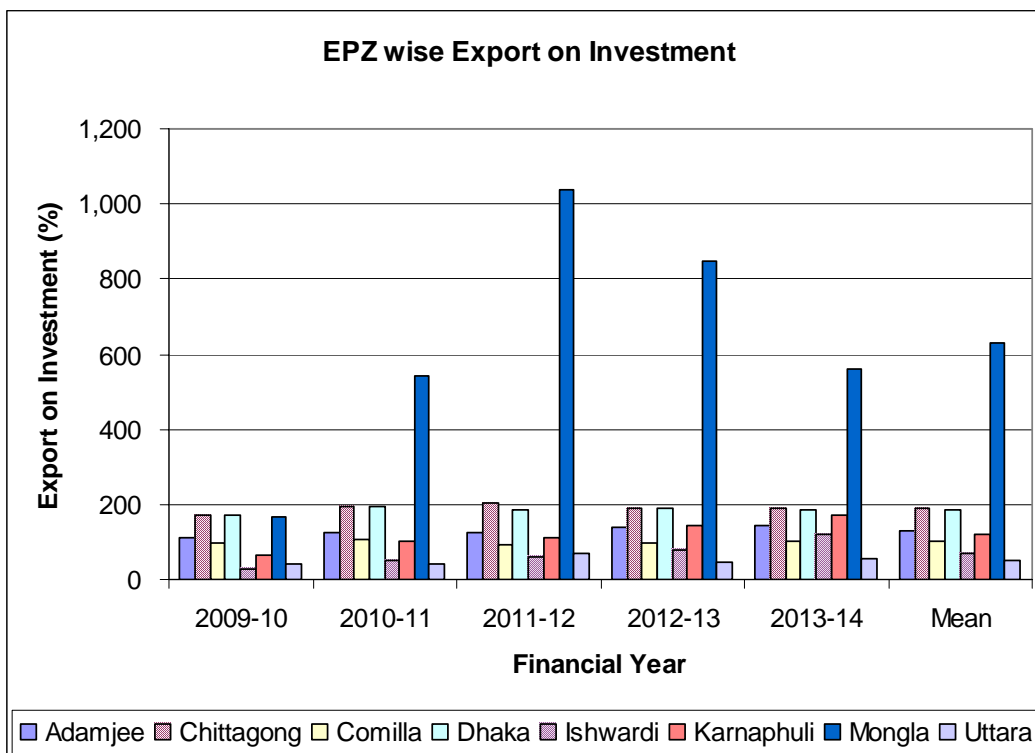
Figure 6.2.2: EPZ Wise Export on Investment in Percent with average During Study Period.

06.3. Analysis of Export to Investment as per the Ownership Type of Business.
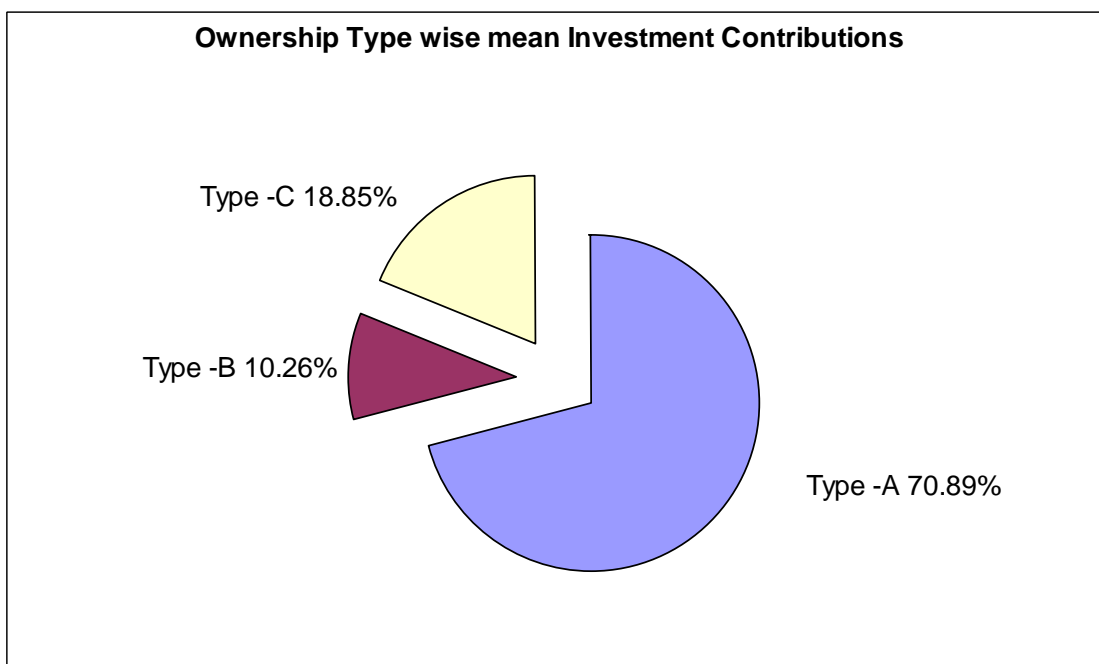
Figure 6.3.1: Ownership Type wise average investment contribution during Study period.

Figure: 6.3.1 (Pie Chart) shows the information about ownership type wise mean investment contributions for three types (Type – A, Type – B and Type – C) business in percent. In the chart, mean investment contributions of A-type business is 70.89%, whereas Type – B is 10.26%, almost seven times lesser than Type – A. Again, Type – C ownership stands second by 18.86% of total investment. It is clear that Type – A full foreign ownership enterprises are the main investor in the EPZs.

Table: 6.3.1 shows Export on investment in percent for Type – A, Type – B and Type – C for five consecutive financial years (FY 2009-10 to 2013-14). In the financial year 2009 – 10, Type – A ownership business exported 163.48% stood first and Type – C was 158.87% stood second while Type – B was of 102.20% stood third . In the next year, Type – A enjoyed the highest Export rate on investment by 188.28% while Type – C (157.51%) remained almost unchanged and Type – B was of 112.41%. In the 2012 – 13 financial year, Type – A remained almost same 185.79% and Type – B (149.36%) outnumbered Type – C (147.46%) slightly

However, Type – C (150.40%) came round in the next year. The general trend of Type – A is stable, Type - B progressive and Type – C has slight fluctuation in a narrow margin.

The average export on investment ratio is that Type – A ownership covers 181.81% stands 1st, Type – C of 155.53% stands second and Type – B of 121.33% stands third during the study period in EPZs' business.

By observing SD in the table 6.3.1, it is found that C-Type enterprises have lowest deviation. B-type enterprises have highest standard deviation (18.89) that means the ratio of export on investment is more volatile than B and A-type enterprises during the period and the position of A-type enterprises is moderate in dispersion.

Table 6.3.1: Export on Investment in Percent as per Ownership Type of the Business during Study Period.

FY	Type -A	Type -B	Type -C
2009-10	163.48	102.20	158.87
2010-11	188.28	112.41	157.51
2011-12	185.68	111.46	163.42
2012-13	185.79	149.36	147.46
2013-14	185.81	131.24	150.40
Descriptive Measures			
Mean	181.81	121.33	155.53
SD	10.30	18.89	6.49
Rank	1	3	2

Source: BEPZA Data base.
I.   Note: Data has been compiled by the researcher.

II. $\text{Export on Investment} = \dfrac{\text{Export}}{\text{Investment}} \text{X} 100$
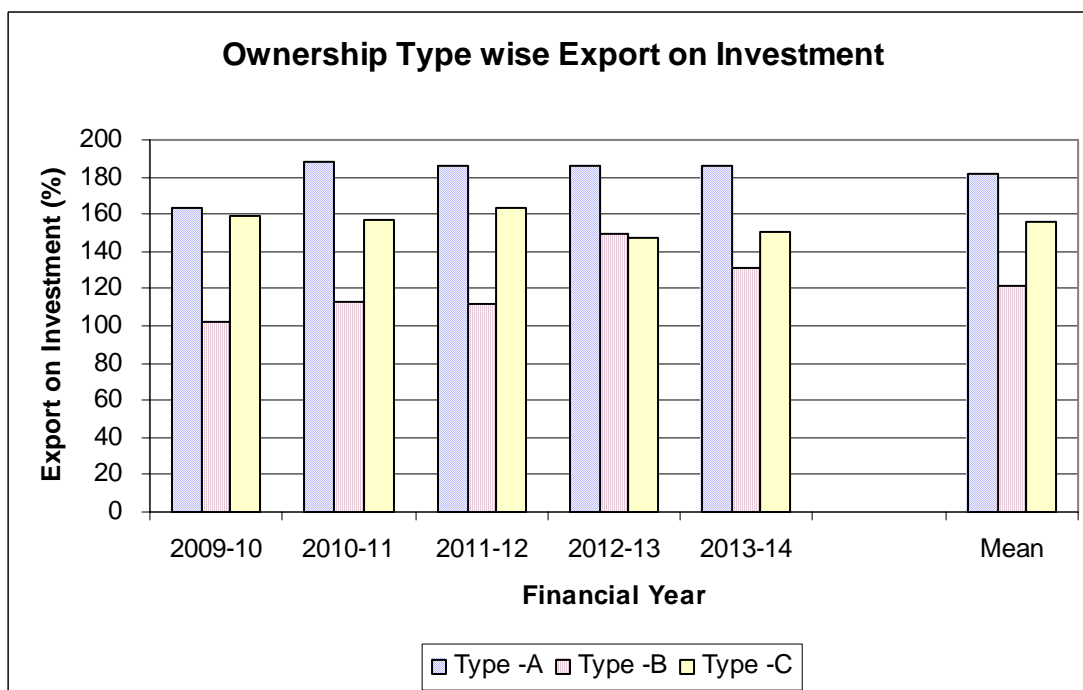
Figure 6.3.2: Ownership Type wise Export on Investment in Percent with average During Study Period.

Figure 6.3.2 (bar chart) shows that the rate of export on investment is almost same by three categories during the study period and A-type full foreign ownership enterprises contains leading position year- by- year as well as average ratio of export on investment ratio in EPZs' business during the study period.

6.4. Industry wise Analysis of Export on Investment.

Figure 6.4.1 illustrates that industry wise average investment contribution during Study period. Garments and cap industry gets first position by contributing 34.49%, knitting, textile, tent and terrytowel industry gets second   position by contributing 31.87%, garments accessories industry gets third position by contributing 12.08%, service and others industry gets 4th position by contributing 12.08%, footwear and leather goods industry gets 5th position by contributing 5.652%, electronics and electrical goods industry gets 6th position by contributing 3.98% as their rank.
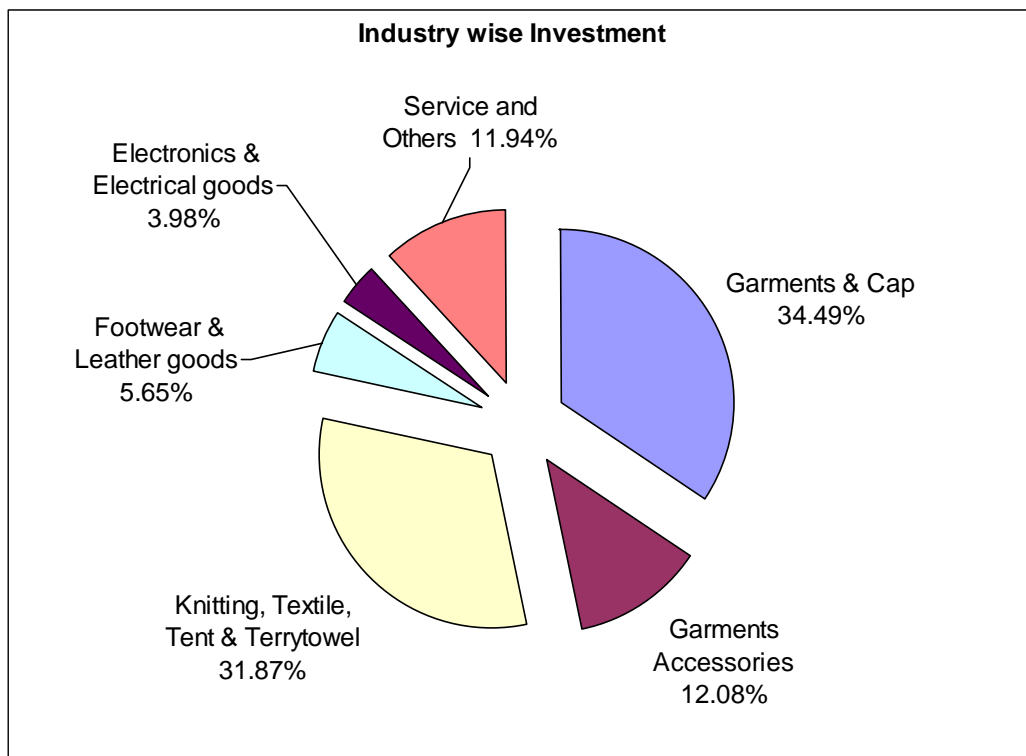
Figure 6.4.1: Industry wise average investment contribution during Study period.

Table 6.4.1 illustrates industry wise export to investment in percent during the study period of six kinds of industry operating in EPZs. Among the ratio on the table, garments industry earns highest ratio (302.69%) in 2013-14 and electronics and Electrical industry earns lowest ratio (54.39%) in same year. As per average ratio of five years, the garments industry gets first position with 278.43%, knitting and textile industry gets second position with 143.95%, garments accessories industry gets third position with 131.46%, footwear and leather industry gets 4th position with 127.47%, service and others industry gets 5th position with 88.79%, electronics and electrical industry gets 6th position with 76.39% as their rank. The standard deviations are almost same of the different industries but garments accessories industry explains a little steady condition with lowest standard deviation (9.28). Finally, it is observed that the garments industry is leading the EPZs industry by highest average export to investment (27.43%) with standard deviation 16.58.

Table 6.4.1: Industry wise Export to Investment in Percent during Study Period.

Financial Year	Garments	Garments Accessories	Knitting & Textile	Footwear & Leather	Electronics & Electrical	Service and Others
2009-10	256.53	143.41	145.50	111.45	60.75	67.27
2010-11	274.49	132.55	162.31	127.57	81.32	94.64
2011-12	281.92	119.15	137.04	126.11	91.83	104.66
2012-13	276.55	136.04	143.14	123.09	93.67	81.79
2013-14	302.69	126.14	131.75	149.14	54.39	95.60
Descriptive Measures						
Mean	278.43	131.46	143.95	127.47	76.39	88.79
SD	16.58	9.28	11.58	13.67	17.96	14.53
Rank	1	3	2	4	6	5

Source: BEPZA Data base.
I.   Data has been compiled by the researcher.
II. Export on Investment $= \dfrac{\text{Export}}{\text{Investment}} \times 100$

By analyzing the Figure 6.4.2, it has found that year wise export to investment ratios are almost similar with a very little fluctuation within five financial year form 2009-10 to 2013-14. By the point of export on investment ratio, each and every year is dominated by garments industry and the other industries are far behind form it. In addition, Electronics and Electrical industry shows worse performance than others.
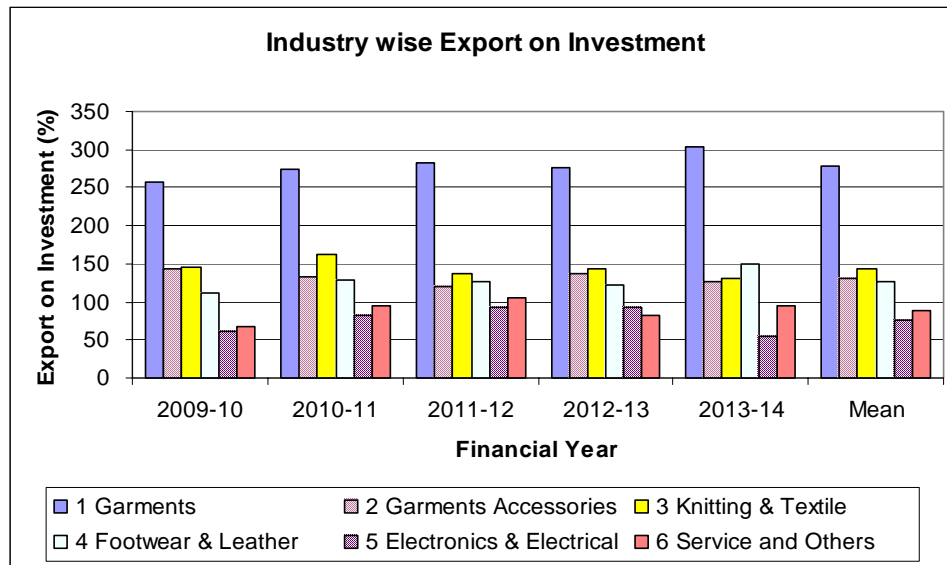
Figure 6.4.2: Industry wise Export to Investment in Percent with average During Study Period.

6.5 Findings

In the view points of investment volume, the Chittagong EPZ gets first position by contributing 39.59%, Dhaka EPZ gets second position by contributing 35.22% of total investment and others are in weak position. Chittagong EPZ is the first EPZ in Bangladesh history and it is internationally well known, cost competitive and very near from our prime seaport. Dhaka EPZ is the second EPZ in Bangladesh and adjacent to capital city of Dhaka and international airport, national and international skill manpower, technician and engineers are available. Besides, the offices of the foreign buyers of different brand are also available there. This is why the both EPZs are established firmly than other EPZs.

The mean of EPZ wise Export on investment is that Mongla EPZ exported 631.57% on investment stands 1st. Chittagong exported 189.75% stands second and Dhaka exported 185.23% stands third. In the next, Adamjee exported 130.08% stands 4th Karnaphuli (119.10%) 5th, Comilla (100.00%) 6th, Ishwardi (68.18) 7th and Uttara (50.56%) 8th in the EPZ wise Export on investments.

The chart explains that Mongla EPZ has extra ordinary performance compare to other EPZs and all other EPZs remain under 200% far behind from Mongla EPZ. As illustrated in figure 6.2.1, Mongla EPZ has no remarkable capital investment and most of the enterprises of Mongla EPZ purchase and re-export agro processing foods with minimum value addition, they just play a traders rule. This is why the export on investment rate is very high for Mongla EPZs.

The average export on investment ratio is that Type – A ownership covers 181.81% stands 1st, Type – C of 155.53% stands second and Type – B of 121.33% stands third during the study period in EPZs' business. A-type full foreign ownership enterprises contain leading position year- by- year as well as average ratio of export on investment in EPZ business during the study period.

As per average ratio of five years, the garments industry gets first position with 278.43%, knitting and textile industry gets second position with 143.95%, garments accessories industry gets third position with 131.46%, footwear and leather industry gets 4th position with 127.47%, service and others industry gets 5th position with 88.79%, electronics and electrical industry gets 6th position with 76.39% as their rank. Finally, it is observed that the garments industry is leading the EPZs' industry by highest average export on investment (27.43%) with standard deviation 16.58. And Electronics and Electrical industry shows worse performance than others.

CHAPTER 07: LABOR PRODUCTIVITY

Analysis of Export per Employee in EPZs

7.1. Preamble Labor Productivity

7.2. Analysis of Export per Employee as per location of the Business.

7.3. Analysis of Export per Employee as per the Ownership Type of Business.

7.4. Industry wise Analysis of Export per Employee.

7.5 Findings

7.1. Preamble Labor Productivity

One of the key objectives of establishing EPZ is increasing overall productivity in our country. Now it is time to measure the present condition of labor productivity from three different views, i.e., employees' productivity as per location of enterprises, employees' productivity as per ownership of Business and industry wise labor productivity. Those are discussed in the chapter with tables and graph during the study period (FY 2009-10 to 2013-14).

07.2. Analysis of Export per Employee as per location of the Business

As discussed in previous chapter there are eight EPZs in Bangladesh, among them which EPZ is showing better performance that will analyze in this section. The table 7.2.1 reveals the information about EPZ wise Export per Employee in thousand US$ with mean, standard deviation, and Rank over the five consecutive financial years (FY2009-10 to FY2013-14).

It is clear that Mongla is second to none in the sphere of export per employee, whereas Uttara EPZ earned the lowest position in almost all financial years. In labor productivity of Adamjee EPZ suffered a fall (8.84 thousand US$) in FY 2012-2013 but FY 2013-2014 was the highest (10.68 thousand US$) achievement year. In per labor export of Chittagong EPZ was at the peak in FY 2013-2014 by 12.36 thousand US$ while the lowest was in FY 2009-2010 by 8.73 thousand US$. Comilla EPZ enjoyed the highest export per labor 13.25 thousand US$ in 2009-2010 and the lowest (11.44 thousand US$) in FY 2011-2012. Dhaka earned much more in 2013-2014 by 21.74 thousand US$ per employee than all other years, whereas the export per employee was 18.22 thousand US$ (the lowest) in FY 2010-2011.

Export per labor of Ishwardi EPZ's highest was 12.86 thousand US$ and the lowest was 2.46 thousand US$ per employee during the study period. Karnaphuli EPZ held the highest export per employee in 2013-2014 by 11.44 thousand US$ and the lowest in 2009-2010 by 4.48 thousand US$. Export per employee of Mongla EPZ was the highest in 2013-2014 by 54.20 thousand US$, while the lowest in 2009-2010 by 20.37 thousand US$. In 2013-2014, Uttara EPZ earned 2.94 thousand US$ export per worker (the highest), While in 2009-2010 it earned 0.53 thousand US$ (the lowest) per employee during the study period.

The Standard Deviation (SD) of Adamjee (0.48), Comilla (0.88), and Uttara (0.91) are minimum that means their condition is steadier than others. Standard deviation of Mongla is much more (14.13) that means its condition is volatile than others, while the condition of others are moderate.

