



Effects of Global Recession on the Ready Made Garment Industries of Bangladesh: A Case Study of Five Large Factories

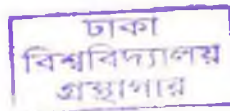
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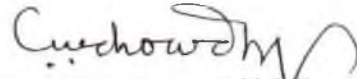
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CERTIFICATE

This is to certify that the materials embodied in this thesis “ Effects of Global Recession on the Readymade Garment Industries of Bangladesh: A Case Study of Five Large Factories” submitted by Bilkis Ferdousi are original and have not been submitted in part or full for any other diploma or degree of any University. The thesis is worthy of consideration for the award of the degree of Master of Philosophy.

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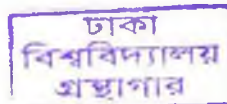
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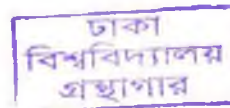


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ABSTRACT

Background: The 2000's recession started in the United States in December 2007 because of the outbreak of the late 2000's financial crisis. It began in the U.S.A and spread worldwide. The extent of the effects of the late 2000's recession on developed and developing countries have been varied in severity. The objective of this study is to analyze the impact of the recession on the readymade garment industries of Bangladesh, as it is now contributing about 80% of Bangladesh's export sector.

Hypothesis: Keeping this background in view, the study tests the hypothesis that the world-wide recession that affected the economies of the all developed countries may have negative impact on our export oriented readymade garments industry because of reduced expenditure by the people of developed countries due to recession. On the other hand this could have positive impact on our garment sector, because the recession affected countries will look for cheap garments from low cost countries.

Methodology: To examine this hypothesis, a survey has been taken on the five large woven and five large knit industries of Bangladesh on employment, output and export revenue of the sector. Randomly selected workers of the five woven and five knit industries were questioned about their wages and other benefits given by the industries from 2007 to 2011.

Executive bodies of the industries were questioned about the employment recruitment and volume or quantity of export of the apparel products to the developed countries from 2007 to 2011.

Results: Statistical analysis of the survey demonstrates that the effect of the late 2000's recession on the readymade garment industries of Bangladesh is not negative. In contrast, the export volumes of apparel products of Bangladesh have been increasing continuously from 2007 to 2010. The wages of the workers in every surveyed industry have increased in a significant rate, and at the same time other benefits received by the laborers from the industries were also continued.

According to the managers of the five woven and five knit industries, they didn't lay-off or cut the labors to sustain in the international apparel market during the recession period. Moreover, they have recruited more labors to cope with the huge orders they have gotten during the recession period. Some well established apparel industries had to export their buyers order below their production cost, because of the international price increment of the apparels raw materials, especially the thread. However this loss was covered by the huge amount of orders which they have gotten from the developed countries buyers.

Conclusion: This work concludes that (i) the export volume of the apparel industries increased during the recession time; (ii) During the period the recruitments, wages and benefits of the laborers of the apparel industries increased gradually; and (iii) Due to cheap labor market apparel industries of Bangladesh remain competitive in international market.

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ABBREVIATIONS

ARG	American's Research Group
BBS	Bangladesh Bureau of Statistics
BGMEA	Bangladesh Garment Export Association
BKMEA	Bangladesh Knitwear Exports Manufacturer
BMI	Business Monitor International
BOP	Balance of Payment
EBA	Everything But Arms
EPB	Export Promotion Bureau
EPZ	Export Promotion zone
EU	European Union
FY	Fiscal Year
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GFC	Global Financial Crisis
GSP	Generalized system of Preference
HDI	Human Development Index
LDC	Least Developed Countries
MFA	Multi Fiber Arrangement
NBER	National Bureau of Economic Research
OTC	Over the counter
RMG	Readymade garment industry
SAARC	South Asian Association of Regional Cooperation
USIIC	US International Trade Commission

1. Introduction

Background

The Readymade garment industry (RMG) of Bangladesh is playing a significant role in the economy of our country. According to the latest statistics the contribution of this sector to the GDP is about 9.5% (BBS). In the last few years, the contribution of this sector to our total export earning has been maintained at about over 75% (EPB.). Recently, Bangladesh's share in the global garment sector has reached nearly 5 percent. In 2008-09 the RMG exports account about 80% of the total export of the country (EPB, 2010).The experts hope this sector will continue such performance in the coming years.

In 2008 the world economy faced a severe financial and economic crisis. As a result the developed markets are adversely effected .The present study will examine the effects of the global economic recession on the RMG sector of our country .In doing so it will evaluate the effects of the recession on output, employment and workers' welfare of the sector.

RMG industries constitute a large component of our industrial sector. This has achieved significant growth during the last two decades. Its growth has tremendous impact on social and economic development of our country. The most significant contribution of RMG sector to our national economy is employment generation. RMG sector has given employment opportunities to many girls and women of our country. It has given them better status within the family and in the society, and provides them with considerable freedom and independency. Employment opportunities in the RMG sector have positive impact on family planning and population control in our country. Working women are

more concerned about the advantage of small family and are exposed to modern family planning methods. In this way this sector is also contributing in alleviating poverty in our country.

With the growth of the RMG industry, linkage industries such as fabrics, yarns, accessories, packaging materials etc. have also expanded. Alongside these, the demand for services like transportation, banking, insurance, shipping, clearing and forwarding, hotels have also increased. All these have created additional employment, income and demand.