Table 7.2.1: EPZ wise Export per Employee in thousand US$ with Mean, Standard Deviation, and Rank during Study Period.

FY	Adamjee	Chittagong	Comilla	Dhaka	Ishwardi	Karnaphuli.	Mongla	Uttara
2009-10	8.73	8.82	13.50	16.20	2.46	4.84	20.37	0.53
2010-11	10.12	9.99	13.26	18.22	5.09	6.90	53.21	1.42
2011-12	9.81	10.99	11.44	18.76	5.39	9.04	36.51	1.86
2012-13	8.84	11.31	11.86	20.09	9.28	9.63	47.17	2.31
2013-14	10.68	12.36	12.56	21.74	12.86	11.44	54.20	2.94
Descriptive Measures								
Mean	9.63	10.69	12.52	19.00	7.02	8.37	42.29	1.81
SD	0.84	1.35	0.88	2.07	4.07	2.55	14.13	0.91
Rank	5	4	3	2	7	6	1	8

Source: BEPZA Data base.
I.　　　　Data has been compiled by the researcher.
II.　　　Export Per Employee = $\dfrac{\text{Export}}{\text{Number of Employee}}$

By the analysis of mean export per employee, it is found that Mongla EPZ scores first with 42.29 thousand US$, Dhaka EPZ gets second position with 19.00 thousand US$ and Comilla EPZ holds third place with 12.52 thousand US$ export per labor, Chittagong gets 4th position with 10.69 thousand US$ export per labor and Adamjee EPZ scores 5th position with 9.63 thousand US$ export per labor.

Figure 7.2.2 shows the information of table 7.2.1 in bar chart for EPZ wise export per employee in thousand US$ with average during study period. It is seen that export per employee is increasing year- by- year slowly and Mongla EPZ earns much more than others, whereas Mongla EPZ has very low value addition; as most the enterprises of Mongla EPZ purchase and re-export the agro bases goods with low labor. On the other side Dhaka and Comilla EPZ earn second and third position with reasonable value addition with highly labor oriented firms.
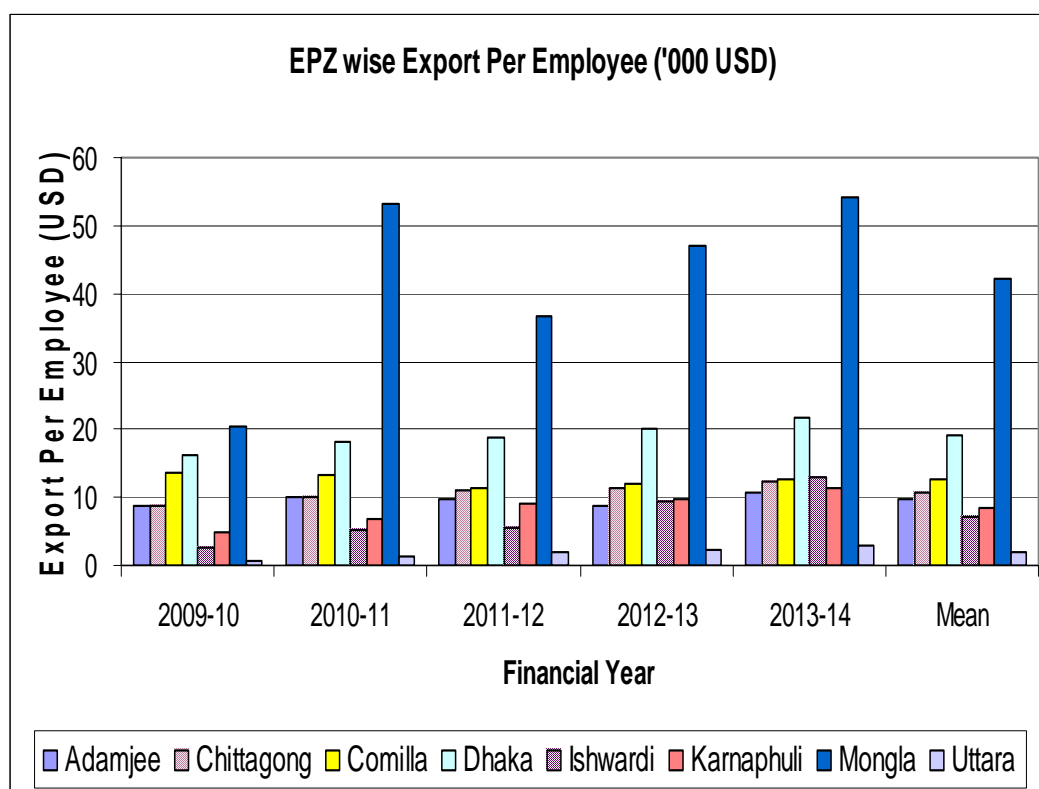
Figure 7.2.2: EPZ Wise Export per Employee in thousand US$ with average During Study Period.

07.3. Analysis of Export to per Employee as per the Ownership Type of Business.

The table 7.3.1 explains the information about Ownership (Foreign, Joint Venture and Local) type wise Export per Employee in thousand US$ with Mean, SD, and Rank over the period of five consecutive financial years (FY2009-10 to FY2013-14).

In 2009-2010 financial year, full Foreign enterprise earned 11.77 thousand US$, (the highest) and Joint Venture was of 7.71 thousand US$ (second), whereas Local was of 8.54 thousand US$ (third) export per employee. Over these period Foreign firm reached the highest peak in 2013-2014 by 15.04 thousand US$ export per employee and per employee export of Joint Venture firm was of 7.71 thousand US$ in 2009-2010.

Table 7.3.1: Ownership Type wise Export per Employee in thousand US$ with Mean, Standard Deviation, and Rank during Study Period.

FY	Foreign	Joint Venture	Local
2009-10	11.77	7.71	8.54
2010-11	12.84	9.58	10.03
2011-12	13.54	10.33	9.90
2012-13	13.87	12.95	9.91
2013-14	15.04	12.54	11.69
Descriptive Measures			
Mean	13.41	10.62	10.01
SD	1.21	2.17	1.12
Rank	1	2	3

Source: BEPZA Data base.
I.   Data has been compiled by the researcher.

II.   Export Per Employee $= \dfrac{\text{Export}}{\text{Number of Employee}}$

The table 7.3.1 also illustrates that the average export per employee for Foreign firm (13.41thousand US$) is much better than the Joint Venture firm (10.62 thousand US$) and the Local firm (10.01 thousand US$). Foreign, Joint, and local firm stood 1st, second   and third respectively.

The standard deviation of the Foreign and the Local firm indicates that the data of export per employee is steadier for them, conversely the Joint Venture firm is somewhat volatile.

The bar chart (Fig: 7.3.1) shows the information about Ownership (Foreign, Joint Venture and Local) type wise Export per Employee in thousand US$ with average During the Study Period (FY2009-10 to FY2013-14).

The figure illustrates that export per employee is the lowest in 2009-10, it is increasing gradually year- by- year and in 2013-14, it is the highest. Analyze the mean, it is seen that foreign firm become first joint venture firm become second and local firm become third in the term of export per employee.
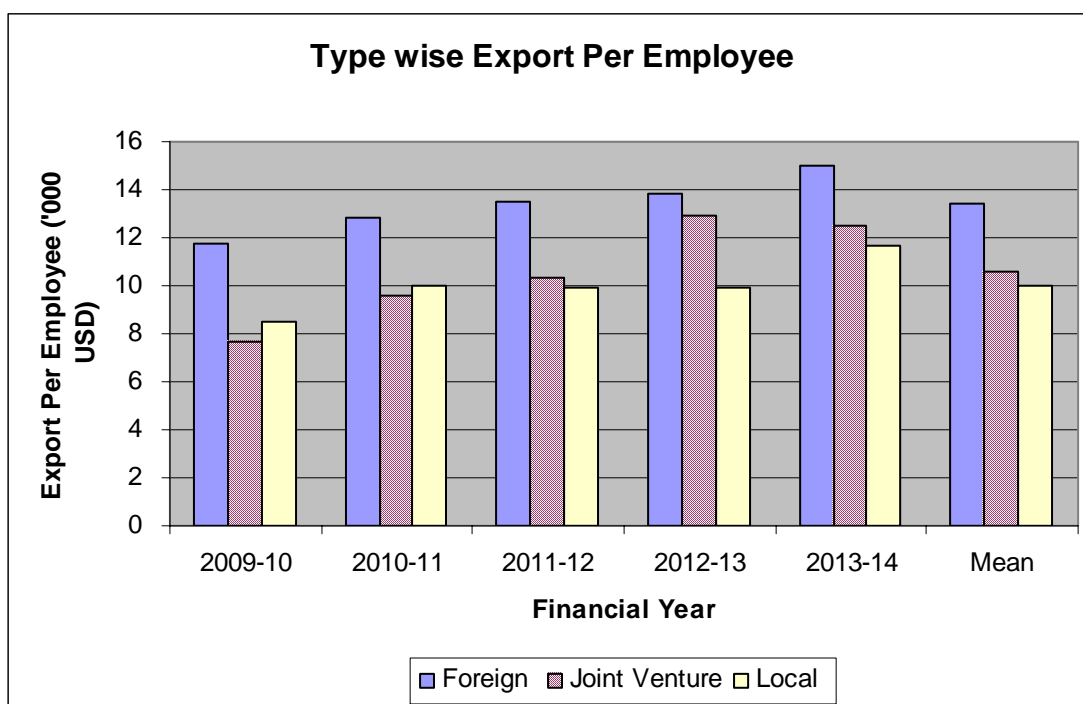
Figure 7.3.1: Ownership Type wise Export per Employee in thousand US$ with average During Study Period.

7.4. Industry wise Analysis of per Employee.

The table 7.4.1 shows the data regarding Industry wise Export per Employee in thousand US$ with Mean, Standard Deviation, and Rank during Study Period (FY2009-10 to FY2013-14).

In FY 2009-2010, Garments Accessories industry earned 26.07 thousand US$ and Electronics and Electrical industry earned 14.41 thousand US$, stood first and second .respectively, while Knitting and Textile industry was of 14.05 thousand US$, stood third and Service and others industry was of 10.46 thousand US$ stood 4th. However, Garments industry (9.21 thousand US$) and Footwear and Leather industry (6.98 thousand US$) had a little performance with 5th and 6th position respectively.

Again, in 2010-11, Garments Accessories industry (24.76thousand US$) was the highest and Footwear and Leather industry (6.60 thousand US$) was the lowest. In FY 2011-12, Electronics and Electrical industry (21.86 thousand US$) was the highest, Footwear and Leather industry (8.40 thousand US$) was the lowest. Electronics and Electrical industry (25.87 thousand US$) was the highest and Footwear and Leather industry (8.21 thousand US$) was the lowest in FY 2012-13. Garments Accessories industry earned 25.33 thousand US$ stood first and Footwear and Leather industry was of 9.30 thousand US$ stood 6th in the financial year 20113-14 yearly.

The Standard Deviation illustrates that export per employee of Knitting and Textile industry (1.30), Garments industry (1.49), and Services and Others industry (1.43) are less-fluctuated, while Garments Accessories industry (2.33) is moderate and Electronics and Electrical industry (4.69) has a dramatic fluctuation.

Table 7.4.1: Industry wise Export per Employee in thousand US$ with Mean, Standard Deviation, and Rank during Study Period.

Financial Year	Garments	Garments Accessories	Knitting & Textile	Footwear & Leather	Electronics & Electrical	Service and Others
2009-10	9.21	26.07	14.05	6.98	14.41	10.46
2010-11	10.50	24.76	16.16	6.60	19.49	13.67
2011-12	11.69	20.13	13.95	8.40	21.86	14.17
2012-13	11.45	24.30	15.83	8.21	25.87	12.84
2013-14	13.24	25.33	16.82	9.30	15.49	13.05
Descriptive Measures						
Mean	11.22	24.12	15.36	7.90	19.42	12.84
SD	1.49	2.33	1.30	1.10	4.69	1.43
Rank	5	1	3	6	2	4

Source: BEPZA Data base.

I.   Note: Data has been compiled by the researcher.

II. $\text{Export Per Employee} = \dfrac{\text{Export}}{\text{Number of Employee}}$

By analyzing the mean, it is found that Garments Accessories industry earned 24.12 thousand US$ and Electronics and Electrical industry earned 19.42 thousand US$, stood first and second .respectively, while Knitting and Textile industry was of 15.36 thousand US$, stood third and Service and others industry was of 12.84 thousand US$ stood 4th. However, Garments industry (11.22 thousand US$) and Footwear and Leather industry (7.90 thousand US$) had a little performance with 5th and 6th position respectively.

Figure 7.4.1 shows Industry wise information of Export per Employee in thousand US$ with average During Study Period (FY2009-10 to FY2013-14). The year wise export per employee is almost same with a little fluctuation. However, Electronics and Electrical industry has some variation year by year; the value is the highest (25.87 thousand US$ per employee) in FY 2012-13 and the lowest (14.41thousand US$ per employee) in FY 2009-2010.
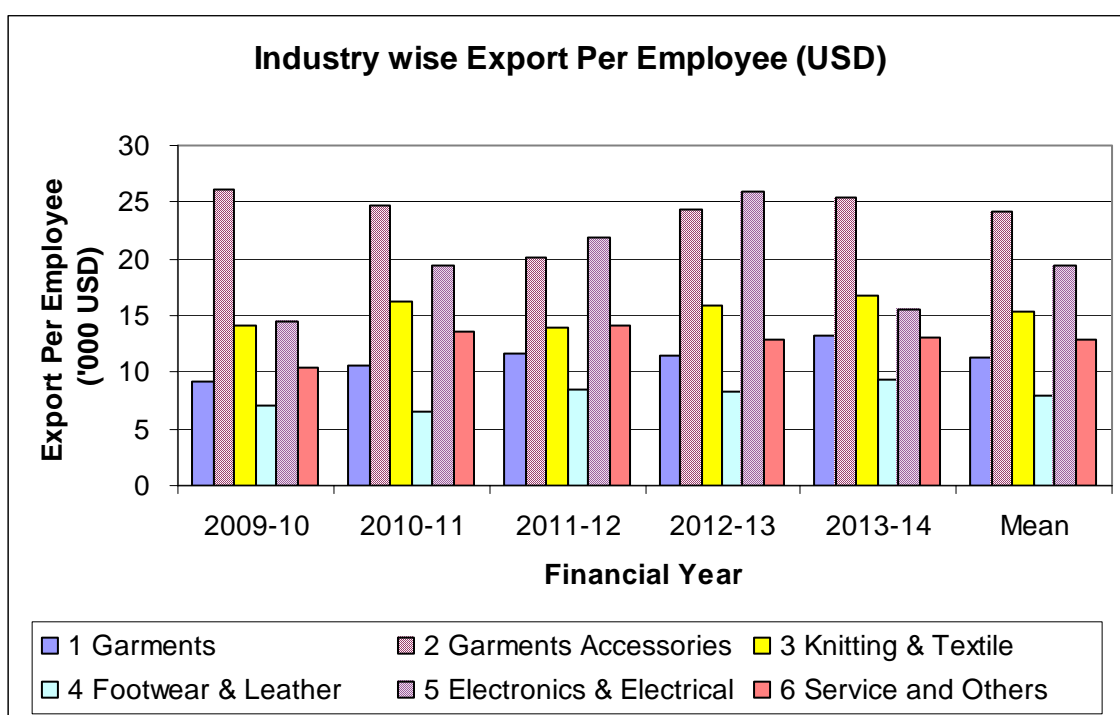
Figure 7.4.1: Industry wise Export per Employee in thousand US$ with average During Study Period.

07.5 Findings

By the analysis of mean export per employee, it is found that Mongla EPZ scores first with 42.29 thousand US$, Dhaka EPZ gets second position with 19.00 thousand US$ and Comilla EPZ holds third place with 12.52 thousand US$ export per labor, Chittagong gets 4th position with 10.69 thousand US$ export per labor and Adamjee EPZ scores 5th position with 9.63 thousand US$ export per labor.

In five financial years, full Foreign enterprise earned 11.77 thousand US$, (the highest) and Joint Venture was of 7.71 thousand US$ (second), whereas Local was of 8.54 thousand US$ (third) export per employee.

By analyzing the mean, it is found that Garments Accessories industry earned 24.12 thousand US$ and Electronics and Electrical industry earned 19.42 thousand US$, stood first and second .respectively, while Knitting and Textile industry was of 15.36 thousand US$, stood third and Service and others industry was of 12.84 thousand US$ stood 4th. However, Garments industry (11.22 thousand US$) and Footwear and Leather industry (7.90 thousand US$) had a little performance with 5th and 6th position respectively.

CHAPTER 8: LAND PRODUCTIVITY

Analysis of Export per Square Meter Land in EPZs.

8.1. Preamble of Land Usages

8.2. Analysis of Export per Square Meter Land as per location of the Business.

8.3. Analysis of Export per Square Meter Land as per the Ownership Type of Business.

8.4. Industry wise Analysis of Export per Square Meter Land.

8.5 Findings

8.1. Preamble of Land Usages

Bangladesh is a small county in the point of area of land but at present about 159.69 million people are live in the country (Bangladesh Bureau of Statistics, 2015). As a result, per capita land is a scarcity of our economic development. So, productivity of land in EPZ is an important variable to the work. In this context, Export per Square Meter Land is analyzed in this chapter with three view points, i.e., location of business, ownership style of business and line of industry.

08.2. Analysis of Export per Square Meter Land as per location of the Business.

The Table 8.2.1explines the information about EPZ wise Export per Square Meter Land in US$ with Mean, SD, and Rank during Study Period (FY2009-10 to FY2013-14). From the analysis it comes out that in FY2009-10, Dhaka EPZ enjoyed the highest Export per square meter land by 3136.89 US$ and Uttara earned 1346.92 US$, stood first and second respectively, whereas Chittagong (1065.50 US$) stood third , Karnaphuli (893.48 US$) stood 4[th] and Mongla (252.49 US$) stood 8th the lowest position.

In the next financial year2010-11, the trend remained decreasing but Chittagong remained somewhat steady by 1065.50 US$. In 2011-12, Dhaka EPZ continued decreasing, though remained the highest position by 2470.79 US$ export per square meter while Karnaphuli also remained downward by 323.30 US$. In the financial year (2012-13), Dhaka EPZ was of 2360.64US$ and Chittagong (1351.13 US$) while Comilla (173.40 US$) and Karnaphuli (101.87 US$) remained on the wane.Dhaka EPZ (2,265.88 US$) and Chittagong (990.83 US$) held the first and second position, while Ishwardi (16.24 US$) was at the lowest point in the (FY 2013-14). The general trend of EPZs' export per Sq. M is downward throughout these FY years.

The SD stands a little steady for Adamjee (147.65) and Chittagong (151.41) but others are very much volatile.

Table 8.2.1: EPZ wise Export per Square Meter Land in US$ with Mean, SD, and Rank during Study Period.

Financial Year	Adamjee	Chittagong	Comilla	Dhaka	Ishwardi	Karnaphuli	Mongla	Uttara
2009-10	612.80	1,065.50	629.96	3,136.89	445.74	893.48	252.49	1,346.92
2010-11	581.31	1,050.35	419.46	2,501.18	680.00	598.27	714.77	723.98
2011-12	450.56	1,246.24	273.23	2,470.79	830.22	323.30	487.59	499.85
2012-13	369.06	1,351.13	173.40	2,360.64	501.87	101.87	342.59	318.74
2013-14	257.65	990.83	69.41	2,265.88	140.03	16.24	101.69	113.48
Descriptive Measures								
Mean	454.28	1,140.81	313.09	2,547.08	519.57	386.63	379.83	600.59
SD	147.65	151.41	219.20	342.65	260.79	361.93	233.86	474.10
Rank	5	2	8	1	4	5	7	2

Source: BEPZA Data base and collected primary data.
I.   Note: Data has been compiled by the researcher.

II. $\text{Export Per Employee} = \dfrac{\text{Export}}{\text{Square Meter Land}}$

Table 8.2.1 also shows that, In the view point of land usages during five year average Dhaka EPZ gets first position by exporting per square meter land US$ 2547.08, Chittagong EPZ holds second   position by exporting per square meter land US$ 1140.81, Uttara EPZ gets third position by exporting per square meter land US$ 600.59, Ishwardi EPZ enjoys 4th position by exporting per square meter land US$ 519.57,   Adamjee EPZ gets 5th   position by exporting per square meter land US$454.28,   Karnaphuli EPZ gets 6th position by exporting per square meter land

US$386.63, Mongla EPZ gets 7th position by exporting per square meter land US$379.83 and Comilla EPZ gets 8th position by exporting per square meter land US$313.09 as their rank.

Figure 8.2.2 illustrates, in term of export per Square meter land, Dhaka EPZ was the highest over3000 US$ and Uttara got the second position by around US$1346 in the FY 2009-2010. Dhaka continued decreasing, though stood first over the years. Chittagong EPZ also held its second position over these financial years. In FY 2013-14, Karnaphuli and Comilla were at the lowest position. While Dhaka EPZ exported over US$ 2000. The mean is that Dhaka remained the highest, while Chittagong EPZ stood second, Uttara the third, Ishwardi-4th, Karnaphuki-5th, Adamjee-6th, and Comilla-7th in export per Sq. M land.
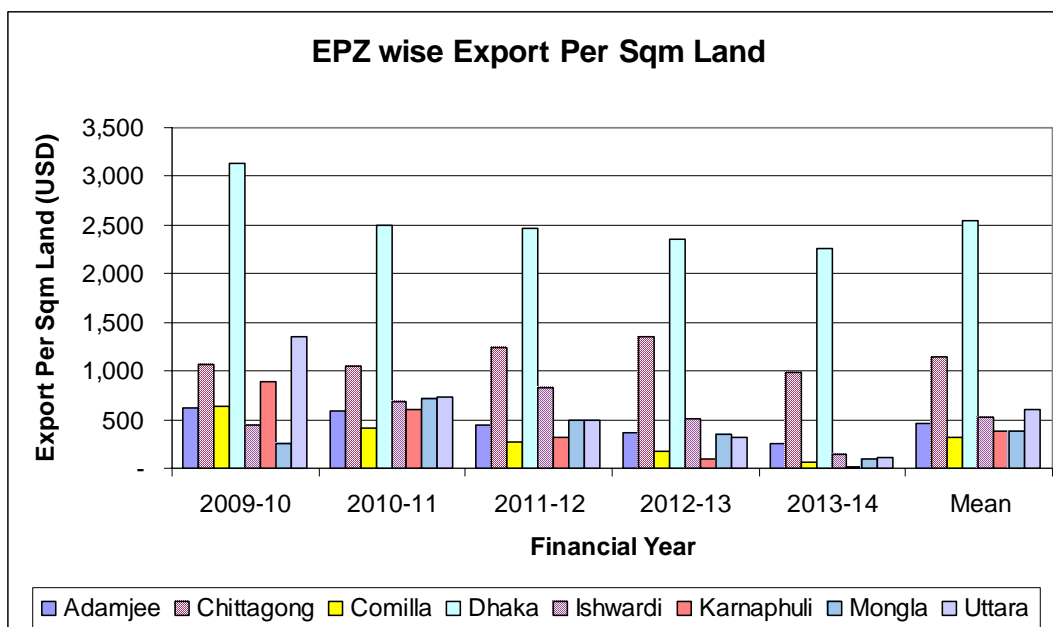
Figure 8.2.2: EPZ Wise Export per Square Meter Land in US$ with average During Study Period.

8.3. Analysis of Export per Square Meter Land in US$ as per the Ownership Type of Business.

Table: 8.3.1 Shows the information about ownership type wise export per square meter land in US$ with mean, SD, and Rank during study period (FY 2009-10. to 2013-14)

It is found that in FY 2009-10, Foreign firm export dominated others with 563.08 US$, while joint venture firm earned 303.50 US$ and local firm earned 291.96 US$ almost half of foreign firm per square meter. In the FY 2010-11, foreign enterprises' performance was on increasing, by 877.19 US$, whereas joint venture (475.26 US$) held the second position and local. Firm (393.63 US$) held the third position. In all financial years all the three sectors were of upward trend though joint venture firm lost the ground slightly with 553.16 US$ on export per square meter. In FY 2011-12 Foreign Enterprise was 829.38 US$ all most double of Local firm (434.69US$) and joint venture enterprise (471.05 US$) was on the wane slightly. Foreign enterprise and Local enterprise in FY 2013-14 enjoyed their highest FY by 1017.92 US$ and 858.05 US$ respectively, though joint venture earned much in FY 2012-13 with 583.57 US$.

The mean of these there sectors is that foreign enterprises earned 799.73 US$, local 503.64 US$ and joint venture 477.31 US$. The Rank of these three sectors is that foreign owned enterprises stood 1st, local second and joint venture the third one in ownership type wise export per square meter land.

The SD standard deviation that joint venture enterprises (108.74) has smooth up and down, whereas foreign owned enterprises (172.01) was moderate and locally owned enterprises (217.13) is volatile.

Table 8.3.1: Ownership Type wise Export per Square Meter Land with Mean, SD, and Rank during Study Period.

FY	Foreign	Joint Venture	Local
2013-14	1,017.92	553.15	858.05
2012-13	877.19	583.57	539.89
2011-12	829.38	471.08	434.69
2010-11	711.06	475.26	393.63
2009-10	563.08	303.50	291.96
	Descriptive Measures		
Mean	799.73	477.31	503.64
SD	172.01	108.74	217.13
Rank	1	3	2

Source: BEPZA Data base and collected primary data.
III.   Note: Data has been compiled by the researcher.

IV. $\text{Export Per Employee} = \dfrac{\text{Export}}{\text{Square Meter Land}}$
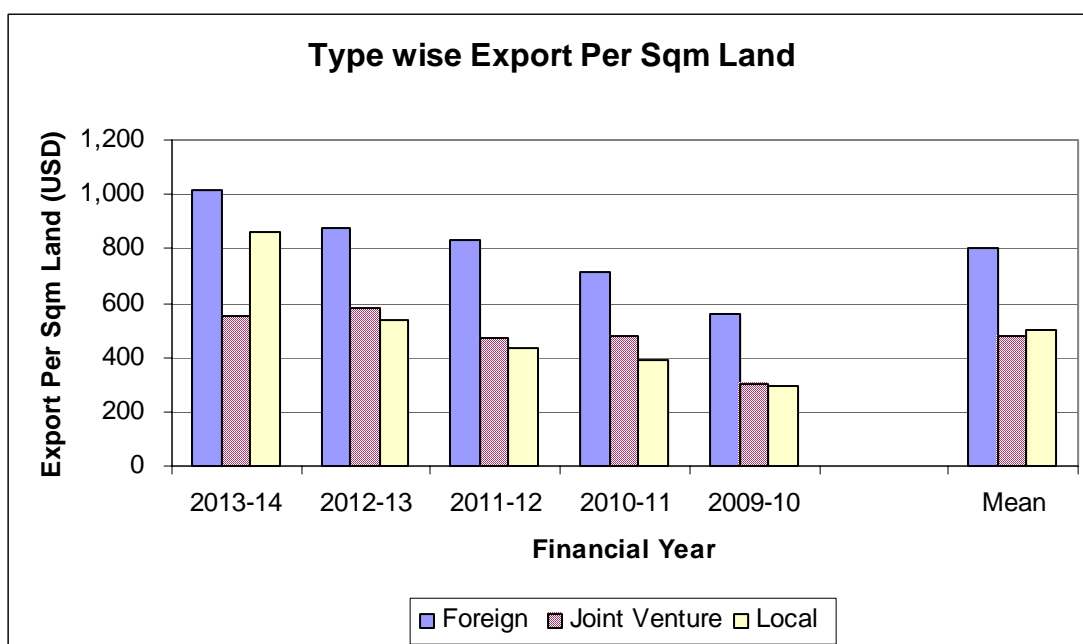
Figure 8.3.1: Ownership Type wise Export per Square Meter Land in US$ with average During Study Period.

Figure 8.3.1 (bar chart) illustrates the performance of ownership type wise Export per square meter land in US$ with average over the five consecutive financial years

(2009-10 to 2013- 14). In the bar chart it is clear that in FY 2009- 10 Foreign firm held the highest position in every FY and then gradual upward trend started from FY-2010-11 and continued till FY 2013-114, though Joint venture firms declined in FY 2013-14. In FY 2009-10, the total export per square meter for every respective firm was almost half of FY 2013-14.

The mean of the chart is that Foreign firm held the first position local firm second and joint venture firm third , though there is a slight difference between local and joint firm on export per square meter land in US$.

8.4. Industry wise Analysis of Export per Square Meter land.

Table 8.4.1 Explains the data about industry wise export per square meter land in US$ over the five different financial years from 2009-10 to 2013-14. It is observed that in FY 2009-2010, Garments Accessories industry held the highest position by exporting 936.25 US$ per Square meter, while Garments (848. 68 US$) and Footwear and Leather (301.50 US$) stood second and third . From FY 2010-11 to FY-2013-14, in almost every year Garments industry was the highest. While, service and others industry earned the lowest export per SQUARE METER land. A gradual increase was continued for footwear and leather goods industry and Knitting and textile industry till FY 2013-14. In FY 2013 -14, it is found that Garments industry conformed its highest position by 1725.71 US$, while Footwear Leather goods industry (1340.42 US$) and Garments Accessories (1000.21 US$) stood second and third respectively. Electronic and electrical goods industry ensured 4[th] position by 641.69 US$, whereas knitting, Textile Tent and Terry towel (690.48 US$) and service and others (219.38 US$) stood 5th and 6th respectively.

The standard deviation indicates is that services and others (74.40) is steadier than others are. Knitting, Textile, Tent and Terry Towel (178.56) and Garments Accessories (202.12) are somewhat steady, while Garments (321.37) Footwear and Leather goods (385.17) are very much volatile.

Table 8.4.1: Industry Wise Export Per Square Meter Land in US$ with Mean, Standard Deviation and Rank during Study Period.

Financial Year	Garments	Garments Accessories	Knitting, Textile, Tent & Terry towel	Footwear & Leather goods	Electronics & Electrical goods	Service and Others
2013-14	1,725.71	1,000.21	690.48	1,340.42	641.69	219.38
2012-13	1,345.99	765.80	728.84	928.29	779.10	235.48
2011-12	1,260.38	585.53	577.45	902.09	624.68	316.55
2010-11	1,119.75	549.19	441.74	632.21	354.05	380.32
2009-10	848.68	936.25	298.24	301.50	134.44	206.25
Descriptive Measures						
Mean	1,260.10	767.40	547.35	820.90	506.79	271.60
SD	321.37	202.12	178.56	385.17	258.95	74.40
Rank	1	3	4	2	5	6

Source: BEPZA Data base and collected primary data.
V.   Note: Data has been compiled by the researcher.

VI. $\text{Export Per Employee} = \dfrac{\text{Export}}{\text{Square Meter Land}}$

Table 8.4.1 also shows that in the term of land usages during five years, garments industry gets first position by exporting per square meter land US$ 1260.10, footwear and leather goods industry gets second   position by exporting per square meter land US$ 820.90, garments accessories industry holds third position by exporting per square meter land US$ 767.408, knittingand textile industry gets 4th position by exporting per square meter land US$ 547.35, electronics and electrical goods industry enjoys 5th position by exporting per square meter land US$ 506.79 and service and

others industry gets 6th position by exporting per square meter land US$ 271.60 as their rank state in the table.

The bar Chart: (Fig 8.4.1) Illustrates the data about industry wise export per square meter (Square meter) land in US$ with average during study period (FY 2009-10 to FY 2013-14). It is observed that in FY 2009-10, Garments Accessories industries exceeded Garments industry for the time being and Knitting, Textile, Tent and Terry towel and footwear and leather goods industries remained almost same around300 US$.
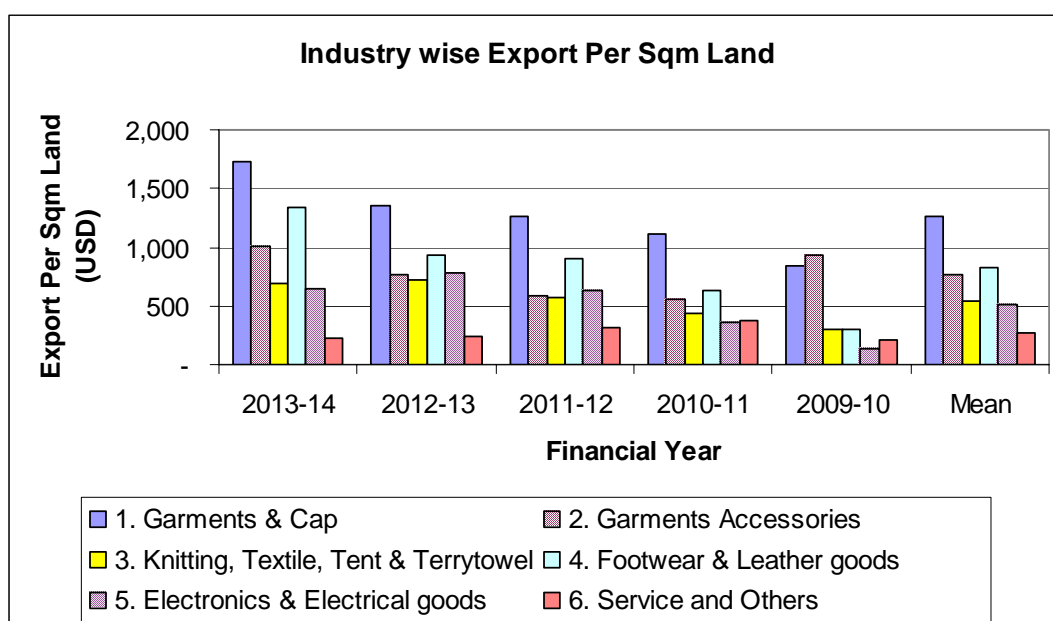
Figure 8.4.1: Industry wise Export per Square Meter Land in US$ with average During Study Period.

From FY 2009-10 to FY 2013-14 almost all the industries enjoyed gradual increase especially in FY-2013-14. In FY 2013 -14, Garments industries outnumbered other industries, while Footwear and Leather was next one. Garments Accessories

industries was over 1000 US$ and services and others was of a little performance held the lowest position.

The mean of the chart indicates that Garments industry was first one, Footwear and Leather second , Garments Accessories third ,and Services and others was the last one industry on export per Square meter land in US$.

8.5 Findings

Location wise: In the view point of land usages during five years average Dhaka EPZ led first position by exporting per square meter land US$ 2547.08 that is more than twice from second position, Chittagong EPZ gets second   position by exporting per square meter land US$ 1140.81 and other EPZs are standing below 1000 US$.

Ownership wise: The mean of these there sectors indicates that foreign enterprises earned 799.73 US$, local 503.64 US$ and joint venture 477.31 US$ by exporting per square meter land. The Rank of these three sectors is that foreign owned enterprises stood 1st, local second and joint venture the third one in ownership type wise export per square meter land.

Industry wise: Comparing with related industries, it is observed that Garments was first one, Footwear and Leather second , Garments Accessories third and Services and others was the last one industry on export per Square meter land in US$.

CHAPTER 09: ANALYSIS OF RETURN ON SALES

9.1. Preamble of Return on Sales

9.2. Analysis of Return on Sales as per location of the Business.

9.3. Analysis of Return on Sales as per the Ownership Type of Business.

9.4. Industry wise Analysis of Return on Sales.

9.5 Findings

9.1. Preamble of Return on Sales

As it has been discussed in literature review, return or profit is the measurement of the level and quantum of earnings of an industry. It is the net result of a firm's overall performance, i.e., export, import, production, marketing and others activities done by a firm. So, the rate of return gives an insight into the working scenario for any enterprise. As the owners and stakeholders in this sector require an adequate return on their investment, it is essential to have an in-depth study on profitability. Following two chapters analyze the profitability issues of the sample enterprises during the study period in two ways; one is return on sales or gross profit margin another is return on investment (ROI). The first one is discussed in this chapter and latter one will be discussed in the next chapter.

9.2. Analysis of Return on Sales as per location of the Business.

Generally, return explains two states, i.e., Earnings before Interest and Tax (EBIT) and Net Profit after taxes. Researcher takes EBIT for his analysis due to avoiding complexity of tax and interest calculation and those data are not available in public domain or any others sources.

Return on Sales can be determined as follows:-

$$\text{Return on Sales} = \frac{EBIT}{Sales} X 100$$

[Where, EBIT= Sales – Cost of goods Sold/Sales – Operating Costs]

Table 9.2.1 explains the Return on sales (ROS) in percent as per location of the business over the consecutive five financial years (2009-10 to 2013-14). From the analysis of the table, it is found that in FY 2009-10, Dhaka EPZ (52.02%) became the first EPZ and Uttara (-9.05) went down in negative figure. In FY 2010-11, Dhaka

EPZ (1st) was in its the lowest position by 36.78% return on sales and Adamjee EPZ (2.64%) stood second , while Uttara EPZ suffered negative figure most of the time except two financial years (2013 -14 and 2011-12). In the FY year (2011-12), Adamjee (41.57%) and Uttara came round, whereas others fell off but return of sales of Dhaka EPZ was 47.36%. However, in the FY 2012-13 year, Mongla (-7.68%), Adamjee (-15.94%) and Uttara (-43.75%) suffered a great blow with negative figure, while Chittagong (34.55%) was increasing. In FY 2013-14 all most every EPZ enjoyed a stable position in return on sales when Dhaka EPZ was of 40.42% and Adamjee (36.96%) stood first and second respectively.

Table 9.2.1: Return on Sales in Percent as per location of the Business during Study Period.

Financial Year	Adamjee	Chittagong	Comilla	Dhaka	Ishwardi	Karnaphuli	Mongla	Uttara
2013-14	36.96	25.72	26.40	40.42	16.69	20.45	24.13	18.66
2012-13	(15.94)	34.55	29.43	42.53	26.77	23.82	(7.68)	(43.75)
2011-12	41.57	27.74	16.57	47.36	3.50	11.62	12.22	2.64
2010-11	19.38	16.91	14.68	36.78	0.45	19.65	14.14	(9.87)
2009-10	45.07	20.41	3.25	52.02	13.49	19.15	14.22	(9.05)
Descriptive Measures								
Mean	25.41	25.07	18.07	43.82	12.18	18.94	11.41	(8.27)
SD	25.14	6.81	10.39	5.97	10.58	4.48	11.64	22.95
Rank	2	3	5	1	6	4	7	8

Source: BEPZA Data base and collected Primary Data
I.   Note: Data has been compiled by the researcher.
II.   Return on Sales $= \dfrac{EBIT}{Sales} X100$

Analyzing the data of average return on sales of five financial years in table 9.2.1, it is found that Dhaka EPZ gets first position with 43.82%, Adamjee EPZ holds second position with 25.41%, Chittagong EPZ enjoys third position with 25.07%, Karnaphuli EPZ gets 4th position with 18.94%, Comilla EPZ gets 5th position with 18.07%,

Ishwardi EPZ secures 6th position with 12.18%, Mongla EPZ gets 7th position with 11.41% and Uttara EPZ gets 8th position with minus 8.27% return on sales as their rank.

The SD explains that Karnaphuli (4.48) Dhaka EPZ (5.97) and Chittagong (6.81) remained steadier than Comilla (10.39), Ishwardi (10.58) and Mongla (11.64), whereas Uttara (22.95) and Adamjee (25.14) suffered sudden fluctuation in a wide range.

Figure 9.2.2 (bar chart) shows EPZ wise return on sales in percent with average during study period (FY 2013–14 to 2009-10). The chart describes that in FY 2009 - 10, Dhaka and Adamjee EPZ were first and second respectively, while Uttara remained at the bottom with a negative figure. However, in FY 2011 -12, Uttara EPZ bounced back, though Dhaka EPZ and Adamjee EPZ remained dominating and sudden fall of Ishwardi happened. In the FY 2012 -13, Adamjee, Mongla and Uttara EPZ fell off in negative figure especially Uttara at the lowest point ever. Almost every EPZ remained steady and Dhaka and Adamjee dominated the FY 2013 -14, being first position second respectively.

The mean explains that Dhaka led others with 43.82% while Adamjee and Chittagong were a little lower than Dhaka EPZ but they were almost same in term of return on sales. The return on sales of Comilla and Karnaphuli were same and Mongla and Ishwardi EPZ were same too but a little lower than Comilla and Karnaphuli. However, Uttara experienced with negative value in EPZ wise average return on sale in percent.
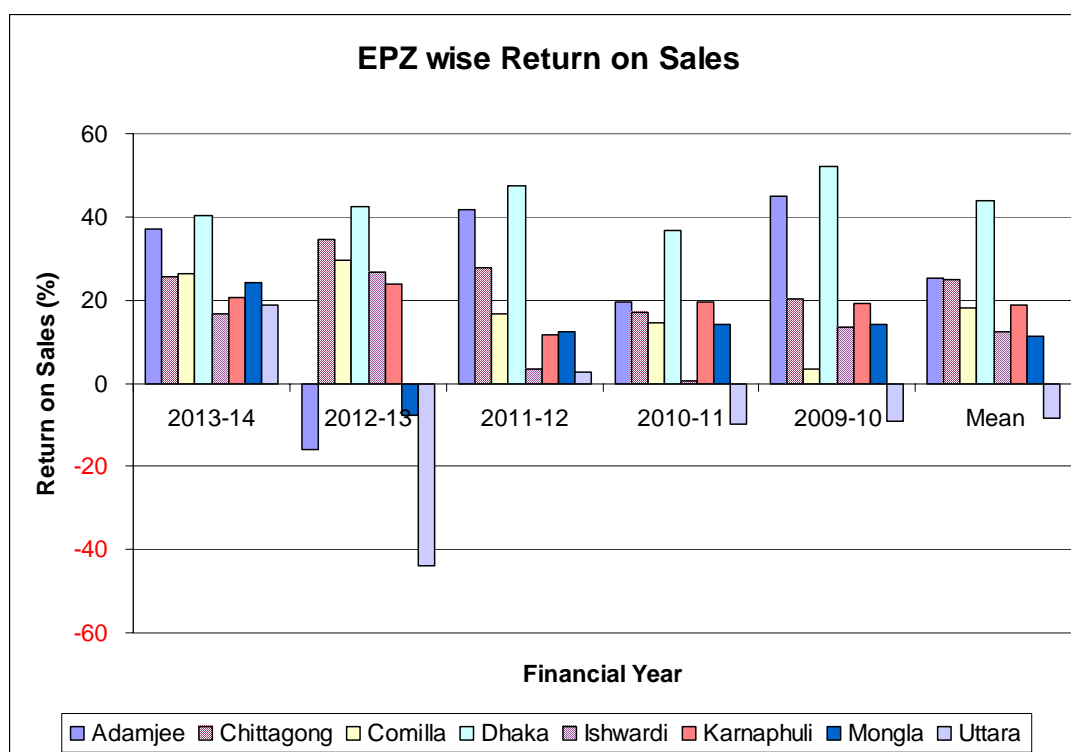
Figure 9.2.2: EPZ Wise Return on Sales in Percent with average During Study Period.

09.3. Analysis of Return on Sales as per the Ownership Type of Business.

Table 9.3.1 shows figure of Return on sales in percent as per ownership Type of business during study period (FY 2013-14 to 2009-10). The table says that return on sales of foreign industry held 44.36%, whereas local industry held 25.36% and joint venture industry was of 15.61% in FY 2009-10. Return on sales of fully foreign enterprises was the highest in FY 2009-10 with 44.36% while 26.79% was in FY 2012-13, the lowest.