The late 2000's recession started in the United States in December 2007, and then spread to the other developed countries. Generally, recession means the decline in GDP of a country for at least two or three consecutive quarters. The consequences are the sharp drop in international trade, rising unemployment, and slumping commodity prices. Another characteristics of the recession is, during this period rational consumers tends to take conservative attitude, i.e less expenditure on the consumers goods. As a RMG exporting country, Bangladesh's major markets are U.S.A, Europe & Canada. It is rational that, because of the recession, these countries consumers demand for housing, clothing, food etc. will decline; as a result this will reduce their national imports. At present, Bangladesh's export sector is heavily dependent on the RMG sector. Most of its export revenue is coming from this sector. It was feared, that during the recession period, Bangladesh's RMG export volume to the developed countries would be adversely affected. Our present study has tried to find out the effects of the current global recession on the export, output, and employment and workers welfare benefit of the RMG sector.

The thesis will be organized as follows: In introduction (section 1), the background, and objectives of the study will be discussed. Section 2 will discuss the Economy of Bangladesh .Section 3 will discuss the growth size, employment of the RMG'S in Bangladesh. Section 4 will review some available literature on the effects of global recession.. Section 5 will discuss the methodology of the primary survey. Section 6 will present the findings of the survey. Section 7 will summarize and conclude.

2. *Economy of Bangladesh*

2.1 *Characteristics of Bangladesh*

The area of Bangladesh is approximately 143,998 square kilometer. It has 64 districts. The population of the country was 158,570,535 in 2011. The population density of the country is 1099.3 per kilometer square. Bangladesh has an annual population increase rate of 1.566 % and an unemployment rate of 5.1%.

2.2 *Agriculture sector*

According to the World Bank, the contribution of agriculture to the country's GDP has been steadily declining from 55% in 1970 to 31.6% in 1999. Although it still provides employment to large numbers of people. Bangladesh remains one of the world's leading producers of Jute and rice, although most of the rice is for domestic consumption rather than export. Rice and Jute are the primary crops; wheat is assuming greater importance, and tea is grown in hilly regions of the northeast. Through better flood control and irrigation measures, more intensive use of fertilizers and high yielding seed varieties, increased price incentives, and improved distribution and rural credit networks, Bangladesh's labor-intensive agricultural sector has achieved steady increases in food grain production despite the often unfavorable weather conditions.

Jute, which historically has accounted for the bulk of Bangladesh's export receipts, faces an uncertain future due to competition from synthetic fiber substitutes. Fishing especially for shrimp, has become increasingly important source of export earnings. With 28.8 million metric tons produced in 2005-2006 (July –June), rice is Bangladesh's main crop. By comparison, wheat output in 2005-2006 was 9 million

metric tons .Population pressure continues to place a severe burden on productive capacity, creating food deficit .Foreign assistance and commercial imports fill the gap.

Under employment remains serious problem and a growing concern for Bangladesh's agricultural sector will be its ability to absorb additional man power. Finding alternative sources of employment will continue to be a daunting problem for future government, particularly with the increasing numbers of landless peasants who already account for about half the rural labor force.

2.3 *Industrial sector*

Manufactured products accounted for around 60% of gross export earnings in 1999, with clothing goods becoming the single most important product .Bangladesh's industrial sector ,contributes significantly to its export sector; it also provides employment and a market for cash crops. Tourism is a very small but rapidly growing sector of the economy that increased by around 42% between 1993 and 1998.

Since the early 1980's production of ready-made garments for the US market has grown rapidly .Bangladesh is the 5th largest supplier of cotton apparel to the United States, and it has begun exporting to West European markets.

Breaking up ships for scrap, is highly labor intensive, now meets most of Bangladesh's domestic steel needs. Other industries include sugar, tea, leather goods, newsprint, pharmaceuticals, and fertilizer production. The industrial (and foreign exchange) impact of the discovery of modest reserves of oil in 1986 remains to be assessed.

The Bangladesh government continues to encourage foreign investment, which it did fairly well in the 1990's in private power generation and gas exploration and production as well as in other sectors such as cellular telephony, textiles and pharmaceuticals. Bilateral investment treaty with the USA and Bangladesh also has established export processing zones in Chittagong(1983), Dhaka(1994), Comilla(2000), Mongla(2001), Iswardi(2005), Uttara(2006) and Karnafully(2007).

The most important reforms Bangladesh should make to be able to compete in a global economy are to privatize state-owned enterprises, deregulate and promote foreign investment in high-potential industries like energy and telecommunications, and take decisive steps toward combating corruption and strengthening rule of law.

2.4 GDP Growth

The economy has grown 5-6% per year since 1996 despite political instability, poor infrastructure, corruption, insufficient power supplies, and slow implementation of economic reforms. Bangladesh is a poor, overpopulated, and inefficiently-governed nation. Although half of GDP is generated through the service sector, 45% of Bangladeshi's are employed in the agriculture sector, with rice as the single most important product.

Bangladesh's growth was resilient during the 2008-09 global financial crisis and recession. Garment exports, totaling \$12.3 billion in FY09 and remittances from overseas Bangladeshi's totaling \$9.7 billion in FY09 accounted for almost 25% of GDP.