The general trend is that in almost every financial year foreign owned enterprises were 1st, Local enterprises were second and joint venture firms' were third.

The highest return on sales of joint venture enterprises was 22.25% in 2012-13 and it was lowest (10.41%) in FY 2011–12. Local enterprises enjoyed the best in 2013-14 by 32.40%, while the worst in 2012 -13 by 16.67%. The mean of these three types of

industry is that foreign industry (33.90) dominated over others, while local industry (25.11) was of second position and joint venture (25.54%) the last one.

The SD explains that joint venture enterprises are steadier than Foreign owned enterprises as well as local firms.

Table 9.3.1: Return on Sales as per Ownership Type of the Business during Study Period.

Financial Year	Foreign firms	Joint Venture	Local Firms
2013-14	34.82	12.23	32.4
2012-13	26.79	22.25	16.67
2011-12	37.38	10.41	25.37
2010-11	26.15	17.19	25.48
2009-10	44.36	15.61	25.63
Descriptive Measures			
Mean	33.9	15.54	25.11
SD	7.63	4.61	5.59
Rank	1	3	2

Source: BEPZA Data base and collected Primary Data
I.   Note: Data has been compiled by the researcher.

II.   Return on Sales $= \dfrac{EBIT}{Sales} X100$

The bar chart (Fig. 9.3.2) Explains ownership type wise (ROS) in percent with average during study period (FY 2013 -14 to 2009-10). From the observation of the study, it is clear that In FY 2009 -10, foreign and local EPZ hold first position second position respectively, whereas joint venture lagged far behind. But in FY 2012 -13, every industry was shrinking, though joint venture industry went up and Local firm became almost half of the FY 2013-14. There was no such difference between foreign firm and local firm in FY2013-14, though joint venture firm went down in Return on Sales.

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The mean of foreign was around 34%, was second to none. Local firm around 25% was second and joint venture around 15% was third.
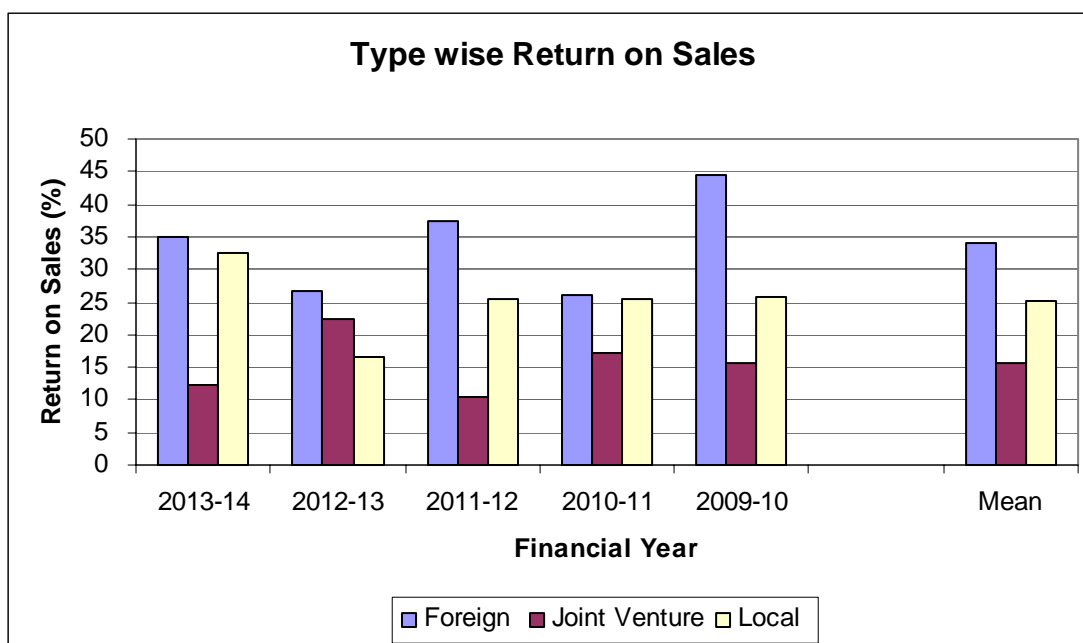
Figure 9.3.2: Ownership Type wise Return on Sales in Percent with average During Study Period.

09.4. Industry wise Analysis of Return on Sales.

Table 9.4.1 shows the information about industry wise return on sales in percent during study period (FY 2013-14 to 2009-10). In FY 2009-10, Garments (39.67%) dominated others, while Electronics and Electrical (38.95%) held the second position and Garments Accessories (37.55%) the third position. However, Footwear and Leather (-2.22%) went down to negative figure. In FY (2010-11), Footwear and Leather came round to 8.46%, though Garments (31.57%) remained dominating. In FY 2011-12, Garments grew up to 35.22% and garments and Accessories was of 24.61% while Footwear and Leather served 9.01% only, though Electronics and

Electrical industry decreased to negative value by 3.01%. A dramatic fall was seen in the return on sales of Garments Accessories by -14.96% which is the lowest point ever, though garments remained steady in FY 2012-13. In FY 2013-14, Garments Accessories got a surprising success by 35.48%, which was the highest figure of the year, while garments stood second and knitting and Textile the third one. The value of SD for Garments Industry is 3.16, Knitting and Textile is 4.94 and service and others is 4.10. These imply that their ratios were steadier than Garments (21.41%) and Electronics and Electrical (15.85%).

Garments industry acquires first place with 36.04%, garments accessories industry acquires second place with 22.15%, knitting and textile industry enjoys third place with 21.87%, electronics and electrical industry holds 4th place with 15.08%, service and others industry acquires 5th place with 11.11%, footwear and leather industry acquires 6th place with 6.74% as their rank.

Table 9.4.1: Industry wise Return on Sales in Percent during Study Period.

Financial year	Garments & Cap	Garments Accessories	Knitting & Textile	Footwear & Leather goods	Electronics & Electrical goods	Service and Others
2013-14	35.36	35.48	28.66	7.77	19.75	15.29
2012-13	38.40	(14.96)	22.53	10.69	13.77	6.50
2011-12	35.22	24.61	23.74	9.01	(3.01)	9.13
2010-11	31.57	28.07	15.79	8.46	5.91	9.05
2009-10	39.67	37.55	18.62	(2.22)	38.95	15.61
Descriptive Measures						
Mean	36.04	22.15	21.87	6.74	15.08	11.11
SD	3.16	21.41	4.94	5.12	15.85	4.10
Rank	1	2	3	6	4	5

Source: BEPZA Data base and collected Primary Data
I.   Note: Data has been compiled by the researcher.
II.   Return on Sales $= \dfrac{EBIT}{Sales} X100$

The bar chart(Fig:9.4.2) explains that in 2FY-2009-10, Garments industry is the highest one while Electronics and Electrical and Garments Accessories were very near to it. However, Footwear and Leather got a blow of negative figure. In FY 2010-11, Garments remained dominating while garments Accessories was second and knitting and Textile was third. In FY 2011-12, Garments was dominating but Electronics and Electrical Went down to negative value. In 2012-13, Garments Accessories got a dramatic fall to the lowest point. In FY 2013-14, Garments and Garments Accessories remained almost same, while footwear and Leather was at the lowest position.

The mean of the chart is that garments went up much more than others do, while Garments Accessories and knitting and Textile were almost same in the position of second and third respectively.
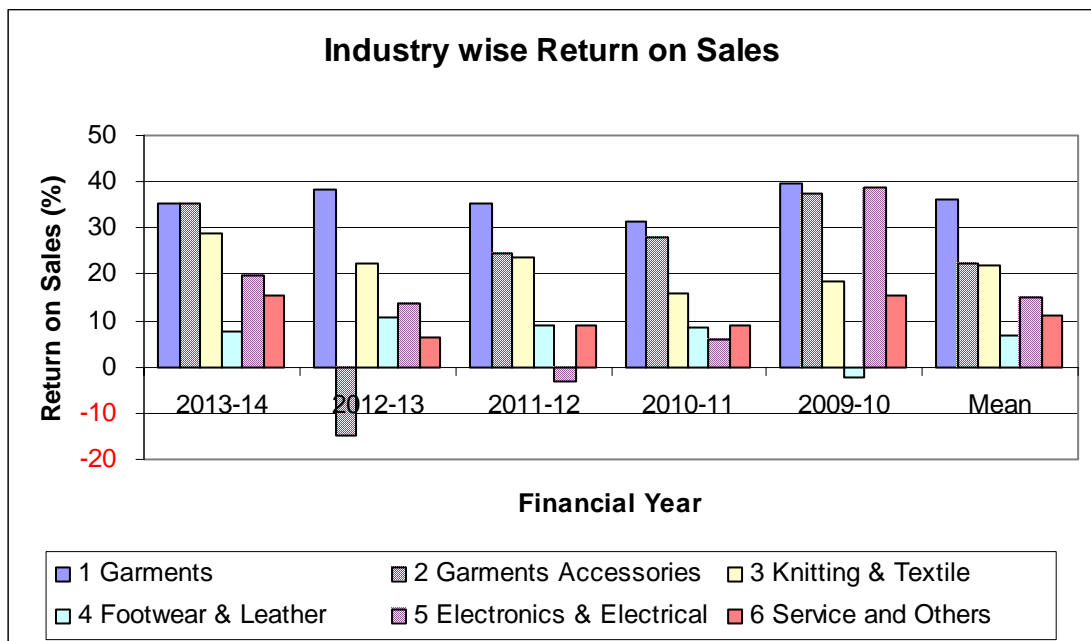
Figure 9.4.2: Industry wise Return on Sales in Percent with average during Study Period.

09.5 Findings

Location wise: Analyzing the data of average return on sales of five financial year in table 9.2.1, it is found that Dhaka EPZ holds first position with 43.82%, Adamjee EPZ secures second position with 25.41%, Chittagong EPZ gets third position with 25.07%, all others industry are standing below 20% in term of return on sales. But Uttara experienced with negative value in EPZ wise average return on sales in percent. Because the foreign and local investors are not interested to invest in Uttara EPZ due to its odd location, i.e., distance from sea and airport, skill labor and technicians do not want to go to Nilphamari, gas supplies are not on hand etc.

Ownership Type wise: The general trend is that in almost every financial year foreign owned enterprises were 1st, local enterprises were second and joint venture firms' were third in ownership type wise return on sales.

Industry wise: Garments went up much more than others did, while Garments Accessories and knitting and Textile were almost same in the position of second and third respectively.

CHAPTER 10: ANALYSIS OF RETURN ON INVESTMENT

10.1. Preamble of Return on Investment

10.2. Analysis of Return on Investment as per location of the Business.

10.3. Analysis of Return on Investment as per the Ownership Type of Business.

10.4. Industry wise Analysis of Return on Investment

10.5 Findings

10.1. Preamble of Return on Investment

Return on Investment can be determined by two ways, i.e., before tax and after tax. Research adopts it as before tax which may be as follows:-

$$\text{Return on Investment} = \frac{\text{Earnings Before Interest \& Tax}(EBIT)}{\text{Total Investments}} X100$$

[Where, EBIT= Sales – Cost of goods Sold/Sales – Operating Costs]

10.2. Analysis of Return on Investment as per location of the Business.

Table 10.2.1 explains Return on Investment (ROI) in percent as per location of the business during study period (2013 – 14 to 2009-10).

From the analysis of the table, (Figure. 10.2.1) it has been found that Dhaka and Mongla dominated the others by 71.19% and 59.67% respectively in the financial year (FY) 2009-10, whereas Adamjee (39.49%) and Chittagong (37.40%) remained stable holding third and 4th position. However, Uttara EPZ (-32.96%) suffered negative figure in FY 2010-11,while Mongla increased dramatically to the highest point by 96.37% leaving Dhaka (46.29%) far behind but in the same year Uttara (-91.18%) declined to the lowest point in negative value. Uttara EPZ enjoyed satisfactory figure by 29.81% but again a dramatic change was found in the next FY (2012-13). In the year 2012-13, ROI of Adamjee (-19.52%) Uttara (-56.90%) and Mongla (-72.30%) went down to negative value and total percentage of (ROI) became shrinking. In FY 2013-14, all these three EPZ regained the position, though there was no such remarkable figure as before, while Mongla (59.01%) stood first position Chittagong EPZ (55.23%) got second position.

The SD implies that Karnaphuli (10.62), Chittagong (11.17) and Dhaka (11.43) were stable, while Ishwardi (12.33), Comilla (13.17) and Adamjee (26.30) were somewhat moderate. However, Uttara (54.80) and Mongla (69.40) suffered dramatic fluctuation.

The mean indicates that Dhaka EPZ enjoys first position with 51.94%, Chittagong EPZ gets second position with 51.01%, Mongla EPZ secures third position with 47.52%, Adamjee EPZ gets 4th position with 24.29%, Comilla EPZ stands in 5th position with 15.64%, Karnaphuli EPZ gets 6th position with 14.94%, Ishwardi EPZ acquires 7th position with 10.84% and Uttara EPZ gets 8th position with nagetive ROI (-23.31%) as their rank.

Table 10.2.1: Return on Investment (ROI) as per location of the Business during Study Period.

Financial Year	Adamjee	Chittagong	Comilla	Dhaka	Ishwardi	Karnaphuli	Mongla	Uttara
2013-14	39.22	55.23	32.72	45.61	14.57	25.94	59.01	34.69
2012-13	(19.52)	61.53	25.93	43.19	30.77	26.36	(72.30)	(56.90)
2011-12	43.37	60.06	10.76	53.49	4.94	9.77	94.87	29.81
2010-11	18.88	40.85	7.43	46.23	0.39	9.81	96.37	(91.18)
2009-10	39.49	37.40	1.34	71.19	3.53	2.83	59.67	(32.96)
Descriptive Measures								
Mean	24.29	51.01	15.64	51.94	10.84	14.94	47.52	(23.31)
SD	26.30	11.17	13.17	11.43	12.33	10.62	69.40	54.80
Rank	4	2	5	1	7	6	3	8

Source: BEPZA Data base and collected Primary Data

I.   Note: Data has been compiled by the researcher.

II.   Return on Investment $= \dfrac{EBIT}{Investment} X100$

The bar Chart (Fig. 10.2.2) illustrates that in FY (2009-10), Dhaka EPZ was at the highest and Mongla was second one while Uttara EPZ was at the bottom line with negative value in the EPZ wise ROI. In FY 2010-11 Mongla was the highest over others and Uttara was the lowest point. In FY 2012-13, Adamjee, Mongla and Uttara were of negative value, though in FY 2013-14 they all came round and Mongla was around 60%. In FY 2013-14, Mongla EPZ and Chittagong stood first position second

respectively, While Dhaka Stood third , Adamjee- 4th Uttara and Comilla EPZ looked same. However, Ishwardi was the last one.

The mean shows that Dhaka and Chittagong EPZ were almost in the same point, though first position second respectively while Mongla was third. However, Uttara remained in negative figure.
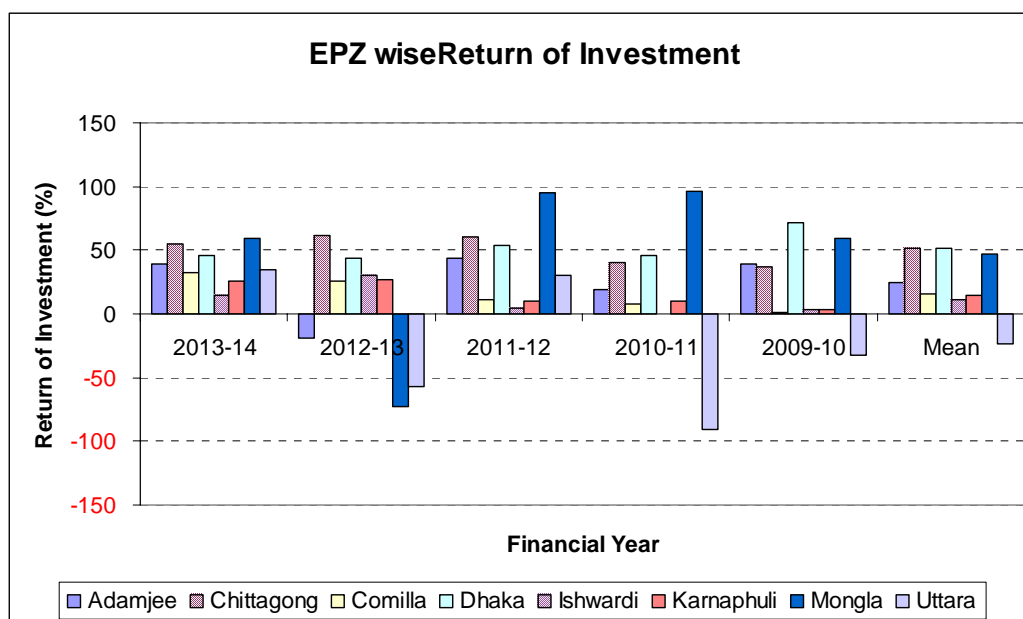
Figure 10.2.2: EPZ Wise Return on Investment (ROI) with average During Study Period.

010.3. Analysis of Return on Investment (ROI) as per the Ownership Type of Business.

From the analysis of table (Fig.10.3.1), it is found that in FY 2013-14, foreign (60.17%) industry dominated over local enterprises industry was (32.41%) and joint venture industry (10.14%). In most cases, all most every financial year foreign enterprises held the first position. Local the second and Joint venture enterprises the third but in FY 2012 -13 Joint venture EPZ were second with 24.77%, whereas local enterprises was of 22.66%. It is also observed that local enterprise (56.00%) dominated foreign industry (43.65%) and joint venture industry (10.14%).

In the FY 2009-10, the trend remained same foreign was of 60.17% while local enterprises and Joint venture were of 32.41% and 10.14% respectively. Foreign Enterprises' (ROI) was highest in FY 2009-10 by 60.17%, Joint venture EPZ were the highest in 2012-13 by 24.77% and local enterprises was the highest in FY 2013-14 by 56.00%.

The mean shows that foreign owned enterprise remained at the first position and local enterprises the second and joint venture (14.84%) the last one.

The SD implies that joint venture industry was steady and foreign enterprises were moderate but locally owned enterprises were volatile.

Table 10.3.1: Return on Investment (ROI) as per Ownership Type of the Business during Study Period.

Financial Year	Foreign	Joint Venture	Local
2013-14	43.56	12.22	56.00
2012-13	31.78	24.77	22.66
2011-12	52.40	10.34	17.04
2010-11	36.11	16.74	27.35
2009-10	60.17	10.14	32.41
Descriptive Measures			
Mean	44.80	14.84	31.09
SD	11.62	6.15	15.04
Rank	1	3	2

Source: BEPZA Data base and collected Primary Data
I.   Data has been compiled by the researcher.
II.   Return on Investment $= \dfrac{EBIT}{Investment} X100$

The bar chart (Fig. 10.3.2) shows that in FY 2009-10, foreign owned enterprises were far more than local and Joint venture enterprises on (ROI). In FY 2010-11, foreign enterprises were over 33% while joint venture was below around 30%. In FY 2011-12 foreign grew up to over 52%, while joint venture was almost five times lesser in Return on Investment. In FY 2012-13, foreign enterprises were over 30% while joint venture exceeded local enterprises of the first time. However, in return on investment

(ROI) local enterprises with a dramatic turn dominated foreign and joint venture enterprises in financial year 2013-14.

The mean indicates that foreign enterprises were at the highest position by around 44% local enterprises the second by around 30% and joint venture was the last one by over 14% on (ROI).
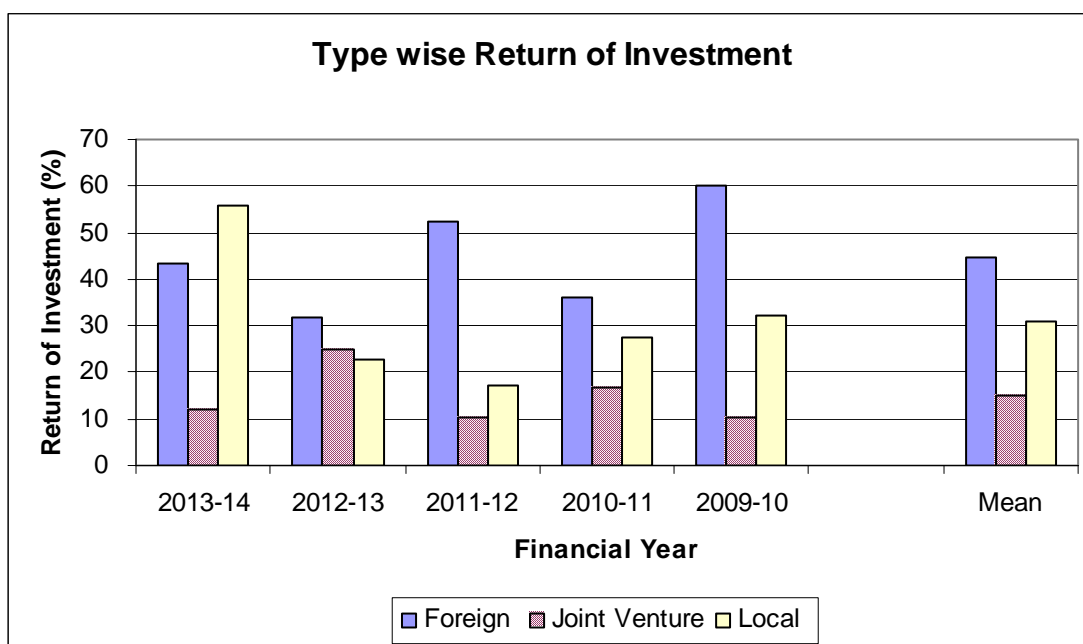
Figure 10.3.2: Ownership Type wise Return on Investment (ROI) with average During Study Period.