2.5 Growth of Bangladesh Industries

Bangladesh has experienced a shift from the traditional sector (agricultural sector) to the non- traditional sector (Industrial and service sector) in the recent years. The contribution of industrial sector and the service sector to the GDP in 2005 were 28% and 51% respectively. And in 2004, those were 27% and 52% respectively. The share of the agricultural sector in the GDP was 20.5% in 2005 and 21% in 2004, respectively.

Since the independence in 1971, Bangladesh has achieved a tremendous growth rate in its industrial production. The economy comprises of number of small and medium size enterprise that make up for 25% of the nation's Gross Domestic Product (GDP).

The country's GDP can be divided as follows

Agricultural: 18.7%

Industry: 28.7%

Service: 52.6%

Infrastructure

Bangladesh's economy is characterized by poor infrastructure, weak energy and gas shortages. Due to these disruptions the economy was unable to achieve its targeted 6% growth by Fiscal Year 2009.

The garment industry of the country remains the strongest root of its economy with 76% contribution in its foreign exchange. Approximately 2.2 million Bangladeshis are employed in this industry of which 80% are women. In the fiscal year 2007 total of US\$ 9.2 billion worth of garment were exported. The figure reached US\$ 12.3 billion In Fiscal year 2009 as expected. The textile industry is made of several small

and large scale, private and public companies. The United States is the largest market garment importer for Bangladesh, with \$5 billion in imports annually.

As of Fiscal year 2010, the pharmaceutical rating of Bangladesh is 38.5. The scale of Pharmaceutical products is expected to mount in the coming decade. It has been envisaged that the sale over-the-counter (OTC) medication and prescription drug will increase to US \$ 3.44 billion in 2019, from US \$ 1.13 billion in 2009. According to a forecast by the Business Monitor International (BMI), exports will overtake import, reaching US\$ 226.75 million and US\$ 166.56 million respectively.

In recent years, Bangladesh has been achieving not only a substantial increase in the volume of exports but also an important change in the composition of exports away from traditional items such as jute and jute products and towards new manufactured products such as ready-made garments

In, 1981-82 61.8% of the total exports were raw jute and jute goods 10.1% of the total exports were leather, 6.1% of the total exports were tea and 1.1% of the total exports were woven garment.

However in 2002-2003 5.2% of the total export was raw jute and jute goods, 2.9% of the total exports were leather, 0.2% of the export were tea, 49.8% of the total exports were woven garments and 25.3% of the total exports were knit wear. Only 5% of the textile factories are owned by foreign investors, with most of the production being controlled by families or Bangladeshi companies.

Although the foreign trade sector of Bangladesh constitutes an important part of its economy, the country suffers from a chronic deficit in its balance of trade. The Balance of trade in Bangladesh with other countries, especially with SAARC

countries, does not show any hopeful sign for the desirable contribution to the country's economic development (Rahman, 2003). The balance of trade has never been positive in Bangladesh from 1984 to 2004.

Main aim or goal of our country is to increase the growth and per capita income of our country. For this, we have to reduce the income inequity. Present government has declared to convert the country from low income level to mid income level country within fifteen years.

To increase national growth and to reduce the income inequity, we have to generate more employment. As Bangladesh is a resource poor country, we need to give more emphasis on the export sector of our country. Readymade garment industry is now contributing about 80% of our export sector. It also has empowered our women population by providing them more employment. The disposable income from their job provides them with better living standard and economic freedom. Beside our garment sector we must promote other industrial sectors. This in turn will diversify Bangladesh's economy and, increase export volume of our country. Due to more export resulting from improved, industrial atmosphere, the country's export revenue will appreciate; this will help us to generate more employment in the economy. As a result our overall growth will increase and, poverty will be alleviated.

3. Growth size and employment contribution of the Readymade garment industry of Bangladesh

During the British period, Bangladesh was a prosperous agricultural country in the South Asia. In the early nineteenth century, based on the agrarian economy, its textile industry became the greatest industry in the world. The country used to export its textile products throughout Asia and Europe. British destroyed its domestic textile industries and converted it to an agricultural country.

After two hundred years of British rule, Bangladesh was known as East Pakistan in 1945; finally in 1971, Bangladesh became independent. Until the time of the independence jute was another main export product of Bangladesh, but the market for jute collapsed in the late 1970's. After that from 1980's garment industry is playing a very important role in the export sector of our country. Developing countries such as Bangladesh has natural advantage in textile production because it is a labor intensive production and Bangladesh has low labor costs.

The RMG industry of our country has started its journey at the late 1970's ,and over the last three decades the export oriented RMG sector has made significant contribution to the transformation of Bangladesh economy. When jute and jute goods were losing their traditional international market, in that crucial time RMG sector replace it.

Textile sector in Bangladesh is predominantly made of natural fiber using cotton. This sector is broadly classified into the three groups based on the value addition. They are yarn, fabric, and apparel. Bangladesh apparel or RMG industry comprises woven, knit and sweater. Trousers, shorts, jackets, children wear, cargo pant, denim pant and shirt etc. are the main woven products and T-shirt, PQ polo shirt, pullover, jeans pant, twill pant etc. are the main knit products. In the 1980 RMG industry of Bangladesh mainly

manufactured and exported woven products .Since the early 1990, the knit section of the industry has started to expand; such products currently account for more than 40% of the country's total RMG export earnings.

The USA was the main exporter of the Bangladesh RMG sector in the early 1990's ,but the European Union has surpassed the United States overtime .These two destinations generate more than 90% of the total RMG export earnings of Bangladesh.

This sector has also played a significant role to overall improvement in the HDI indicators of our country. It is also one of the major employers in our country. The rapid growth of readymade industry in Bangladesh since the mid 1980' has generated considerable female employment in the formal export –oriented manufacturing sector. This has made women visible in statistics and has brought about a social change in Bangladesh. Some studies have argued that such employment improves women's economic status and mobility, and expand individual choices. Employment in garment industry has also provided direct access to cash income for the first time to many women. Prior to entering the garment industry ,about 50% of the female workers and 15% of the male workers were doing unpaid household based work in 1990.The 1997 survey showed that for 96% of the male and female workers in the non EPZ garment industry work was the first wage employment. For the EPZ the proportions were 88 and 82 percent respectively .Hence for the first time a large number of women were getting regular wages each month. In 2002, about 14 lakh workers were engaged in this sector, and among them 70% were women. This economically empowered people contributed significantly to the growth of the economy through its multiplier impact in terms of consumption, expenditure and savings. RMG sector and the related activities

have also contributed to the growth of the financial sector of our country, especially banking and insurance sector.

From 1974 through 2004, the international T and C (textile and clothing) has been governed by the quota system known as the Multi Fiber Arrangement (MFA). This agreement was based on imposing quotas on the amounts developing countries could export to developed countries. One of the main aim of the MFA was to provide greatest scope to the newly industrialist countries to increase their share in the world textile market, at the same time maintain some protection for the developed countries textile products. Because of the quota system developing countries are receiving higher price than in a free market. One of the main reason of the success of the RMG sector in our country is the introduction of the Multi Fiber Agreements g(MFA). Under this agreement Bangladesh as a LDC gets the huge access in the developed countries like USA and Europe. It was a great opportunity for Bangladesh. Because of the quota system Bangladesh was able to manage a strong foothold in the apparel market over the past years. Quota system provided Bangladesh and other developing countries a certain degree of security in accessing the apparels markets of developed countries. In 1994, it was decided that MFA should be phase-out by January 1st 2005.

In 2004 Bangladesh's apparel export to the world was 4.44 billion which was about 1.72% of the total world apparel market share. USA is one of the main market share of Bangladesh's RMG sector; its earning from the US market increased from 373.96 million in FY 1991 to 2198.42 million in FY 2001. In past few years Bangladesh's knit wear export is experiencing phenomenal growth both in the US and EU, because of the strong advantage of the backward linkage. From 1995 to 2005 China was the topmost exporter of RMG products to the US market. Before the quota phase-out Bangladesh's

position was around the fifteenth but after quota de-restriction Bangladesh has become one of the top ten exporters to the US market. The quota on Chinese export to the US has created higher market access opportunities for Bangladesh.

This agreement was over expired in 2005, and Bangladesh was forced to enter in the open market competition. It was expected that Bangladesh would suffer most from the ending of the MFA .In fact Bangladesh's exports increased in value by about \$500 million in 2006. But ,it also have other side, after quota phase-out it was difficult for the entrepreneurs to face the challenges of the intensified globalization. Not only in the international market; inside the country many joint-venture RMG industries were also victimized because of the phase-out of MFA in 2005.

Bantai was a joint-venture RMG company with a Taiwanese partner, which was established in 1990. The agreement between the two partners was that the Bangladeshi partner would be in charge of production and the Taiwanese partner would manage the marketing side .The foreign partner left the company in 2001. The main reason for the partners departure was that the Bangladeshi garment industries would lose its larger quotas as a least developed country under MFA after 2004. The Taiwanese partner moved to China from Bangladesh for better investment opportunity. Bantai Company's profit started to fall sharply after the departure of the foreign partner.

It is very difficult for a RMG worker to maintain his living standard with the wage he is getting now. According to the BGMEA, because of the post-MFA pressure, it was also difficult for the producers to increase the wage structure of the garments workers .During the quota regime, entrepreneurs earned an average USD25-30 per dozen pants, which has now dropped to USD 7-10; earning from a dozen has dropped from

USD 12-14 to USD 4.5-6; earning from a dozen sweaters have declined from USD 24-30 to USD 13-16.

Another disadvantage of the RMG sector of our country in the context of the globalization is the expensive, corrupted and inefficient port facilities and services of the Chittagong port .According to the World Bank estimates the handling charge for a 20 foot container in Bangladesh is USD 640(USD 250 "unofficial tolls" for instance bribes ,kickbacks etc.) while it is USD 220 in Colombo and USD 360 in Bangkok .From the above description we can see that the Chittagong port is one of the most expensive port in the world .It effects adversely the export oriented RMG sector of our country.

Bangladesh government has also failed to provide the required infrastructure facilities and continuous energy supply for the RMG industries which have made the per unit production cost more expensive than most of its competitors. Only the cheap labor cost has made Bangladesh a competitive place for apparel manufacturing.

Export Performance since the MFA phase-out

The quota phase-out have increased the competition in the global marketplace among the apparel exporting developing countries .It was assumed and there were concerns that because of the MFA phase-out , a number of countries including Bangladesh will be effected badly and seriously. But, against all fear and predictions, mainly because of low labor cost and, an increasing growth in the knitting sector Bangladesh's RMG sector is surviving and doing well business in the international apparel market/business.