10.4. Industry wise Analysis of Return on Investment (ROI).

From the analysis of the table 10.4.1, it comes out that garments industry dominated others with 94.289% while garments accessories industry (48.19%) stood second and knitting Textile (22.93%) stood third while footwear and leather(-3.815%) was with negative value in FY 2009-10. But in FY 2010–11, Garments Accessories got a fall off with 34.80%, though Garments industry remained at the highest point by 85.73%.

Again, in FY 2011-12, Electronics and Electrical industries went down dramatically by -2.75%, while garments industry grew up to 92.21%.

Although electronics and Electrical came round in 2012- 13, Garments Accessories went down by negative figure with -00.74%, while Garments industry continued the first position with 87.92%. Like other FY, garments industry led all other industries with 88.30% return on investment, while garments accessories industry enjoyed a remarkable success with 50.28% stood second.

The SD indicates that Garments industry (3.47), services and others (4.48) are steady in ROI year by year, while garments accessories industry (20.76) is capricious and footwear and leather (10.49), knitting and textile (9.49) are moderate.

Table 10.4.1: Industry wise Return on Investment (ROI) during Study Period.

Financial year	Garments & Cap	Garments Accessories	Knitting & Textile	Footwear & Leather goods	Electronics & Electrical goods	Service and Others
2013-14	88.30	50.28	41.01	20.02	17.53	15.12
2012-13	87.92	(0.74)	37.22	20.73	15.01	6.57
2011-12	92.21	25.04	32.88	17.84	(2.75)	16.03
2010-11	85.73	34.80	18.58	19.52	3.64	19.94
2009-10	94.28	48.19	22.93	(3.81)	9.67	20.00
Descriptive Measures						
Mean	89.69	31.51	30.53	14.86	8.62	15.53
SD	3.47	20.76	9.49	10.49	8.30	5.48
Rank	1	2	3	5	6	4

Source: BEPZA Data base and collected Primary Data
I.   Note: Data has been compiled by the researcher.
II.   Return on Investment $= \dfrac{EBIT}{Investment} X100$

The table 10.4.1 implies that average ROI of garments industry acquires first place with 89.69%, garments accessories industry holds second   place with 31.51%,

knitting, textile, tent and terrytowel industry enjoys third place with 30.53%, service and others industry acquires 4th place with 15.53%, footwear and leather goods industry acquires 5th place with 14.86% and electronics and electrical goods industry acquires 6th place with 8.62% as their rank.
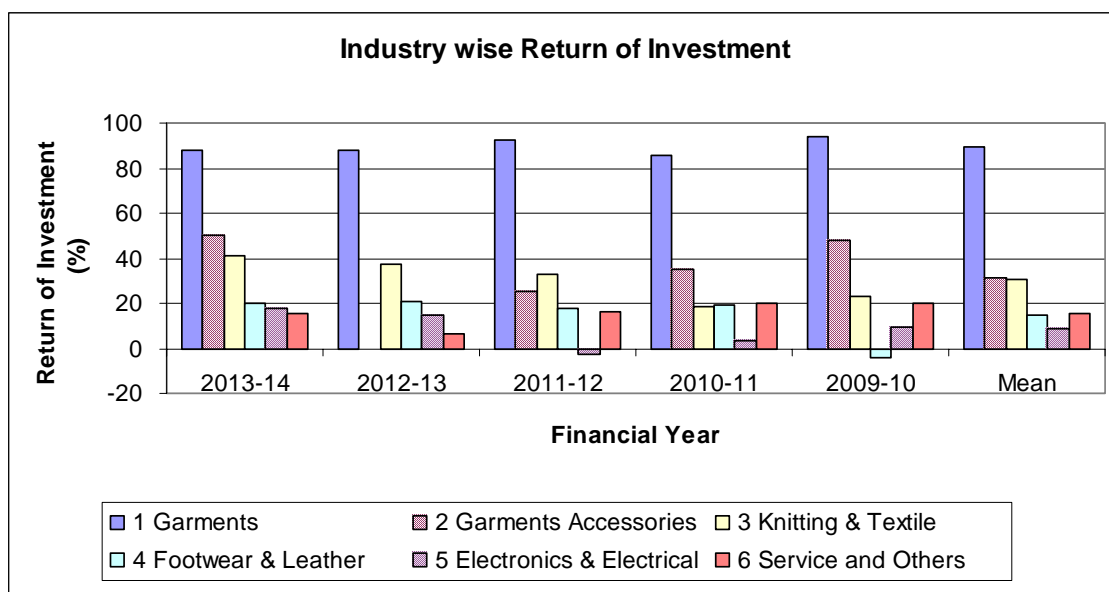
Figure 10.4.2: Industry wise Return on Investment (ROI) with average during Study Period.

The bar Chart (Fig: 10.4.2) illustrates the data about industry wise return of investment in percent over the five financial years from 2009–10 to 2013–14. In the chart, it is observed that in FY 2009-10, Garments dominated others and Garments and Accessories was second, knitting and textile was third, and others were not competitive. In almost all financial years garments led rest of the industries notably in the ratio of Return on Investment. In FY 2009-10 Footwear and leather industry showed a negative figure and electronics and electrical industry went down slightly in 2011-12 while garments accessories industry fell off below the zero margin in FY 2012-13.Garment industry like other FY outnumbered others with over 80% in TY 2013-14. The mean is that, Garment stood 1st, Garments Accessories and knitting and

Textile had slight difference in second and third position respectively. Footwear and leather and services and others were almost same 1n 4th and 5th position, while Electronics and Electrical was the lowest.

10.5 Findings

Location wise: After analysis of EPZ wise Return on Investment, it is found that Dhaka EPZ stands in first position with 51.94%, Chittagong EPZ gets second position with 51.01%, Mongla EPZ holds third position with 47.52%, Adamjee EPZ holds 4th position with 24.29% and other EPZs are standing below 20% of Return on Investment. Whereas, Uttara EPZ gets 8th position with nagetive Return on Investment (-23.31%) like return on sales that was discussed in chapter-9. So, Uttara EPZ is not profitable at all.

Ownership type wise: In industry wise analysis, the mean ROI shows that the foreign enterprises was at the highest position by around 44% local enterprises the second by around 30% and joint venture was the last one by over 14% return on investment.

Industry wise: It is found that in average ROI, garments industry acquires first place with 89.69%, garments accessories industry stands in second   place with 31.51%, knitting, textile, tent and terrytowel industry acquires third place with 30.53% and other industries are staying below 20% of Return on investment by the industry wise analysis.

CHAPTER 11: ANALYSIS THROUGH VALUE ADDITION.

11.1. Preamble of Value Addition

11.2. Analysis of Value Addition per employee as per location of the Business.

11.3. Analysis of Value Addition per employee as per the Ownership Type of Business.

11.4. Industry wise Analysis of Value Addition per employee

11.5 Findings

11.1. Preamble of Value Addition

Performance means accomplishment of expected courses of action. Appraisal, which is variously known as evaluation, measurement, assessment etc., refers to an ongoing evaluation of the quality, quantity, style. Determinants of the present performance, growth, potential, etc. to provide controlled information leading to an action program and enabling feedback aimed at performance improvement, growth and satisfaction (Bhardwaj, 1978). The overall performance of an organization can be measured in terms of several indicators. However, the performance of a business enterprise, specially the private sector, is measured in terms of profit earned which can be assessed in absolute term or it may be measured in terms of percentage on sales or return on investment etc. Such performance measurement in terms of profits can be useful to owners and lenders (Thavraj, 1978). But profit as a yardstick of measurement is not free from criticism. However, in recent years, there has been a considerable interest in 'Value Added' technique as an alternative or additional approach to measure the operational efficiency of a business (Mathur, 1989). In fact, contribution made by an enterprise, whether it is in the public or in private sector can be measured in terms of value addition which may be of important to national income accounting and to the owners, managers, employees and other stakeholders of the concerned enterprises.

The calculation of value added: Services of labor, capital and organization on natural and acquired products generate utilities having market value. Value added, in other words created by the operation an entity and its employee's equals the market value of the goods produced in the entity less than that of goods or services purchased from

other firms. In short, value added represents in the most general way the difference between output value and the value of inputs purchased from the units (Unido, 1980). Symbolically: $V_A = V_T - V_R$

Where,

V_A =Value Added

V_T = Value transferred to other units through sales, and

V_R =Value from other units through purchase.

11.2. Analysis of Value Addition per employee as per location of the Business.

Fig. 11.2.1 explains the information about EPZ wise gross value addition contribution during study period (FY 2009-10 to 2013-14) . It is seen that Dhaka EPZ covers the most proportion by 44.87%, whereas Chittagong enjoys 41.01% on gross value addition.
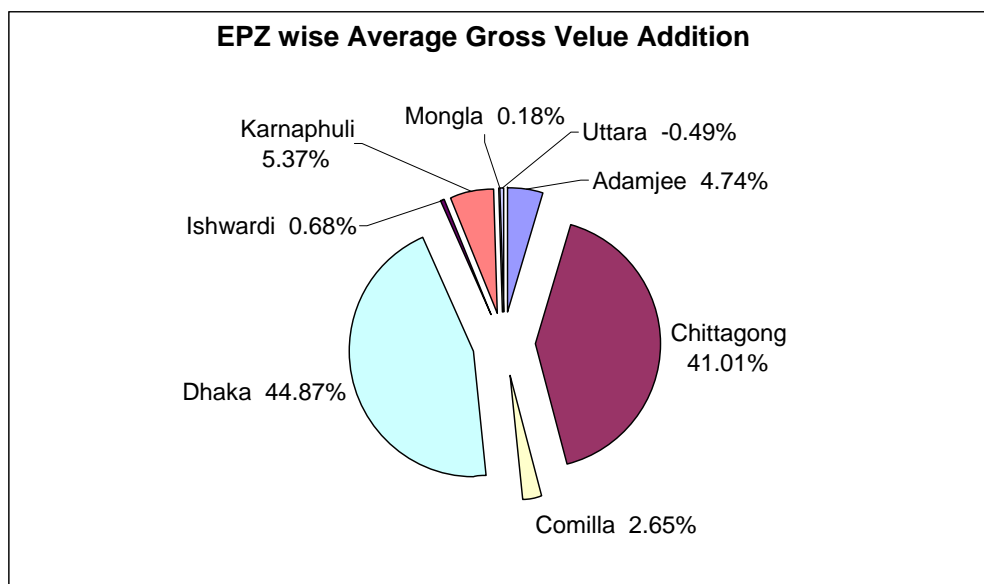
Figure 11.2.1: EPZ Wise Gross Value Addition contribution during Study period.

Fig. 11.2.1 shows that the contribution of Karnaphuli (5.37%) and Adamjee (4.74%) is mentionable, while other EPZs' contribution is nominal. Comilla EPZ adds only 2.65% gross value addition, whereas Ishwardi 0.68%, and Mongla EPZ cover only 0.18% of average gross value addition. However, Uttara EPZ loses value by 0.49%. So, Dhaka EPZ stands 1st, Chittagong second Karnaphuli third · Adamjee 4th, Comilla 5th, while Ishwardi 6th, Uttara 7th and Mongla EPZ stand 8th in average gross value addition. It is also seen that Dhaka and Chittagong EPZ jointly contribute 85.88%, while rest of the six EPZs contribute 14.12% only that is very trivial contribution in average gross value addition.

The Figure (11.2.1) also shows that Dhaka EPZ gets first position by contributing 44.87%, Chittagong EPZ holds second   position by contributing 41.01%, Karnaphuli EPZ gets third position by contributing 5.37%, Adamjee EPZ gets 4th position by contributing4.74%, Comilla EPZ gets 5th position by contributing 2.65%,   Ishwardi EPZ gets 6th   position by contributing 0.68%, Mongla EPZ gets 7th position by contributing 0.18% and Uttara EPZ gets 8th   position by negative contribution (-0.49%) as their rank.

From the observation of the table 11.2.1, it is found that the value addition per employee for the respective EPZ is different. In FY 2009-10, Dhaka EPZ's (7.27 thousand US$) value addition per employee was surprisingly higher than any other EPZ, while Mongla (-6.25 thousand US$), Ishwardi (-0.51 thousand US$) and Uttara (-0.12 thousand US$) remained negative. In the next financial year Dhaka EPZ (6.92 thousand US$) and Uttara (-2.80 thousand US$) decreased but Mongla contributed a handsome figure (4.26 thousand US$) with a nice back throw, although Uttara

remained negative in per employee value addition. From FY 2011-12 to 2013-14, Dhaka EPZ was on rising and in FY 2012-13, Chittagong and Mongla enjoyed significant amount of figure by 4.90 thousand US$ and 6.66 thousand US$ respectively. However, Uttara (-2.17 thousand US$) decreased in negative value addition. In FY 2013-14, Dhaka (9.50 thousand US$) contributed much more than others, whereas Adamjee added 4.32 thousand US$ value addition per employee, though Uttara (0.44 thousand US$) and Mongla (0.47 thousand US$) stood 7th and 8th respectively.

In term of per labor value addition during study period, Dhaka EPZ gets first position by value adding 8.35 thousand US$ per labor, Chittagong EPZ gets second position by value adding 3.71 thousand US$ per labor, Comilla EPZ gets third position by value adding 3.24thousand US$ per labor, Adamjee EPZ provides 3.12 thousand US$ and stands 4th, while Karnaphuli stands 5th by sharing 2.51 thousand US$ per labor, Ishwardi EPZ gets 6th position by value adding 1.51 thousand US$ per labor, Mongla EPZ gets 7th position by value adding 1.43 thousand US$ per labor and Uttara EPZ gets 8th position by negative value adding (-1.13) thousand US$ per labor as their rank.

The standard Deviation (US) implies that Comilla (0.58) and Chittagong (0.91) contribute steadily, while Adamjee, Karnaphuli and Dhaka EPZ are moderate but Mongla Fluctuates in a very wide range.

Table 11.2.1: Value Addition per employee in thousand US$ as per location of the Business during Study Period.

Financial Year	Adamjee	Chittagong	Comilla	Dhaka	Ishwardi	Karnaphuli	Mongla	Uttara
2009-10	2.97	3.01	2.94	7.27	(0.51)	1.21	(6.25)	(0.12)
2010-11	2.27	2.67	2.48	6.92	0.36	1.28	4.26	(2.80)
2011-12	4.14	4.29	3.15	8.59	0.87	3.00	2.96	(0.13)
2012-13	1.91	4.90	3.83	9.47	2.45	3.18	6.66	(2.17)
2013-14	4.32	3.70	3.81	9.50	4.37	3.87	(0.47)	(0.44)
Descriptive Measures								
Mean	3.12	3.71	3.24	8.35	1.51	2.51	1.43	(1.13)
SD	1.08	0.91	0.58	1.21	1.93	1.20	5.00	1.26
Rank	4	2	3	1	6	5	7	8

Source: BEPZA Data base and collected Primary Data

I. Note: Data has been compiled by the researcher.

II. $\text{Value Addition per employee} = \dfrac{\text{Value Addition}}{\text{Total No. of Employee}}$

The bar chart (Fig. 11.2.2) describes the value addition of EPZs over the five consecutive financial years (2009-10 to 2013-14). It is clear that Dhaka EPZ contributed much more than others across the financial years. Adamjee and Chittagong changed with almost same fashion for the first three years, though there was slight difference later. The value addition of Mongla and Uttara was not so constant over the years. Mongla fell at the lowest point ever in FY 2009-10, while Uttara decreased to negative value in FY 2012-13.

The mean indicates that Dhaka is second to none, while Adamjee, Chittagong and Comilla are almost same in EPZ wise value addition per employee but Uttara EPZ's performance is very poor.

Figure 11.2.2: EPZ Wise Value Addition per Employee in thousand US$ with average During Study Period.

11.3. Analysis of Value Addition per employee as per the Ownership Type of Business.

The Figure 11.3.1 indicates foreign, local and joint venture firm wise average value addition in percentage during the study period. From the chart it is quite clear that foreign firm contributed 75.35% and enjoyed unchallenging first position in average value addition. Local industry contributed 18.40% stands second and the contribution of joint venture firm is only 6.25%, which stands third in average value addition.

Ownership Type wise Average Value Addition

Local 18.40%

Joint Venture
6.25%

Foreign 75.35%
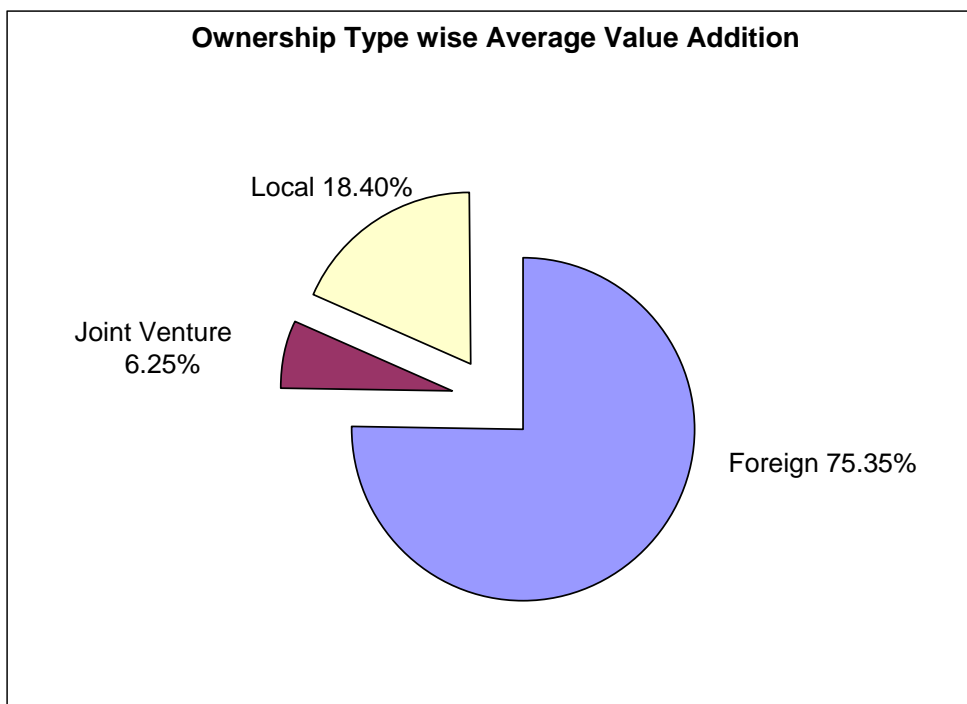
Figure 11.3.1: Ownership Type wise average Value Addition per employee during Study period.

From the observation of table 11.3.1, it has been found that foreign firm dominates over other two types of business in value addition per employee. It is quite clear that, In FY 2009-10, Foreign industry added 4.48 thousand US$ per employee almost double of joint venture (2.30 thousand US$), while local industry contributed 3.35 thousand US$. Again, foreign firm was the highest while local stands second and joint venture EPZ held the last position across the five financial years (FY). However, From 2009-10 to 2011-12. Local exceeded joint venture firm in adding value addition. In the FY 2013-14, Foreign EPZ contributed 5.09 thousand US$ and Local firm added 5.03 thousand US$, which is very near to Foreign firm while the contribution of Joint venture was 3.95 thousand US$ value addition per employee.

The mean indicates that foreign EPZ contributed 4.94 thousand US$, stands first position Local firm (3.96 thousand US$) stands second, while joint venture firm stands third by contributing 3.29 thousand US$ average over the five financial years (2009-10 to 2013-14).

The SD implies that all type of firms are steady in yearly value addition per employee. It indicates that the data of all firms are very close to their mean. In all parameter (mean and SD) foreign owned enterprises shows the best performance during the study period.

Table 11.3.1: Value Addition per employee in thousand US$ as per Ownership Type of the Business during Study Period.

FY	Foreign	Joint Venture	Local
2009-10	4.48	2.30	3.35
2010-11	3.87	2.41	3.05
2011-12	5.52	3.21	4.09
2012-13	5.72	4.56	4.28
2013-14	5.09	3.95	5.03
Descriptive Measures			
Mean	4.94	3.29	3.96
SD	0.76	0.98	0.78
Rank	1	3	2

Source: BEPZA Data base and collected Primary Data
I.   Note: Data has been compiled by the researcher.

II. $\text{Value Addition per employee} = \dfrac{\text{Value Addition}}{\text{Total No. of Employee}}$

The figure 11.3.2 shows the value addition per employee for foreign, joint venture and local owned enterprises over five consecutive financial years (2009-10 to 2013-14). From the chart it is found that foreign firm was always dominating across the years and in FY 2012-13, it got the highest position, whereas it performed under 4 thousand US$ in FY 2010-11. On the other hand, Joint venture firm enjoyed an increasing trend, though it fell off under 4 thousand US$ in FY 2013-14. Besides, Local owned

firms held the third position and it lost the ground to joint venture firm in FY 2012-13. Finally, In FY 2013-14, Local firms' performance on value addition was very close to that of foreign, while joint venture was under 4 thousand US$ value addition per employee.