Data compiled by the EPB

In the fiscal year 2003-04 export earnings from RMG was about \$7.6 billion. In 2004-05 (included the first 6 months of the quota free regime) , exports rose by more than

\$1billion ,registering a growth of about 19% .The growth rate in 2005-06 was even more impressive 23.5%.

During June 2006-January2007, exports of woven garments and knitwear were, respectively, \$2,698.50 and \$2,636.87 million compared to the previous year's corresponding period's \$2,262.54 and \$2,086.23 million registering an increase of 27.80 and 27.84 percent respectively.

The factors which are behind this achievement

1. After the MFA phase-out on January 2005, negotiated trade restraints again imposed on China which was effective from July 2005 and was expired in December 2008 .The safeguard measures taken against China benefitted Bangladesh. During the 1st year of quota phase-out Bangladesh's export to EU decline from 3.9 billion to euro 3.7 billion i.e. a growth rate of minus 5.1% .Bangladesh performed a strong recovery with the help of growth rate of 38% during the January-July 2006.Restricted SS from China to EU and US ,contributed this encouraging development.
2. Bangladesh has achieved recent development in the RMG sector mainly due to the knitwear products. However the performance of the woven garment is relatively weak. Most woven garments made in Bangladesh have low domestic value added content, and therefore do not qualify for EU GSP facilities.
3. Another factor that contributed positively for the recent growth in the Bangladesh's RMG sector is the depreciation of its currency. The depreciation of the taka coincided with the phasing-out of the MFA regime. The Chinese currency and the Indian rupee were appreciated during the same time.

The depreciation of the Bangladeshi currency and the restriction on Chinese exports by US and the EU has increased the international competitiveness of Bangladesh's RMG exports and therefore Bangladesh was able to capture larger share of global apparel market.

4. Tariff concession from Canada and EU is very helpful.
5. With the flourish of the RMG sector, a group of world class entrepreneurs emerged in Bangladesh who courageously and boldly faced the post MFA phase-out situation. They have successfully established a long-lasting relationship with the North American and European buyers. Exporters have also modernized their SS chain management using ITC and other modern management tools. They have also used more modern technology and production techniques to increase productivity and, in their factories workers skills have also increased.

Due to the current global economic crisis, USA's clothing sale started to decline from 2007. This has reduced import of RMG products from the Asian countries who are mainly dependent on the US market.

EU is one of the main markets of our RMG products. From January 1, 2008 quotas on Chinese products were lifted; this brought downward pressure on prices in the EU clothing market. Woven import from all Asian countries except china and Vietnam had declined in August 2008, at the same time, in Bangladesh woven exports and knitwear export declined by 16 and 9 percent respectively.

Bangladesh is enjoying access to EU market under EBA. Duty free access offered to Bangladeshi products continued to boost EU demand for knit clothing. But the situation is not that good for woven exports; it has declined by 5.27% in the first half of 2008.

Recent export performance of the RMG sector of Bangladesh (2009-2010)

In addition to quota protected export markets, Bangladesh's RMG industry was also benefited from the EU'S generalized system of preferences (GSP) and more recently under its Everything but Arms initiatives for Least Developed Countries. For duty free access to the EU markets, apparel produced in a LDC must fulfill its GSP rules of origin which require that a two stage transformation must take within its territory. For woven garments this means that the fabrics used in production should be locally produced. While for knitwear products the used yarn should be of domestic origin .Fortunately, almost all Bangladeshi exporter of knitwear, and a significant portion of woven garments succeeded in meeting this criteria .Bangladesh has achieved recent development in the RMG sector mainly due to the knitwear products, and however the performance of the woven garment is relatively weak. Most woven garments made in Bangladesh have low domestic value added content, and therefore do not qualify for EU GSP facilities.

"China is gradually appreciating its currency and in the last three years its currency appreciated by 15 %.If Chinese currency appreciated by another 15% in the next three years ,then it will be a big boost for Bangladesh"-Dr.Rahman said.

Appreciation of Chinese currency makes its exportable products more expensive in the world market. China is the main competitor of Bangladesh in the international RMG sector. So, order has obviously started to come to Bangladesh (as a low cost country).Beside, currency appreciation China is also facing acute workforce problem. The government had to increase the RMG workers wage, which also have made the Chinese apparel products expensive in the international market .More international buyers are coming to Bangladesh due to the high price of the Chinese apparel products. China is also going through a , transition in its industrial sector ,from low tech. industry

to high tech. industry .Chinese RMG producers are also no more interested in this labor intensive products because of currency appreciation and wage hike of the Chinese RMG workers.

Talking to the Daily star ,chairman of Dekker Group ,said although there is no statistics of the orders, Bangladesh now receives, which are being shifted from china, the country has turned out to be a good destination for outsourcing apparel items .

Up to May (2010), at least 200 new local buying houses have opened in Bangladesh, while the number of such new buying houses were 150 in 2007.