The mean shows that the contribution of foreign EPZ is just touching 5 thousand US$ and local EPZ (about 4 thousand US$) stands second , while joint venture firms holds the third position in value addition per employee.
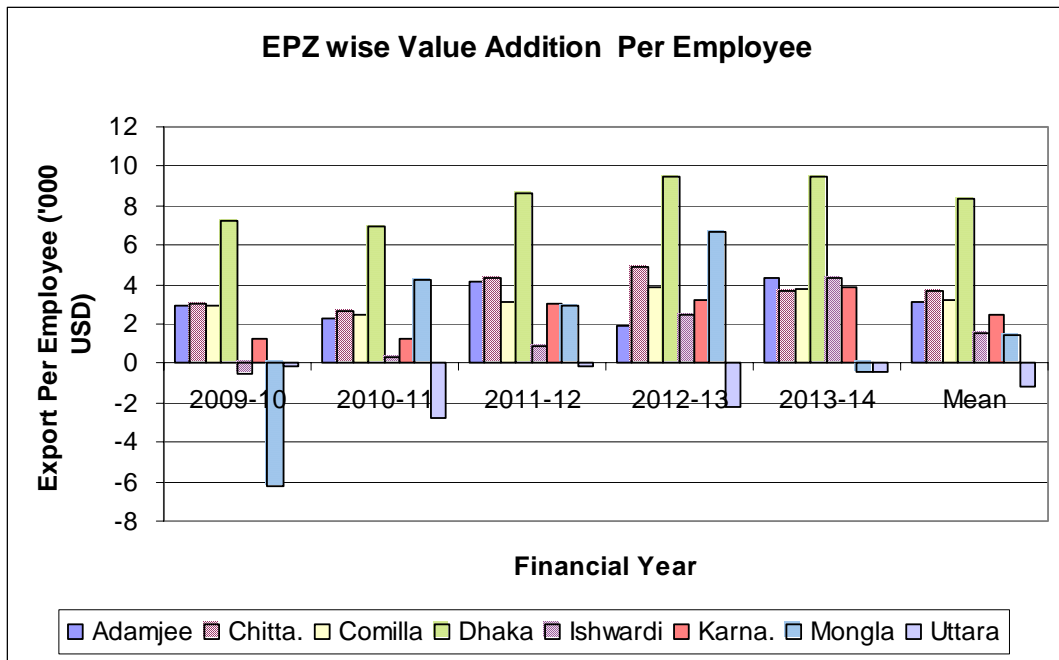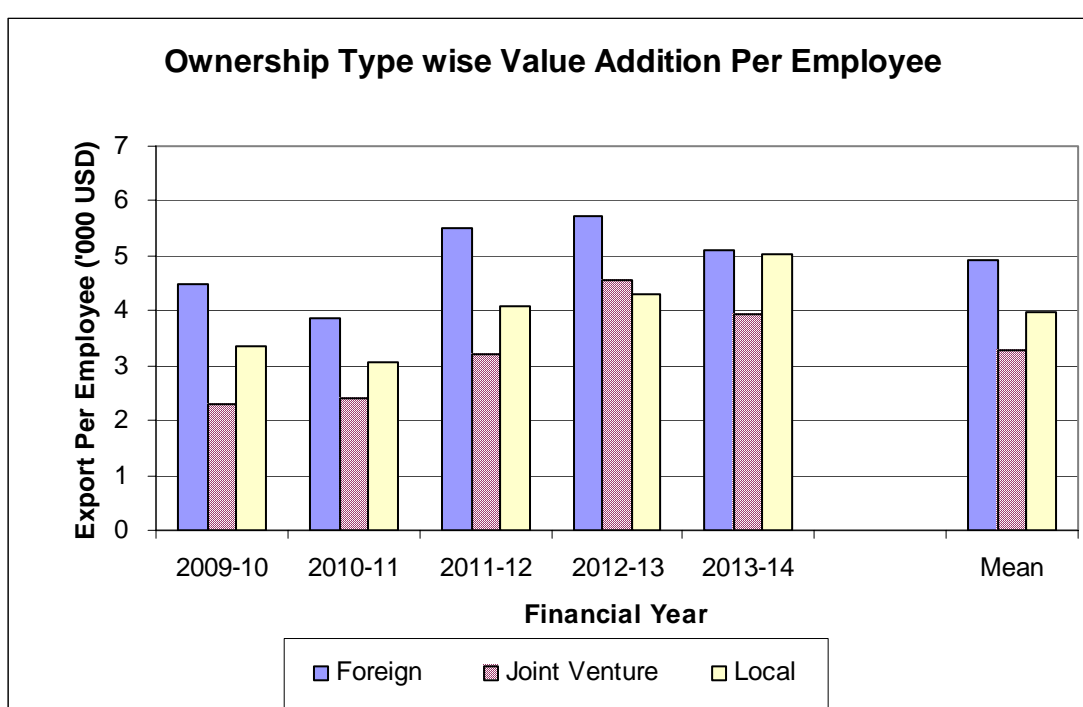

Figure 11.3.2: Ownership Type wise Value Addition per employee in thousand US$ with average During Study Period.

11.4. Industry wise Analysis of Value Addition per employee

The pie chart (Fig. 11.4.1) shows the industry wise average value addition, for six different industries in percentage. It is seen in the chart that Garments industry (1st) covers 62.81% and knitting and Textile (second) contributes 23.46%, while Garments Accessories (third) covers 8.52%.

One the other hand, service and other (3.18%), Footwear and Leather (1.43%) and Electronics and Electrical industry (0.59%) Stand 4th, 5th and 6th position respectively in industry wise average value addition.   It is notable that share of the garments industry in value addition is very outstanding which is more than 62% (lion portion).
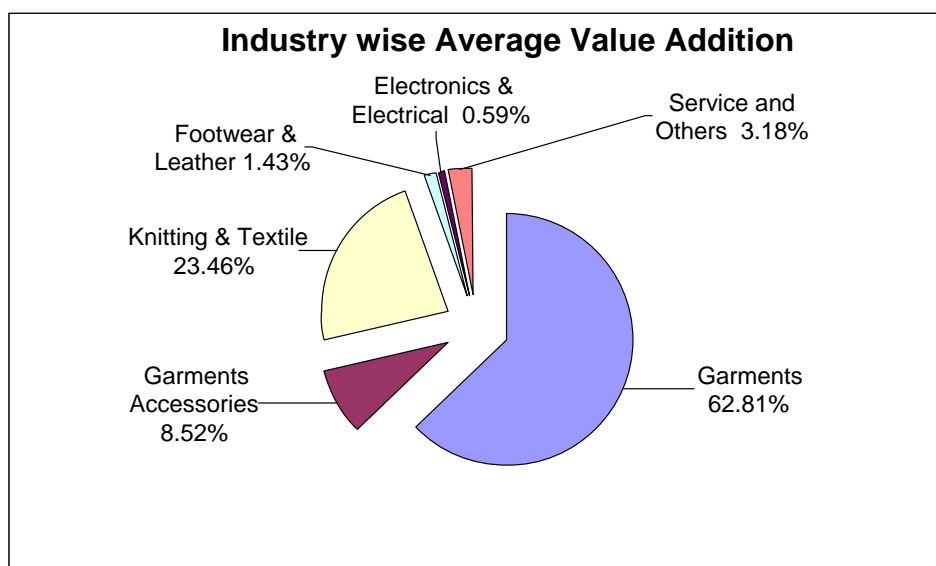
Figure 11.4.1: Industry wise average Value Addition contribution during Study period (FY 2009-10 to 2013-14).

From the analysis of the table 11.4.1, it is found that industry wise value addition per employee for six different industries are different over the consecutive five financial years (2009-10 to 2013-14). It is observed that Garments Accessories industry dominated others over the years. In FY 2009-10, Garments Accessories (12.12 thousand US$) was almost three times more than second one- knitting and Textile (4.58 thousand US$). However, Electronics and Electrical added negative value by (0.45) thousand US$ per employee. In the next year Electronics and Electrical industry increased in 1.77 thousand US$ but Garments Accessories (8.95 thousand US$) decreased alarmingly. In FY 2012-13, there was no such rise and fall of respective industry, whereas only Electronics and Electrical industry increased at its

highest position ever by 7.63 thousand US$. In 2013-14, sudden fall of Electronics and Electrical industry (-0.31 thousand US$) and Footwear and Leather (-1.07 thousand US$) were observed in value addition per employee.

In term of per labor value addition during study period, garments accessories industry acquires first place by value adding 8.88 thousand US$ per labor, knitting, textile, tent and terrytowel industry acquires second place by value adding 5.22 thousand US$ per labor, garments industry acquires third place by value adding 4.79 thousand US$ per labor, service and others industry acquires 4th place by value adding 2.46 thousand US$ per labor, electronics and electrical goods industry acquires 5th place by value adding 2.41 thousand US$ per labor and footwear and leather goods industry acquires 6th place by value adding 1.17 thousand US$ per labor as their rank.

Table 11.4.1: Industry wise Value Addition per employee in thousand US$ during Study Period.

Financial Year	Garments	Garments Accessories	Knitting & Textile	Footwear & Leather	Electronics & Electrical	Service and Others
2009-10	3.96	12.12	4.58	1.43	(0.45)	2.47
2010-11	3.82	8.95	4.19	0.73	1.77	0.62
2011-12	5.31	7.62	5.20	2.14	3.41	3.62
2012-13	5.33	7.45	6.28	2.62	7.63	2.83
2013-14	5.55	8.27	5.84	(1.07)	(0.31)	2.78
Descriptive Measures						
Mean	4.79	8.88	5.22	1.17	2.41	2.46
SD	0.83	1.91	0.86	1.44	3.33	1.12
Rank	3	1	2	6	5	4

Source: BEPZA Data base and collected Primary Data
III.   Note: Data has been compiled by the researcher.
IV.   Value Addition per employee $= \dfrac{\text{Value Addition}}{\text{Total No. of Employee}}$

The SD implies that Garments industry (0.83) and knitting and textile (0.86) are steadier than service and others (1.12), Footwear and Leather (1.44) and Garments Accessories (1.91), whereas Electrics and Electrical (3.33) is moderate in value addition per employee year by year.

The figure: 11.4.2 describes the performance of six different industries in value addition per employee while Garments Accessories holds the first position across the years. It is obvious that Garments Accessory contributed over 12 thousand US$ value addition per employee in FY 2009-10, though it decreased gradually in the next years. Knitting and Textile industry was also satisfactory, which added value over 6 thousand US$ in FY 2012-13. Garments held the third position in value addition, which was the highest in FY 2013-14 and the lowest in FY 2010-11. On the other hand Footwear and Leather and Electronics and Electrical industry fell off in negative value for several times. In FY 2013-14, Garments Accessories (over 8 thousand US$) was the highest but Footwear and Leather suffered the worst blow ever on value addition per employee.

The mean indicates that Garments Accessories is over 8 thousand US$, which stands 1st, knitting and Textile second and Garments the third , while the performance of service and others and Electronics and Electrical look almost same, though 4th and 5th respectively. Footwear and Leather industry's value addition per employee was at the lowest (6th) position.

In this analysis, it is seen for the second time that garments accessories and Knitting and Textile industry defeat garments industry. Because, two of those industries need

limited manpower but huge capital investment, while the scenario of garments is fully reverse. So per capita labor value addition of garments is lower than those industries.

Industry wise Value Addition Per Employee

Legend:
- 1 Garments
- 2 Garments Accessories
- 3 Knitting & Textile
- 4 Footwear & Leather
- 5 Electronics & Electrical
- 6 Service and Others

Y-axis: Value Addition Per Employee ('000 USD)
X-axis: Financial Year (2009-10, 2010-11, 2011-12, 2012-13, 2013-14, Mean)

Figure 11.4.2: Industry wise Value Addition per employee in thousand US$ with average During Study Period.

11.5 Findings

In the EPZ wise, Dhaka and Chittagong EPZ jointly contributed 85.88% of total value addition, while rest of the six EPZs contributed 14.12% only that was very trivial contribution in average gross value addition. It also found that Dhaka, Chittagong and Comilla EPZ won 1st, second and third place in per employee value addition.

In term of per labor value addition during study period Dhaka EPZ gets first position by value adding 8.35 thousand US$ per labor, Chittagong EPZ gets second position by value adding 3.71 thousand US$ per labor, Comilla EPZ gets third position by value adding 3.24thousand US$ per labor, Adamjee EPZ provides 3.12 thousand US$ and stands 4th, while Karnaphuli stands 5th by sharing 2.51 thousand US$ per labor, Ishwardi EPZ gets 6th position by value adding 1.51 thousand US$ per labor, Mongla EPZ gets 7th position by value adding 1.43 thousand US$ per labor and Uttara EPZ

gets 8th position by negative value adding (-1.13) thousand US$ per labor as their rank.

It was quite clear that foreign firm contributed 75.35% and enjoyed unchallenging first position in average value addition. Local industry contributed 18.40% stood second and the contribution of joint venture firm was only 6.25%, which stood third in average value addition.

In ownership type wise per employee value addition, foreign firms contributed 4.94 thousand US$, stood first position Local firms (3.96 thousand US$) stood second , while joint venture firms stood third by contributing 3.29 thousand US$ per employee averagely over the five financial year (2009-10 to 2013-14). Both in all parameter (mean and SD) foreign owned enterprises shows better performance during the study period

It was notable that share of the garments industry in value addition was very outstanding which was more than 62% (lion portion).

In term of per labor value addition during study period garments accessories industry acquires first place by value adding 8.88 thousand US$ per labor, knitting, textile, tent and terrytowel industry acquires second place by value adding 5.22 thousand US$ per labor, garments industry acquires third place by value adding 4.79 thousand US$ per labor. In this analysis, it was seen that garments accessories and Knitting and Textile industry defeated garments industry. Because, two of those industries need limited manpower but huge capital investment, while the scenario of garments is fully reverse. So, per capita labor value addition of garments is lower than those industries.
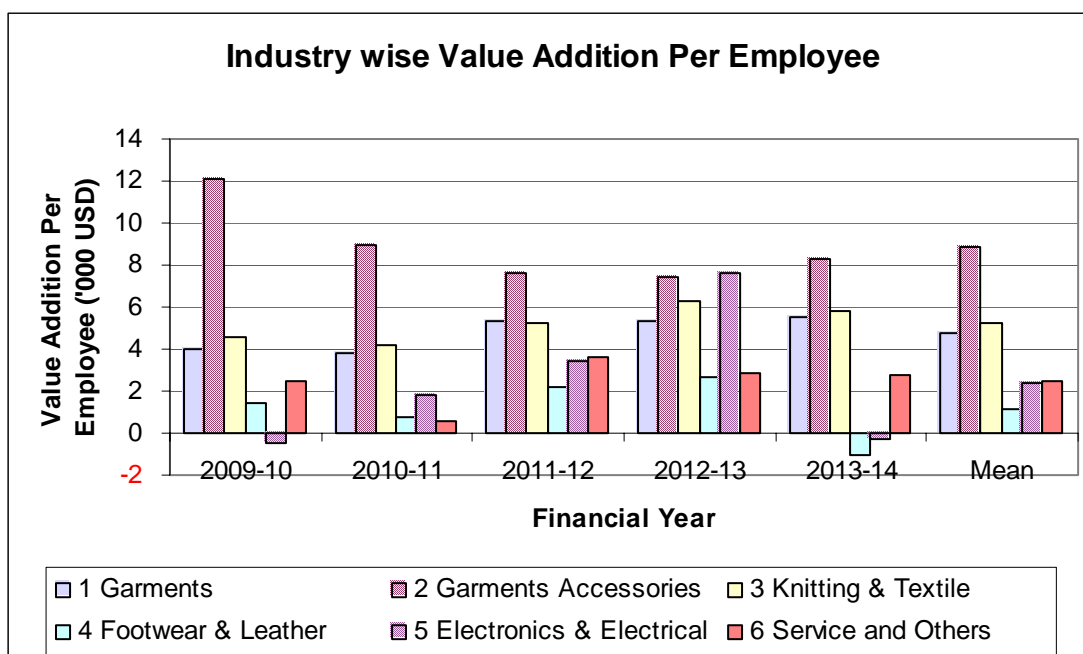
CHAPTER 12: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATION

12.1. Summary of Findings

12.2. Conclusions

12.3. Direction towards Further Study.

12.1 Summary of the findings:

Chapter 04 presents the analysis of export and its growth with three dimensions, i.e.,(i) location or EPZ wise analysis, (ii) ownership type of business wise analysis and (iii) industry wise analysis.

The present study is about the financial performance evaluation of BEPZA regulated enterprises cover previous five financial years (2009-10 to 2013-14) and secondary and primary data were used for analysis of various ratios and conditions. The main findings of the study are discussed below chapter by chapter:-

Chapter 04 presents the analysis of sales and its growth with three dimensions, i.e.,(i) location or EPZ wise analysis, (ii) ownership type of business wise analysis and (iii) industry wise analysis. Figure 4.1.1 reveals that the sales and growth rate of total industry under BEPZA was remarkable and the businesses were rising satisfactorily.

EPZ wise analysis reveals that total export of BEPZs are dominated by the Chittagong and Dhaka EPZs, The other EPZs have been established since 2000, within last decade. Among them, Karnaphuli, Adamjee and Comilla show a competitive performance; though they are still far behind from CEPZ and DEPZ; others three EPZs; Mongla, Ishwardi and Uttara show very poor contribution in term of export volume. After 2000 total export volume of BEPZs rises sharply; so, we can conclude that the overall export performance is remarkable.

Unlike export volume, weak EPZs like Uttara, Mongla and Ishwardi increase their export year- by- year than other EPZs. On the other hand it has also been found that export growth rates of Dhaka and Chittagong EPZs were low but steady and Karnaphuli, Adamjee and Comilla were moderate. However, there is no negative

growth in the EPZ during the study period and differences of export growth rates among the EPZs are not statistically significant.

Ownership type wise analysis reveals that A-type 100% foreign ownership has the lion portion of export contribution, this type belongs to first position with remarkable percentage (75.60%) of total export volume in EPZ business during the study period which is ten times to B type business and about five times to C type business. Both B and C type business are far behind from A- type business individual and jointly though the C-type 100% local ownership business stood second position with 16.99% and B type joint venture business stood third and last position with 7.41%.

It is seen that the B-type Joint venture business stood first position with 24.96% growth rate, A- type 100% foreign ownership business stood second position with 18.33% growth rate, C-type 100% Bangladeshi ownership business stood third position with 17.23% growth rate as their rank. Unlike export volume, export growth rate of B-type Joint venture business is high. They increase their export volume year-by- year than A and C types business. On the other hand it has also been found that export growth rate of C-type 100% Bangladeshi ownership business is low and A-type 100% foreign ownership business is moderate. However, there is no negative growth in the EPZ during the study period.

In the industry wise analysis reveals that in the term of Export is dominated by the Garments and Cap industry and followed by Knitting and Textile industries then other industries are standing. The lion portion of the Export belongs to garments and cap

industry (54.08%) then Knitting and textile industry belongs to 25.39% and contributions of other industries are not competitive.

The study finds a different picture compare to the total export with export growth rate. The highest export contributing garments industry becomes third in growth rate. Conversely, minimum export contributing service and others industry becomes first in tram of growth rate. The table shows mean Export growth rate is the highest for service and others business but it does not a represent any basic industry, it is of ungrouped various industry. So, the researcher does not give any concentration on it though it becomes 1st.

Chapter 05 presents the analysis of employment and its growth with three dimensions: In location or EPZ wise analysis reveals that the total employment of BEPZs is dominated by the Chittagong EPZ and followed by Dhaka EPZs; Karnaphuli and Adamjee shows competitiveness on the other side Comilla and Uttara show weak position but Ishwardi and Mongla are very poor in total employment. In the view point of new job creation Chittagong and Karnaphuli EPZ lead the total BEPZs during the study period. Adamjee and Dhaka EPZ show modest condition; Uttara, Comilla and Ishwardi show poor contribution while Mongla EPZ shows very week position in term of new job creation. Though total employment of BEPZ dominated by Chittagong and Dhaka EPZ but their growth rate is very low; it can be said that Chittagong and Dhaka EPZ have reached in matured stage of their life cycle and others EPZ are in growing stage. However, there is no negative average growth in the EPZ during the study period and differences of employment growth rate among the EPZs are not statistically significant.

According to ownership type analysis, 100% foreign owned enterprises create total 276,494 jobs, local-foreign Joint Venture enterprises create total 33,797 jobs and 100% local owned enterprises create total 80,725 jobs up to June 2014. Therefore, 100% foreign owned (A-type) enterprises stood first position, 100% local owned (C-type) enterprises stood second position and Joint Venture (B-type) enterprises stood third   position as their rank in term of total employment up to June 2014 among the sub-groups. Employment is dominated by the 100% foreign owned (A-type) enterprises and the 100% local owned (C-type) enterprises show second but weak volume in the same way Joint Venture (B-type) enterprises show very weak position compare to 100% foreign owned (A-type) enterprises.

In industry wise analysis, employment is dominated by the Garments industry and followed by Knitting and Textile industries; Footwear and Leather goods industry shows competitiveness. On the other side, Garments Accessories industry shows weak position but Electronics and Electrical goods industry is very poor in employment creation. The lion portion of the employment belongs to garments and cap industry (61.70%) EPZ then Knitting and textile industry belongs to 18.27% and contributions of other industries are not discussable.

In average employment growth rates of Footwear and Leather industry, Garments Accessories and Garments industry are showing competitiveness on the other side electronics and Electrical goods industry and knitting and textile industry show very weak condition compare to others.

Chapter 06 presents the analysis of investment and its ratio with export in three dimensions, i.e., location, ownership and type of industry.

In location or EPZ wise analysis, it reveals that in investment volume the Chittagong EPZ gets first position by contributing 39.59%, Dhaka EPZ gets second position by contributing 35.22% of total investment and others are in weak position. Chittagong EPZ is the first EPZ in Bangladesh history and it is internationally well known, cost competitive and very near from our prime seaport. Dhaka EPZ is the second EPZ in Bangladesh and adjacent to capital city of Dhaka and international airport, national and international skill manpower, technician and engineers are available. Besides, the offices of the foreign buyers of different brand are also available there. This is why the both EPZs are established firmly than other EPZs.

The mean of EPZ wise Export on investment is that Mongla EPZ exported 631.57% on investment stands 1st. Chittagong exported 189.75% stands second and Dhaka exported 185.23% stands third. In the next, Adamjee exported 130.08% stands 4th Karnaphuli (119.10%) 5th, Comilla (100.00%) 6th, Ishwardi (68.18) 7th and Uttara (50.56%) 8th in the EPZ wise Export on investments.

The chart explains that Mongla EPZ has extra ordinary performance compare to other EPZs and all other EPZs remain under 200% far behind from Mongla EPZ. As illustrated in figure 6.2.1, Mongla EPZ has no remarkable capital investment and most of the enterprises of Mongla EPZ purchase and re-export agro processing foods with minimum value addition, they just play a traders rule. This is why the export on investment rate is very high for Mongla EPZs.

In ownership type wise analysis, it reveals that the average export on investment ratio of Type – A ownership business covers 181.81% stands 1st, Type – C ownership business of 155.53% stands second and Type – B ownership business (121.33%) stands third during the study period in EPZs' business. A-type full foreign ownership enterprises contain leading position year- by- year as well as average ratio of export on investment in EPZ business during the study period.

In ownership type wise analysis, it is observed that the garments industry stands in first position with 278.43%, knitting and textile industry gets second position with 143.95%, garments accessories industry holds third position with 131.46%, footwear and leather industry gets 4th position with 127.47%, service and others industry acquires 5th position with 88.79%, electronics and electrical industry gets 6th position with 76.39% as their rank. Finally, it is observed that the garments industry is leading the EPZs' industry by highest average export on investment (27.43%) with standard deviation 16.58. In addition, Electronics and Electrical industry shows worse performance than others do.

Chapter 07 presents the analysis of labor productivity through export per employee with three dimensions, i.e.,(i) location or EPZ wise analysis, (ii) ownership type of business wise analysis and (iii) industry wise analysis

In the EPZ wise analysis, it is found that Mongla EPZ gets first with 42.29 thousand US$ export per labor, Dhaka EPZ gets second position with 19.00 thousand US$ and Comilla EPZ holds third place with 12.52 thousand US$ export per labor, Chittagong gets 4th position with 10.69 thousand US$ export per labor and Adamjee EPZ scores 5th position with 9.63 thousand US$ export per labor.

In the Ownership type wise analysis, it is found that full Foreign enterprise earned 11.77 thousand US$) export per employee, (the highest) and Joint Venture was of 7.71 thousand US$ (second)) export per employee, whereas Local was of 8.54 thousand US$ (third) export per employee during the study period.

In the industry wise analysis, it is found that Garments Accessories industry earned 24.12 thousand US$ export per employee and Electronics and Electrical industry earned 19.42 thousand US$, stood first position second .respectively, while Knitting and Textile industry was of 15.36 thousand US$, stood third and Service and Others industry was of 12.84 thousand US$ stood 4th. However, Garments industry (11.22 thousand US$) and Footwear and Leather industry (7.90 thousand US$) had a little performance with 5th and 6th position respectively.

It is found that export on investment is high in garments industry and export per employee is high in garments accessories industry. So it is clear that garments industry needs more labors then machineries on the other hand garments accessories industry needs more machineries than labors.

Chapter 08 presents the analysis of land productivity through export per square meter land with three dimensions:

In the EPZ wise analysis, it is observed Dhaka EPZ lead first position by exporting per square meter land US$ 2547.08 that is more than twice from second position, Chittagong EPZ gets second position by exporting per square meter land US$ 1140.81 and other EPZs are standing below 1000 US$.

By the ownership type wise analysis, it is indicated that foreign enterprises earned 799.73 US$ export revenue per square meter land, local enterprises earned 503.64

US$ and joint venture firms 477.31 US$ by exporting per square meter land. The Rank of these three sectors is that foreign owned enterprises stood 1st, local is second and joint venture the third one in export per square meter land.

In industry wise analysis, it is found that that Garments was firs tone, Footwear and Leather second , Garments Accessories third and Services and others was the last industry on export per Square meter land in US$.

Chapter 09 presents the analysis of profitability through return on sales with three dimensions:

Analyzing the location wise data of average return on sales of five financial year in table 9.2.1, it is found that Dhaka EPZ gets first position with 43.82% return on sales, Adamjee EPZ gets second position with 25.41%, Chittagong EPZ gets third position with 25.07%, all others industry are standing below 20% in term of return on sales. But Uttara experienced with negative value in EPZ wise average return on sales in percent. Because the foreign and local investors are not interested to invest in Uttara EPZ due to its odd location, i.e., distance from sea and airport, skill labor and technicians do not want to go to Nilphamari, gas supplies are not on hand etc.

Ownership type wise analysis of return on sales, it is found a general trend that in almost every financial year foreign owned enterprises were 1st, local enterprises were second and joint venture firms' were third in ownership type wise return on sales.

By the industry wise analysis, it is revealed that garments went up much more than others, while Garments Accessories and knitting and Textile were almost same in the position of second and third respectively.

Chapter 10 presents the analysis of profitably through return on investment with three dimensions like previous chapter.

EPZ and Return on sales:

After analysis of EPZ wise Return on Investment, it is found that Dhaka EPZ stands in first position with 51.94%, Chittagong EPZ gets second position with 51.01%, Mongla EPZ holds third position with 47.52%, Adamjee EPZ gets 4th position with 24.29% and other EPZs are standing below 20% of Return on Investment, like return on sales was discussed in chapter-9, Uttara EPZ gets 8th position with a nagetive ROI (-23.31%). So, Uttara EPZ is not profitable at all.

In Ownership type wise analysis, the mean of ROI shows that the foreign enterprises was at the highest position by around 44% local enterprises the second by around 30% and joint venture was the last one by over 14% return on investment.

By industry wise analysis, it is found that in average ROI, garments industry acquires first place with 89.69%, garments accessories industry stands in second place with 31.51%, knitting, textile, tent and terrytowel industry acquires third place with 30.53% and other industries are waiting below 20% of Return on investment by the industry wise analysis.

Chapter 11 presents the analysis of value addition and per employee value addition with three dimensions, i.e.,(i) location or EPZ wise analysis, (ii) ownership type of business wise analysis and (iii) industry wise analysis

Location wise total value addition volume reveals that Dhaka and Chittagong EPZ jointly contributed 85.88% of the total value addition, while rest of the six EPZs

contributed 14.12% only that was very trivial contribution in average gross value addition. It is also found that Dhaka, Chittagong and Comilla EPZ won 1st, second and third place in per employee value addition.

Ownership type wise total value addition volume reveals that foreign firm contributed 75.35% and enjoyed unchallenging first position in average value addition. Local industry contributed 18.40% stood second and the contribution of joint venture firm was only 6.25%, which stood third in average value addition.

Location wise per labor value addition during study period reveals that Dhaka EPZ gets first position by value adding 8.35 thousand US$ per labor, Chittagong EPZ gets second position by value adding 3.71 thousand US$ per labor, Comilla EPZ gets third position by value adding 3.24thousand US$ per labor, Adamjee EPZ provides 3.12 thousand US$ and stands 4th, while Karnaphuli stands 5th by sharing 2.51 thousand US$ per labor, Ishwardi EPZ gets 6th position by value adding 1.51 thousand US$ per labor, Mongla EPZ gets 7th position by value adding 1.43 thousand US$ per labor and Uttara EPZ gets 8th position by negative value adding (-1.13) thousand US$ per labor as their rank.

In ownership type wise per employee value addition, foreign firms contributed 4.94 thousand US$, stood first position Local firms (3.96 thousand US$) stood second , while joint venture firms stood third by contributing 3.29 thousand US$ per employee averagely over the five financial years (2009-10 to 2013-14). In both parameters (mean and SD) foreign owned enterprises shows better performance during the study period.

Industry wise value addition and its ratio with employee are found that share of the garments industry in value addition was very outstanding which was more than 62% (lion portion). In term of per labor value addition during study period garments accessories industry acquires first place by value adding 8.88 thousand US$ per labor, knitting, textile, tent and terrytowel industry acquires second   place by value adding 5.22 thousand US$ per labor, garments industry acquires third place by value adding 4.79 thousand US$ per labor.

 In this analysis, it was seen that garments accessories and Knitting and Textile industry defeated garments industry. Because, two of those industries need limited manpower but huge capital investment, while the scenario of garments is fully reverse. So, per capita labor value addition of garments is lower than those industries.

12.2 Conclusions

From the trade and business point of view and earning of foreign exchange as well as FDI for the country, EPZ industry is the most vital manufacturing unit. The question of growth, profitability and sustainable development is also important through foreign and local investment as well as technology transfer and skills development. However, this study emphasizes on financial performance of the enterprises operated in EPZs and their growth that was found satisfactory and hopeful. Especially performance of foreign owned firm is much better than garments industry, garments accessories industry, knitting and textile and some related industries are showing very strong position in total EPZs' industry in Bangladesh. Chittagong EPZ and Dhaka EPZ are the pioneer EPZ in Bangladesh, whereas Karnaphuli, Adamjee and Comilla EPZ are rising sharply but other EPZs do not show such performance. So, the government of Bangladesh as well as BEPZA should take care of the other EPZs and never setup

EPZ like such less potential area in the country. Local investors should be discouraged to invest in the pioneer EPZs, because their performance is not up to the mark like foreign investment.

The study also recommends the measures that could be adopted by BEPZA to ensure soundness in operations of enterprises. Enterprises in EPZs should pursue sound and profitable operations as BEPZA policies that will stimulate economic growth in a sound and stable economic environment.

Member of Investment of BEPZA executive body may be appointed by the concern of investors group. He/she will represent the investors in board meeting but in present structure there is no provision to explain their needs, arguments and appeal board meeting directly. As a result, the authority is falling to understand the thinking of investors' mind.

As the overall performance of EPZ is appreciating, BEPZA as well as government of Bangladesh should expand the area or set up new EPZ in the potential territories of the country, keeping present structure, rules, regulations and practices with improvement.

12.3 Direction towards further studies

It has been mentioned in literature review that there have no available worth mentioning studies regarding the performance of EPZs industry in Bangladesh. Therefore, there is a huge scope to carry out industrial research studies related to the performance of the industry. In the following paragraphs, some avenues are mentioned for carrying out such study:-

1. At first, a detailed study on the problems hindering the performance of the industry including the measures to remove of the same may be undertaken.

This is because of the fact that removal of the problems would surely enhance the productivity and profitability

2. Worker / labor performance at EPZs in Bangladesh as well as performance of female workers compare to male workers with working environment; Foreign employment at EPZs in Bangladesh and its' impact on national productivity.

3. Input or Raw materials supplies chain at EPZs in Bangladesh compare to DTA and Export or Marketing of Bangladeshi EPZ product to the foreign nations.

4. Land productivity of EPZs to find out the reasons for establishing new EPZ or Economic Zone and Explore the actual benefit or losses earn our national economy by operating existing eight Zones.

5. At lastly, a trend analysis on the production, export, investment and profitability for a period of 20 years may be undertaken in order to examine the growth trend of the industry in Bangladesh.

Appendix-A

AN OVERVIEW OF BEPZA

The Organization

Vision, Mission and Objectives of BEPZA

Key Events Timeline of BEPZA and Chronology of EPZs

Common Features of the EPZs' Enterprise

Type of Investment

Executive Office of BEPZA

Departments of BEPZA

Management of BEPZA

Organogram of BEPZA

A brief of EPZs

Policy Incentives and Infrastructural Facilities

Fiscal Incentives

Non-Fiscal Incentives

Infrastructural Facilities

BEPZA Support Service Facilities

EPZ Program and Industrial Policy

Cumulative Scenarios of EPZs

How to start a Business in EPZs in Bangladesh

An Overview of BEPZA

The Organization

Bangladesh Export Processing Zones Authority (BEPZA) is a distinct authority directly, an autonomous body, under Prime Minister's Office, Government of People's Republic of Bangladesh; established in 1981 with a view to enhancing the opportunity of overseas export (thus keeping the balance of payment in favor) of the country through acquiring advanced technology from foreign investors, and so forth.

It was granted considerable power over related ministries, divisions and corporations, and also immunity from sixteen laws relating to industry, labour and customs questions. BEPZA also included, at a later stage, the PMO's Principal Secretary in its governing body in order to further streamline the co-operation of the central bureaucratic structure, but with the practice of providing speedy solutions rather than following the conventional argument and counter-argument decision-making process having become the norm [M. Abu Eusuf, ABM Omor Faruque & Atiur Rahman (March 2007)].

In view of the growing need of industrialization and lower level of capital formation in the economy for financing the industrial projects, the Government of Bangladesh took the initiative to set up Export Processing Zones (EPZs) in different parts of the country in 1978. (An export processing zone, as stated before, is a territorial or economic enclave in which intermediate goods and raw materials may be imported and manufactured and reshipped with a reduction in duties and/or minimal intervention by custom officials.) The decision of the government was later approved by the **Executive Committee of the National Economic Council (ECNEC)** in its

meeting held on August 22, 1978. After the approval of ECNEC, the bill was placed in the Parliament and passed as **Bangladesh Export Processing Zones Authority Act, 1980 (Act no. XXXVI, 1980)** on December 26, 1980. In pursuance of the Act, BEPZA has been empowered for creation, development, operation and management of Export Processing Zones under public sector. Since then it has been working for the acceleration of foreign export of Bangladesh, exploiting the infrastructural facilities, creating direct employment opportunity for approximately 3.89 lac of native people.

Vision of BEPZA

To build a strong and economically prosperous Bangladesh (BEPZA website, 2013)

Mission of BEPZA

- Promotion of Investment

- Diversification of Export

- Generation of Employment

Objectives of BEPZA

The objectives of BEPZA can be depicted in the following broad terms:

- ✓ Promotion of foreign and local investment.

- ✓ Promotion of export overseas.

- ✓ Diversification of exports.

- ✓ Development of backward and forward linkages.

- ✓ Promotion of employment for local manpower.

- ✓ Transfer of technology from developed countries.

- ✓ Up-gradation of skill/dexterity of labor.

- ✓ Development of management.

- ✓ Promotion of international marketing skill/access.

- ✓ Keeping the Balance of Payment in favor of Bangladesh.

Investors willing to invest in Export Processing Zones are required to deal only with Bangladesh Export Processing Zones Authority (BEPZA) for sanctioning of their projects and for all other operational purposes. Starting from the approval of the projects it provides allotment of land and factory building within the Export Processing Zones, issues work permits to foreign nationals and takes care of all other matters necessary for operation of industrial enterprises. In fact, Bangladesh Export Processing Zones Authority (BEPZA) is providing "**ONE WINDOW SAME DAY SERVICE**'' to its investors. Rules and documentation procedures have been framed to make them easy and simple with minimum formalities.

Key Events Timeline of BEPZA:

- ▪ 1980: BEPZA was established under the BEPZA Act 1980 and the Foreign Privat Investment Act 1980.

- ▪ 1983: Chittagong EPZ becames operational.

- ▪ 1993: Dhaka EPZ was established.

- ▪ 1993-2009: Six new EPZs were established.

- ▪ Mongla: 1999

- ▪ Comilla: 2000

- ▪ Ishwardi: 2001

- Adamjee: 2006

- Karnaphuli:2006

Source: Annual Report of BEPZA 2010-11

Source: Annual Report of BEPZA 2011-12

As of today, eight EPZs have been established under BEPZA in different parts of Bangladesh for ensuring balanced economic development of the country. EPZs established by BEPZA are:

- Chittagong EPZ

- Dhaka (Savar) EPZ

- Comilla EPZ

- Karnaphuli (Chittagong) EPZ

- Adamjee (Narayanganj) EPZ

- Ishwardi EPZ

- Mongla (Bagerhat) EPZ

- Uttara (Nilphamari) EPZ

Common Features of the EPZs are:

- Firms in EPZs are 100% export oriented and isolated from local economy.

- Unlimited, duty-free imports of raw, intermediate input and capital goods necessary for the production of exports.

- Less governmental red-tape. More flexibility with labor laws for the firms in the zone than in the domestic market.

- Generous and long-term tax holiday and concessions to the firms.

- Above average (compared to the rest of the host country) communications services and infrastructure. It is also common for countries to subsidize utilities and rental rates.

↯ Firms in the EPZs can be domestic, international or joint venture. The role of FDI is prominent in EPZ activities.

BEPZA attracts investment in EPZs in three categories, i.e:-

Type – A :   Investment with 100% foreign ownership,

Type – B :   Joint venture between Bangladeshi and foreign investors with no limit to the extent of equity share,

Type – C :   100% Bangladeshi ownership.

Total investment in the EPZs up to June, 2014 stands at US$ 2,826.75 million. Export from the EPZs is very much encouraging and for the last few years the figure is increasing significantly and crossed billion US Dollar. In the financial year 2013-2014 the EPZs enterprises made an export of US$ 5,525.34 million. It was US$ 4,856.68 million during the same period of the previous fiscal year, this shows and increase of 13.76%. An employment opportunity for 3.89 lac Bangladeshi Nationals has been created in the EPZs in a permanent pay roll, out of which 64% is female. 17540 Bangladeshi workers got job opportunities in the operational industrial units of EPZs in 2013-14 fiscal year (BEPZA Bulletin, April-June 2014 and Brochure of BEPZA, February 2014).

Executive Office of BEPZA

The Executive Office of BEPZA is situated at the spacious building of **BEPZA Complex**, Dhanmondi, Dhaka. The Building is a six-storied large building with the offices of BEPZA occupying from 2nd floor to 5th floor. It consists of four departments in broader terms: Administration, Investment Promotions, Accounting and

Engineering. The break-ups of the departments in the Executive Office of BEPZA are given below:

Departments of BEPZA

1. **Administration :**

   (a) Personnel Management

   (b) Common Service, Store, Transportation, Dispatch and Protocol

   (c) Law

2. **Investment Promotions :**

   (a) Investment Promotions (Commercial Operations and Industrial Relations)

   (b) Enterprise Services

   (c) Public Relations

3. **Engineering :**

   (a) Civil

   (b) Maintenance (Mechanical and Electrical)

4. **Accounting and Finance :**

   (a) Accounting (Revenue and Finance)

   (b) Audit

Management of BEPZA

The Board: There is a Board of Governors of the Authority. The Honorable Prime Minister or a member of the Board, who is a Minister nominated by the Honorable Prime Minister, is the Chairman of the Board of Governors. The Board formulates the policies for operation and management of the Authority and zones and does not require any formal approval of any Ministry or Division dealing with the matters for their implementation. There is also an Executive Board under the Board of Governors

consisting of an Executive Chairman (Secretary of the Board of Governors, usually a Brigadier/ Major General from Bangladesh Army, appointed by the Honorable Prime Minister) and three members, who are generally Joint Secretaries of Bangladesh Cadre Service of the Government of People's Republic of Bangladesh. They are deputed on BEPZA by the Ministry of Public Administration. Each Member is in charge of a department: Investment Promotions, Engineering and Finance. The Administration Department of BEPZA is operated under an executive designated as "Secretary", generally a Deputy Secretary from Administration Cadre and also deputed by the government. There are two other departments: Management Information Systems (MIS) and Security. A General Manager is in charge of each of these departments. Each zone is also headed by one General Manager who acts directly under the Executive Chairman to provide all out cooperation and supports to the investors of the concerned zone.

The inner management of the officials and staff of the Authority is operated under the rules depicted in the **evsjv‡`k iß‡bx †cÖuqKiY GjvKvZ©©©¨ (†ecRv) Kg©Pixc©barPabgyjÑv, 1990**. The investors, as well as the workers working in the factories are obliged to comply with "The EPZ Workers' Welfare Association and Industrial Relations Act, 2010".

Management: BEPZA managed by two-tier of administration. One is Board of Governs that is consists of 19 members Headed by Prime Minister along with Finance, Commerce, Shipping, Industries, Energy and Home Secretary, Governor Bangladesh Bank (Central Bank), Principal Secretary of Prime Minister Office, Secretary to Prime Minister, Executive Chairman Board of Investment, Chairman National Board of Revenue and concern Secretaries are the members; BEPZA

Executive Chairman is the Member Secretary of the Board of Governors. The Board of Governors are the authority for policy making at national level required for setting up, development and operation of Export Processing Zones in the country.

On the other hand, second tier is the Executive Board. The Executive Board consists of three members. BEPZA Executive Chairman is the Chairman, and three members are: (1) Member Investment and Promotion (IP); (2) Member (Finance) and (3) Member (Engineering). This body is responsible for execute the order taken through Board of Governors. Apart from this, the Executive Board takes the decisions as required for day-to-day operation by the authority. Moreover, Every Zone is headed by General Manager/Project Director who is responsible for managing and providing all kind of cooperation and support to the investors of the concern zone.

MANAGEMENT

| **BOARD OF GOVERNORS** |
| CHAIRED BY THE HON'BLE PRIME MINISTER |

| **EXECUTIVE BOARD** |
| CHAIRED BY THE EXECUTIVE CHAIRMAN |

| **BEPZA** |
| HEADED BY THE EXECUTIVE CHAIRMAN |

| **EPZ** |
| HEADED BY GENERAL MANAGER |
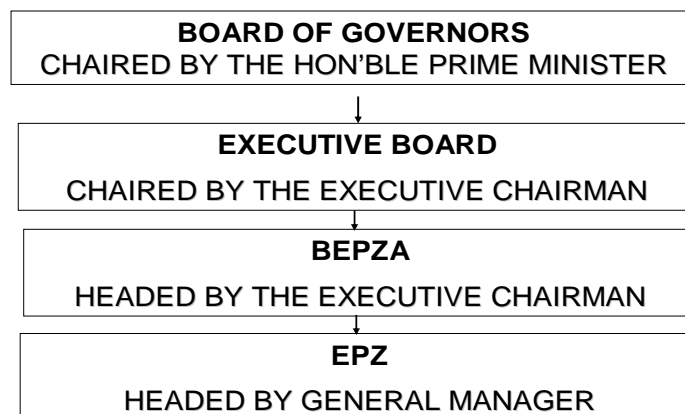
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Organogram of BEPZA: As per observations of Researcher as an Ex-official of BEPZA.