According to the managing director of Interfab Shirt Manufacturing LTD. currently (8.10.2010) the RMG sector Bangladesh is getting strong orders (including recovery from the global recession).Two reasons are behind it:

1. In the last years, buyers followed a conservative strategy in purchasing RMG products, and this year the actual business has started .They have become more confident.
2. Second reason is the ongoing shift of orders from Srilanka, Pakistan and China to Bangladesh. China has been suffering from the shortages of low –wage workers on the other hand Pakistan have faced wide spread flooding. Recently, EU has withdrawn zero tariffs (GSP+) from Srilanka. RMG orders which were supposed go to Srilanka are now coming to Bangladesh.

4. Literature Review

4.1 Keynesian theory of economic depression

J.M. Keynes, the founder of Macro-economics, was the first economist to comprehensively analysis the causes of depression in the economy and suggest the policy measures to combat depression and regain the full employment equilibrium level. Before the publication of his General Theory in 1936, the classical and neoclassical economists argued that supply always creates demand at the aggregate level and the economy automatically achieves and maintains full employment equilibrium. There may only be the temporary disturbances to move the economy away from the full-employment level and thereby to cause recession/depression or inflation .Adoption of monetary policies alone can bring the economy back to the full-employment level. Keynes criticized these ideals in details and rejected the conclusion. He argued that supply does not always create demand and full-employment equilibrium is not automatically created. In some situations, aggregate demand can greatly fall short of supply, and unemployment equilibrium can emerge. In his view, aggregate demand has two components: consumption expenditure and investment expenditure. While consumption function remains more or less stable, investment expenditure can fluctuate over time. Investment depends on marginal efficiency of investment and the rate of interest. Marginal efficiency of investment (MEI) depends in turn on demand price and supply price of capital. The demand price depends on the prospective yield of investment, which is the function of speculation of the investors .It can happen at some points in time that the investor's expectation about return from investment is low. This can be caused by several reasons – economic ,political, or other .Then the investors will

reduce the volume of investment expenditure, which will reduce aggregate demand and aggregate demand will be lower than aggregate supply, causing over supply of output. This will create a process of continuous unemployment and falling income in the economy, or recession. The recession can lead to the depression, as in 1929. In this situation, monetary policy is not effective to reduce the rate of interest and increase investment expenditure. Due to increased speculative demand for money, increased money supply through the use of monetary policy will be absorbed in hoarding of money, without creating any effect in the money market. Hence, Keynes concludes that in order to increase investment and thereby to increase aggregate demand, the government has to adopt appropriate fiscal policies such as deficit financing, easy lending policy, increase in supply of bank credit, tax holiday, and so on. This is the cause of the Keynesian theory of depression. Many countries in the world have on many occasions successfully wiped out recession/depression using Keynesian policy prescriptions..

4.2 The Great Recession or the late 2000's Recession

The informal definition of recession is two consecutive quarters of negative economic growth. The national Bureau of Economic Research of the United States considers any recession continued decline in economic activity for two or more consecutive quarters. According to the National Bureau of Economic Research late 2000's recession began in December 2007. The great recession has affected the entire world economy with detriment in some countries than others. It is a global recession which sparked by the outbreak of the late 2000's financial crisis. This is the worst recession since the great depression. The US economy shrank in five quarters. Two quarters shrank more than 5%. It was also the longest since the great depression.

It is assumed that the great Recession ended in the US in June or July 2009, because the economists requisite of two consecutive quarters of growth in the GDP was confirmed by the end of 2009. However, economic hardship remain in the US and many other countries. Particularly in the USA, persistent unemployment, the continuing decline in home values, an escalating federal debt crisis, inflation and rising gas prices is still continuing.

According to a poll of 2011, more than half of all Americans think that the USA is still in recession or even depression, though the official data show a modest recovery.

Causes of the economic recession of 2008

1. Stagnating oil prices (increasing oil prices), driven by geopolitical uncertainties, the collapse of stock markets and subsequent diversion of speculative investment market and the expected oil production cuts by the OPEC.
2. Continuous increase of staple foods, rising price of the manufactured goods, mainly due to the rise of costs of crude oil and raw materials, along with wage increases.
3. Increase of inflation rates close to 6% and current account deficit (15% of GDP) for 2008.
4. Rise in interest rates by the European Central Bank to reach 4.5%.
5. An increase in the rate of unemployment up to 12.5% at the end of 2008, due to the outbreak of the housing bubble and subsequent domino effect in the sectors linked to the construction of a United Euro.

The consequences of the global recession's are sharp drop in international trade, rising unemployment and slumping commodity prices .Several economists have predicted that recovery may not appear until 2011 and that the recession will be the worst since the Great depression of the 1930s.The other consequences of this recession are the huge layoff from different industries, falling share markets, decreasing industrial growth, bankruptcy of major markets , reduction in consumer spending and a credit crisis, which has not been alleviated by massive government rescue plan.

Remedy or Solution of US recession

In -2009, the US government launched the economic –stimulus plan. It was designed to spend \$185 billion in 2009 .An in fact it halted a four –quarter decline in GDP by Q3 of that year, thus ending the recession .However ,unemployment continued to rise to 10% , and many business leaders were expected a W-shaped recession in 2010.

4.3 Review of available literature on the effects of global recession

Rahman, M. *et al.* (2009) indicated in their paper that economic recession has its influence on the labor market in different ways depending on its nature, depth and the sector. Betcherman and Islam (2001) indicated that during the Asian crisis unemployment, earnings of workers fell and workers rights were endangered; consequently it affected the national economy in many ways.