Executive Chairman

Member (Investment Promotion)

Secretary (Administration)

Member (Engineering)

Member (Finance)

GM Enterprise Service

GM Investment Promotion

GM Public Relation

GM Security

GM Management Information Systems

Chief Engineer

GM Maintenance

Chief Accounts Officer

GM Audit

General Manager (Each EPZ)

Dept. of Investment Promotion

Administration

Dept. of Accounts

Dept. of Security

Dept. of Engineering

A brief of EPZs

BEPZA has successfully traversed a long way with a new dimension to increase the volume of investment, diversification of export, employment generation and strengthening the economic base of Bangladesh. A brief description of eight EPZs is as follows:

Chittagong Export Processing Zone: BEPZA set up its first Export Processing Zone in the port city of Chittagong covering an area of 453 acres. The zone started its operation in 1983. Chittagong Export Processing Zone has 501 industrial plots and 60,979 sq. meters of ready-made factory space. Presently (2014) 167 industries are in operation in Chittagong Export Processing Zone. All the plots and factory buildings have been allotted to foreign and local investors. The total investment made by the enterprises in Chittagong Export Processing Zone stands at US$ 1,203.52 million as on June, 2014. During the financial year 2013-2014 the goods worth of US$ 2,261.61 million was exported from this zone. Total 182.21 thousand workers got job opportunities in the operational industrial units of Chittagong Export Processing Zone up to 2013-14 fiscal year (BEPZA Bulletin, April-June 2014 and Brochure of BEPZA, February 2014).

Dhaka Export Processing Zone, Savar: With the successful operation of Chittagong Export Processing Zone, the Government took decision to set up the second Export Processing Zone in the capital city of Dhaka. Accordingly 141 acres of land was acquired on the Dhaka-Kaliakoir Road, opposite to Atomic Energy Commission in Savar. The required infra-structural facilities were constructed very quickly and the zone became operational in 1993. Initially 123 industrial plots were developed in Dhaka Export Processing Zone. The plots were exhausted within two years of its

operation. Need for its expansion was felt very badly. The Government immediately took the decision to expand the Dhaka Export Processing Zone and 214 acres of land was accordingly acquired on the other side of the Dhaka-Kaliakoir road opposite to the original site of the existing zone. The development work was taken up quickly to make the plots ready for allotment. In total, Dhaka Export Processing Zone has 451 industrial plots and 1,13,422 sq. meters of ready-made factory space. Meanwhile all the plots and all the factory buildings have been fully occupied by the investors. Presently (June, 14) 103 industries are operating in Dhaka Export Processing Zone. Up to June 2014 Dhaka Export Processing Zone has accumulated investment at US$ 1,057.34 million. During the financial year (2013-2014) the export from this zone was US$ 1,937.52 million. Total 88.52 thousand workers got job opportunities in the operational industrial units of Dhaka Export Processing Zone up to 2013-14 fiscal year (BEPZA Web site, BEPZA Bulletin, April-June 2014 and Brochure of BEPZA, February 2014).

In face of growing response from foreign investors in both Dhaka and Chittagong Export Processing Zones and feeling the necessity of balanced industrial development of all regions of the country the Government took the decision to setup 6 more EPZs in different parts of the country. Accordingly construction work of the relatively new 6 Export Processing Zones in the name of Mongla, Comilla, Ishwardi, Uttara, Adamjee and Karnaphuli EPZs were taken up.

Mongla Export Processing Zone, <u>Mongla</u>, <u>Bagerhat</u> was established in 1999. It has 190 industrial plots and 18,717.68 sq. meters of Standard Factory Building on 255.41 acres of land. There were 31 industries are operating in Mongla Export Processing Zone in June 2014. Up to June 2014 Mongla Export Processing Zone has accumulated

investment at US$ 13.83 million. During the financial year (2013-2014) the export from this zone was US$ 77.28 million. Total 1,416 workers got job opportunities in the operational industrial units of Mongla Export Processing Zone up to 2013-14 fiscal year (BEPZA Web site, BEPZA Bulletin, April-June 2014 and Brochure of BEPZA, February 2014).

Ishwardi Export Processing Zone, Ishwardi, Pabna has 290 industrial plots and 20,420 sq. meters of Standard Factory Building on 309 acres of land. The zone was established in 2001 and 15 industries were operating in 2014. Up to June 2014 Ishwardi Export Processing Zone has accumulated investment at US$ 76.00 million. During the financial year (2013-2014) the export from this zone was US$ 93.16 million. Total 7,194 workers got job opportunities in the operational industrial units of Iswardi Export Processing Zone up to 2013-14 fiscal year (BEPZA Web site, BEPZA Bulletin, April-June 2014 and Brochure of BEPZA, February 2014).

Comilla Export Processing Zone The zone was established on old airport of Comilla (267.46 acres land) in 2000. It has 238 industrial plots and 61,122.15 sq. meters of Standard Factory Building. There were 32 industries are operating in Comilla Export Processing Zone in June 2014. Up to June 2014 Comiolla Export Processing Zone has accumulated investment at US$ 201.09 million. During the financial year (2013-2014) the export from this zone was US$ 209.41 million. Total 16,474 workers got job opportunities in the operational industrial units of Comilla Export Processing Zone up to 2013-14 fiscal year (BEPZA Web site, BEPZA Bulletin, April-June 2014 and Brochure of BEPZA, February 2014).

Uttara Export Processing Zone, Nilphamari has 180 industrial plots and 20,478 sq. meters of Standard Factory Building on 313.66 acres of land. The zone was established in industrially backward area, northern part of Bangladesh, in 2001 and 23 industries were listed in 2014. Up to June 2014 Uttara Export Processing Zone has accumulated investment at US$ 60.59 million. During the financial year (2013-2014) the export from this zone was US$ 33.22 million. Total 11,139 workers got job opportunities in the operational industrial units of Uttara Export Processing Zone up to 2013-14 fiscal year (BEPZA Web site, BEPZA Bulletin, April-June 2014 and Brochure of BEPZA, February 2014).

Adamjee Export Processing Zone, Siddhirganj, Narayanganj was established in 2000 in the place of former Adamjee Jute Mill on the area of 245.12 acres land beside the Shitalakha River. It has 229 industrial plots and 56,196 sq. meters of Standard Factory Building, and 39 industries are operating on the land and building in June 2014. Up to June 2014 **Adamjee** Export Processing Zone has accumulated investment at US$ 267.96 million. During the financial year (2013-2014) the export from this zone was US$ 386.23 million. Total 36.01 thousand workers got job opportunities in the operational industrial units of **Adamjee** Export Processing Zone up to 2013-14 fiscal year (BEPZA Web site, BEPZA Bulletin, April-June 2014 and Brochure of BEPZA, February 2014).

Karnaphuli Export Processing Zone, North Patenga, Chittagong has 255 industrial plots and 44,455.39 sq. meters of Standard Factory Building on 209.06 acres of land. The zone was established in 2006 and 41 industries were operating in 2014. Up to June 2014 Karnaphuli Export Processing Zone has accumulated

investment at US$ 307.72 million. During the financial year (2013-2014) the export from this zone was US$ 526.85 million. It was US$ 274.10 million during the same period of the previous fiscal year, this shows an increase of 92.21% which is remarkable growth. Total 45.65 thousand workers got job opportunities in the operational industrial units of Karnaphuli Export Processing Zone up to 2013-14 fiscal year (BEPZA Web site, BEPZA Bulletin, April-June 2014 and Brochure of BEPZA, February 2014).

Policy Incentives and Infrastructural Facilities

Presently Bangladesh is offering a vast range of facilities and incentives to foreign and local investors with the adoption of liberalized industrial policy. Apart from the incentives provided in the industrial policy, BEPZA is also offering various types of fiscal and non-fiscal incentives as well as infrastructure and support services for the investors in EPZs.

Financial Incentives

The fiscal incentives mainly include the followings:

☞ 05 years tax holiday within different slaves.

☞ Income tax exemption of salaries of foreign technicians for three years (for the projects approved before March 22, 2009).

☞ Duty free import of machinery, equipment, construction raw materials.

☞ Duty free export of finished goods.

☞ Relief from double taxation.

☞ Exemption from dividend tax for tax holiday period.

☞ Duty free import of two/three vehicles for foreign and joint venture industries subject to certain conditions (for the projects approved before March 22, 2009).

☞ Accelerated depreciation on machinery and plant.

☞ Full repatriation of profit, capital and establishment.

Source: BEPZA Annual Report 2011-12.

2.1.8.2. **Non-financial Incentives**

The non-fiscal incentives include:

- Investment protected under Foreign Private Investment (Promotion and Protection) Act, 1980.

- 100% foreign ownership permissible.

- Enjoy MFN status.

- No ceiling on foreign investment.

- Foreign currency loan from abroad under direct automatic route (OBU facilities).

- Non-resident Foreign Currency Deposit (NFCD) allowed for 100% foreign owned industries.

- Operation of FC (Foreign Currency) account by Joint Venture and Local industries allowed.

- 100% backward linkage raw materials, accessories are allowed to sell for export oriented industries inside and outside EPZs.

- Receiving and offering sub-contacting with export oriented industry are allowed both inside and outside EPZ.

- 10% sale of finished products except garments, defective finished goods and surplus raw materials to domestic Tariff Area is allowed.

- No UD (utilization Declaration), IRC (Import Registration Certificate), DRC (Export Registration Certificate) and renewal of bond license are required.

Moreover, the products exported from Bangladesh are eligible for GSP benefits in certain countries subject to fulfillment of relevant conditions (BEPZA Annual Report, 2011-12 & 2010-11 and Brochure of BEPZA, February 2014).

Infrastructural Facilities

Export Processing Zones of Bangladesh have been providing state-of-the-art industrial support service facilities for its investors. These include:

☞ Basic infrastructure: electricity, gas, water, road, telecom, e-mail etc.

☞ Fully serviced plots (average size 2000 sqm).

☞ Factory building available on rental basis.

☞ Enclave for workers dormitory.

☞ Available Warehousing.

☞ Business support service: courier (DHL, FedEx), banks, police station, fire station, post office, C and F (Clearing and Forwarding) agent, shipping agent, MTO etc.

☞ Administrative support service: Shopping center, green area, daycare center, commissariat (for hard drinks), health club, investors club, medical center, sports complex, accommodation for expatriates, school and college, public transport etc.

Apart from the above fiscal/non-fiscal incentives and infrastructure facilities, the simplified documentation procedure formulated by BEPZA also ensure smooth functioning of the business within the zones.

BEPZA Support Service Facilities

Though mentioned briefly above, the support services provided by BEPZA and its EPZs can be explored to some greater extent, these are:

☞ Local and Foreign banking service.

☞ Import Permit (IP) and Export Permit (EP) issued within the same day.

☞ Work Permits issued by BEPZA.

☞ Secured and protected bonded area.

☞ Availability of Offshore Banking Unit (OBU).

☞ Freedom from Import Policy restrictions.

☞ Import on Documentary Acceptance (DA) basis.

☞ Back-to-Back LC facilities.

☞ Insurance companies, C and F agents, freight forwarder and courier service in the EPZs

☞ Availability of customs office, police station, BEPZA's own security service, fire station, public transport, medical centers etc in the EPZs.

☞ Customs clearance at factory site.

☞ Intra/inter zone sub-contracting and transfer of goods allowed.

☞ Easily available and trainable workforce.

Moreover, Medical Center, Day care center, restaurant, Health club, investors club, School, college, sports Complex etc are available under BEPZA. (BEPZA Annual Report, 2011-12 & 2010-11 and Brochure of BEPZA, February 2014)

EPZ Program and Industrial Policy

EPZs are considered most appropriate for Bangladesh economy as it is striving to develop and diversify export products but unable to provide standard infrastructural facilities country-wide for its various weaknesses. It also has to overcome economy-wide deficiencies rapidly in its policy regime. That is the main reason why Bangladesh has demonstrated its ability to create proper environment in the limited area of an EPZ needed to attract export-oriented investment. Existing policies attach importance to both forward and backward linkages of the EPZs with the DTA. EPZ enterprises can sell 10% of their products to the DTA. Import of goods and repairing and maintenance of machinery and equipment from the DTA is allowed. But sub-contracting which is instrumental in strengthening linkages is allowed only within Export Oriented Business which work to the divergence of EPZ and DTA policies. In order to expedite the process of industrialization in the country, there is a pressing need for a gradual convergence of the policy regime inside and outside the EPZs.

Basic policy supports provided by BEPZA to its investors fall broadly in three categories:

"One Window Same Day" Service

BEPZA has been providing "ONE WINDOW SERVICE'' to its investors. Operational and documentation procedures have been framed to make them easy and simple with minimum formalities. Investors need only to deal with BEPZA for all of their investment and operational requirements. BEPZA assists the investors with everything like import, export, subcontract permits etc. Apart from that, by providing on-site services such as customs clearance, logistics, international couriers, and

offshore banking facilities, BEPZA provides its investors with the chance to further simplify business processes, resulting in a reduction in lead time. BEPZA also provides same-day services to the investors.

Protection of Foreign investment

Foreign investors are afforded multiple levels of protection in BEPZA. The Foreign Private Investment (Promotion and Protection) Act secures all foreign investment in Bangladesh. As a member, OPIC's (Overseas Private Investment Corporation, USA) insurance and finance programs are operable in Bangladesh as well as in the EPZs. Bangladesh is a member of Multilateral Investment Guarantee Agency (MIGA) which provides safeguards and security under international law. The International Centre for the Settlement of Investment Dispute (ICSID) also provides an additional means of remedy, whilst copyright interests are protected through World Intellectual Property Organization (WIPO) (BEPZA Brochure)

Flexibility

BEPZA offers investment opportunities in convertible foreign currencies, providing investors with the flexibility of repatriating of both profit and capital. Investors may establish public or private companies in the EPZs and they also get benefit of 10 years tax holiday. The investors also enjoy GSP facility in EU countries, USA, Australia, Japan, Norway and duty and quota free access to Canada.

Other Support Policies:

Besides these, recently BEPZA has adopted some other support policies to enhance opportunities for investors:

Public Private Partnerships

BEPZA has embarked on Public Private Partnerships (PPP) for some projects, such as, Power Generation Plants and Central Effluent Treatment Plants. Chittagong EPZ and Dhaka EPZ are clearly forerunners in this development. As per the agreement signed between BEPZA and the investor in 2010, Dhaka EPZ will have a CETP operating on a PPP basis with a local private operator. A Build, Operate and Own (BOO) based PPP model is used with a revenue sharing agreement, with an allocation of 40% for BEPZA and 60% for the operator. Chittagong EPZ has recently selected a local private operator to Build, Operate and Own a CETP, once again with a profit sharing agreement. In the coming years, there is ample opportunity for more PPP's within BEPZA.

Environment Management

BEPZA is committed to act as a catalyst for the improvement of social and environmental compliance within the EPZ industry, and recognizes that such issues now form a core component of the investors' business strategy. In this regard, BEPZA has been working with the Department of the Environment in order to formulate the BEPZA Monitoring, Inspection and Enforcement Agreement. BEPZA has also been working to develop a set of Environmental Enforcement Evaluation Criteria, as well as the introduction of Environmental Best Management Practices, and the preparation

of an environmental training and awareness program. Environmental management also requires necessary infrastructural support and controls. The introduction of two Central Effluent Treatment Plants in Dhaka EPZ and Chittagong EPZ will provide a great step forward in this regard, providing a strong internal mechanism for the control of industrial effluent.

Capacity Building

Capacity building is an ongoing process and essential instrument for promotion of an organization. BEPZA has started administrative streamlining by broadening its organogram and scope of activities. It has taken up lot of reforms in labor, security and environment management, online development, promotional campaign, specialized training, familiarization tour through financial assistance from World Bank, DFID and IFC-BICF. Necessary steps have been taken to enhance EPZ workers rights, workers' wages, remuneration, facilities. BEPZA deployed 60 (sixty) counselors to monitor workers welfare and address the workers issues and also working as a bridge between the workers and the management of the company to uphold healthy and harmonious relation.

Industrial Units

BEPZA has sanctioned 563 industrial units in different EPZs of the country up to June 2014. Among these, 428 industries are already in operation up to June 2014 and others in their different stages of implementation. These industries produce different types of products, such as garments, textile, footwear and leather, electronics, knitwear, caps, tent, garment accessories, metal products, agro products, power industry, wig, miscellaneous, etc. Some world famous brand products like Nike, Reebok, Lafuma, Sony Ericsson, Nissan, Mitsubishi, Hino, Toyota, Konica, Fuji,

Gap, Brouks, J.C. Penny, Wal-Mart, Kmart, Ospig (Germany), Mother Care (UK), Adidas, Falcon (USA) etc. are being manufactured in the EPZs.

Investment

Up to June, 2014 the total amount of actual investment in BEPZA stands at US$ 2,826.75 million. 35 countries including South Korea, Japan, China, Malaysia, Taiwan, U.S.A, U.K, Italy, Canada, Netherlands, Germany, British Virgin Island, India, Sweden, Singapore, Pakistan, Switzerland, Panama, Belgium, Denmark, France, Thailand, Sri Lanka, Indonesia, Australia, Nepal, Mauritius, Ireland, U.A.E., Turkey, Ukraine, Marshal Island, Kuwait and Romania have already invested in the EPZs of Bangladesh.

Cumulative Scenarios of EPZs from very beginning to June 2014.

EPZ	Unint (Nos.)		Export	Investment	workforce
	Opration	U/IMP	US$ mn	US$ mn	(Nos)
Chittagong	170	11	19419.34	1203.52	182,621
Dhaka	102	8	16302.69	1057.34	88,521
Comilla	32	33	1098.65	201.09	16,474
Mongla	17	13	280.14	13.83	1,416
Uttara	12	11	78.71	60.59	11,139
Ishwardi	15	17	231.76	76	7,194
Adamjee	39	23	1220.9	267.96	36,007
Karnaphuli	41	19	1395.47	307.72	45,645
Total	428	135	40027.66	3188.05	389,017

Source: Quoted from BEPZA Bulletin, April-June 2014

How To Apply for investment in EPZs
It is very essay procedure for any invertors whether they foreign or local. which are stapes by stapes as under:
1. Collect Prescribed Project Proposal Format (only 06 pages) from BEPZA on payment of Tk. 3000.00. (available at http://epzbangladesh.org.bd)

2. Should be read following documents/papers:

a) The Bangladesh Export Processing Zones Authority Act. 1980 (as modified)

b) The Foreign Private Investment (Promotion and Protection) Act. 1980

c) Booklets containing information regarding fiscal and infrastructure facilities

d) Principles and procedures governing setting up of industries in EPZ

e) Customs clearance procedures and exchange control requirement in EPZ

f) The EPZ Worker's Welfare Association and Industrial Relations Act, 2010

3. Prepare required document and filling Project Proposal Format.

4. Submit the proposal along with the required documents mentioned in the project proposal format to **Executive Chairman,** Bangladesh Export Processing Zones Authority (BEPZA) BEPZA Complex, House: 19/D, Road: 6, Dhanmondi R/A, Dhaka, Bangladesh.

5. After evaluation the project, BEPZA will accept or reject the project very quickly.

6. If project is accepted by BEPZA, for execution of lease agreement Investor should pay one year rental for land and four months rental for Standard Factory Building, as security deposit.

7. Start setting up the business.

.... October 2014.

To,
The General Manager/Manager
....
....
....

Request to Respond to a Questionnaire.

Dear Sir

I have the pleasure to request you to respond to a questionnaire survey pursued by Md. Monir Hassan, M. Phil Research Student, Department of Accounting and Information Systems, University of Dhaka, Dhaka under my supervision.

It would be highly appreciated if you kindly help the researcher with required information to achieve his target in time.

I can assure you that the information will be used only for research purpose and confidentiality of the information will be maintained strictly.

Thanking you,

With best regards.

(Dr. Mahfuzul Hoque)
Professor
Department of Accounting and Information Systems
University of Dhaka
Dhaka.

Appendix – C:

Questionnaire

For the study on Financial Performance Evaluation of BEPZA Regulated Enterprises.

Section A: General Information:

1. Respondent's Particulars

Name:	
Position:	
Name of Enterprise:	

2. Location of your Enterprise [Please tick (√)]:

Adamjee EPZ	Chittagong EPZ	Comilla EPZ	Dhaka EPZ	Ishwardi EPZ	Karnaphuli EPZ	Mongla EPZ	Uttara EPZ

3. Land Occupied (SqM): .... or Factory Building d (SqM): ....

4. Sector/Line of your Business [Please tick (√)]:

Agro. and Food Processing	Germans	Garments Accessories	Electric Goods and Engineering	Textile	Leather and Foot-Wear	Power, Service and Others

5. Type of Enterprise (Please Tick): ☐-A   ☐-B   ☐-C

6. Country of Origin: ....

7. How old your business in Zone [Please tick (√)]:

0 - 05 years	05 - 10 years	10 -15 years	Above 15 years

Or Date of Incorporation: …………..

Section B: Financial Information:

	2013-14	2012-13	2011-10	2010-09	2009-08
1.Total Expenses: Cost of Goods Sold and Operating Expenses (in thousand USD)					
2.Cost of Raw Materials (in thousand USD)					
3.Total Number of Employees (Person) — Local					
3.Total Number of Employees (Person) — Foreign					

Thanks for your kind co-operation by devoting most valuable time in providing generous answer to the questions, framed as interview guide.

(Md. Monir Hassan)

M. Phil Research Student
Department of Accounting and Information Systems
University of Dhaka
Dhaka, Bangladesh.
Contact: E-mail: mhossan2000@gmail.com
Mobile: +880 1819 159 307

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