According to the survey of literature related to the East Asian financial crisis of the 1990's, during the global financial crisis the most affected areas of Bangladesh were export oriented sector, manpower sector, remittance and domestic resource mobilization.

During 2008 (late 2000's recession or great recession has started at the end of 2008) two major economies USA and EU's economic growth was positive and it was 1.4% and 1.2% respectively. In 2009, both of these countries faced negative economic growth and it was -1.6%, and -2.0% respectively.

This paper showed that lower growth rates; induce low demand for goods and services, which in turn adversely affect their import of goods and services from developing countries .As a result developing countries export sector being harmed. According to this paper, during June-Nov .2008, imports of apparels, frozen foods, leather and jute by major developed countries, such as USA, EU and Canada portrayed a mixed picture. In this period, imports of apparels in the USA has declined -3.14%, compared to the same period of the previous year, though import in EU and Canada was marginally positive (7.5% and 5.8%).

According to the survey of America's Research Group (ARG) before Christmas (11 Dec.2008) about 40% of consumers were likely to spend less because of job fears(63.6%).The effected sectors were clothing , pharmacy and retail sales index for all businesses. Their paper stated that, bleak trend in the sales of major chain stores in the USA and other developed economies during the Christmas season indicates a depressing prospect for the export of these products from the major supplying countries.

Murshid, S.A.K. *et al.* (2009) demonstrates in their BIDS-PRP working paper that in 2008 Bangladesh's apparel export volume to the USA had increased as a low cost country. Initially they argued that due to the current GFC the export sector of Bangladesh was in vulnerable position as it is heavily dependent on the EU and

US market. Recent global financial crisis started to have a negative impact on the US clothing sales from 2007.

The growth of retail sales drop from 10.75% in the first quarter to 2.48% in the last quarter of 2007. During the 2nd and 3rd quarter of 2008, there was no growth and, in the last quarter retail sales declined by 8% which had decreased apparel imports of the USA. The decrease in US apparel import is a great loss for the Asian RMG suppliers who are heavily dependent on the US and EU market.

Again the paper indicated that by observing the consumer's low buying tendency, during the recession period, the US apparel importers were looking for the low cost producer's. As a result Bangladesh's clothing export was quite strong in 2008.

US retail clothing sales declined by 8.05% in the 4th quarter of 2008 and, in the same year US's imports of apparel declined by 3%. But, US's apparel import from Bangladesh increased by 18.5% in the 4th quarter of 2008 (as a low cost producer).

Rahman, M. *et al.* (2010) argued that Bangladesh was not much affected by the recent global crisis. Crisis impacts were felt in the 2nd half of 2009, when many developed countries were beginning to recover. In the period of the crisis the aggregate export earning was quite satisfactory, which was mainly driven by the readymade garment export. But, in the 3rd quarter of 2009, there was a significance fall in the export sector, mainly because of the low demand of the developed country.

Export of primary products suffered from the early shocks through the falling demand. However, the overall performance of the export sector continued with double digit, led by the RMG sector up to the 1st quarter of 2009. Adverse effects were starting to visible from the April 2009.

In this study we get some information on the growth of Bangladesh's total export sector, apparel sector, woven sector and knit sector in 2008/09 which are very important to understand the Bangladesh's apparel sectors export performance during the recession period. Bangladesh's export growth in 2008/09 was 10.3%, which was against the backdrop of high growth rates of 15.5% and 15.9% in the previous two fiscal years. In 2008/09, export growth of apparels was strong; it contributed about three quarters of total export earnings. The main contributors of the RMG sector was the Knit and woven industries. The growth rate of Knit RMG was 17.4% and woven RMG was 13.2%, compared with the last fiscal year's (2007/08).

In the last quarter of 2009(Jan-March) total export registered 6.0% growth ,although the growth rate became negative in the 2nd quarter(April-June).In the crisis period ,US apparel import from most other countries have had decelerated . Estimation based upon US international trade commission (USITC) data show that total apparel imports to the US declined by 13.5% during Jan – Sep(2009) over the period of 2008.

In the period of crisis, US apparel import declined by 0.1% from China, 4.5% from Vietnam, and 24.2% from Cambodia.

But, in contrast US imports of apparel products from Bangladesh increased by 1.8%, over the period between January and September 2009.

Gereffi, G. & Frederick, S. (2010) on their policy research working paper demonstrates the challenges and opportunities for developing countries in the global apparel market. In their paper they indicated that on the onset of GFC, in 2008 the US consumers spent \$200 billion on apparel which was 3.6% down from

2007. In 2009, among the apparel importers in EU-15 China was the market leader. It accounted about 24% of total EU-15 apparel imports in 2009. The next top three importers were Turkey (6.3%), Bangladesh (4.77) and India.

All the leading apparel suppliers in the EU-15 are either receiving duty free or preferential tariff treatment, to varying degrees. Indonesia, Thailand, Pakistan, Vietnam, India, Sri Lanka and Bangladesh are receiving the benefits from the generalized system of preferences program. However, the United States excluded textiles and apparels from its GSP agreements. On the other hand EU-15 includes textile and apparels in its GSP agreements, and in this way favoring many of the least developed exporters in the global economy.

During the great recession, in 2009, the largest low-cost apparel producers such as China, India, Vietnam and Bangladesh were able to increase their export share in the major global markets because of the developed countries consumers conservative attitude. On the other hand in this period, decreasing demand of the international consumers has caused many apparel industries of the developing countries to go out of business. Consequence is the job losses in the textile and apparel industries of the developing countries.

The most severe effect of the recession on the suppliers is the access to credit and finance. The crisis had made access to credit much more difficult than before.

4.4 *Effects of Recession on Developed Countries*

UNITED STATES OF AMERICA

Recessions generally occur when there is a widespread drop in spending often following an adverse supply shock or the burst of an economic bubble.

Government usually responds to recession by adopting expansionary macroeconomic policies such as increasing money supply, increasing government spending and decreasing taxation.

According to the National Bureau of Economic Research (the official arbiter of recession) , the recession began in December 2007 .The financial Crisis is linked to reckless lending practices by financial institution and the growing trend of securitization of real estate mortgage in the United States of America.

The emergence of Sub-prime Loan losses in 2007 began the crisis and exposed other risky loan and over-inflated assets prices. With loan losses mounting and the fall in the Lehman Brothers on September 15, 2008 a major panic broke out on the inter-bank loan market. As share and housing prices declined, many large and well established investment and commercial banks in the United States and Europe suffered huge losses and even faced bankruptcy, resulting in massive public financial assistance.

A global recession has resulted in a sharp drop of international trade, rising unemployment and slumping commodity prices.

In December 2008, the National Bureau of Economic Research (NBER) declared that the United States had been in recession since December 2007. Several economists have predicted that recovery may not appear until 2011 and that recession will be the worst since The Great Depression of the 1930's.

Paul Krugman, who won National Memorial prize in Economics, once commented on this as seemingly the beginning of the "Second Great Depression".

The conditions leading up to the crisis, characterized by an exorbitant rise in demand, are considered a result of extended period of easily available credit, inadequate regulation and oversight, or an increasing inequality.

The recession has renewed interest Keynesian economics ideas on how to combat recession conditions. Fiscal of monetary policies have been significant eased to stem the recession and financial risks.

Economists have advised that the stimulus should be withdrawn as soon as the economy recovers enough to "Chart a path to sustainable growth."

Effects

The late-2000's recession is shaping up to be the worst post World War II contraction on record.

Real gross domestic product (GDP) began contracting in the 3rd quarter of 2008, and by early 2009 was falling at an annualized pace not seen since 1950s.

Capital investment which was in decline year-on-year since the final quarter of 2009, dropping 23.2% year on year, nearly four percent faster than in the previous quarter.

US domestic demand, which has been in decline for five straight quarters, is still three months shy of the 1974-75 record but the pace down of 2.6% per quarter is already higher than the 1.9% in the previous period and is a record breaker already.

The report in 2009 by Bloomberg states that \$14.5 trillion of value of global companies has been erased since the crisis began.

Policy Responses

The financial phase of the crisis led to emergency intervention in many national financial systems.

In particular, economic stimulus plans were announced in the USA, China and the European States. Bailouts of failing or threatened businesses were carried out or discussed in the USA, the EU and India. In the final quarter of 2008, the financial crisis saw the G8 group of major economies assume a new significance as a focus of economic and financial crisis management.

UNITED KINGDOMS

The current economic slowdown has ended 16 years of continuous economic growth, the longest period of growth within the UK since the 19th century. A report from the National Institute for Economic and Social Research said that the economy contracted by 0.1% within the period from May to July 2008 and 0.2% from June to August 2008.

During the recession, factory production in the UK dropped by 0.5% in June 2008, where twelve out of thirteen categories of factory production fell. The economic output of the UK was reported to have increased by only 0.2% in 2008, the joint-slowest pace since 2001. The value of the pound relative to other currencies was dropped by around 30%.

According to the Office for National Statistics, unemployment claims rose from 32,500 to reach 904,900 in August 2008. The wider Labor Force Survey Measure

found the unemployment rose from 81,000 to 1.72 million between May and July, the largest since 1999.

From 1 December 2008, the UK Government made the decision to cut VAT from 17.5% to 15% for 13 months in an attempt to encourage big spending by UK shoppers before Christmas.

On 4 December 2008, the Bank of England cut interest rates from 3% to 2% which amounts to the lowest level since 1951.

On 5 February 2009, interest rates were cut from 1.5% to 1%.

On 5 March 2009, the Bank of England cut the interest rates yet again to 0.5% only.

Figures published in March 2009 by the Bank of England revealed that over \$1 trillion in foreign holdings had been withdrawn from UK banks between spring and the end of 2008.

By November 2008, unemployment had risen to over 1.8 million and by March 2009 it had surpassed 2 million, the highest since 1997.

A report by the ONS produced in March 2009 stated that the UK economy had shrunk by 1.6% during the last quarter of 2008 with a 1% drop in household spending.

In April 2009, it was reported that the 1st quarter GDP had shrunk by 1.9%, with a prediction of 4.1% drop for the year. The largest contribution to this figure was made by the manufacturing output, which fell by 6.9% over the quarter.

In May 2009, the unemployment rate showed a record quarterly rise of 281,000 to stand at 2.38 million – equivalent to 7.6% of the working population. In the three months to June, the number of job vacancies fell to a record low of 429,000, down by 35,000 from the previous quarter.

By the start of August 2009, UK unemployment had hit 2.44 million, a 14 year record. However, on 26 February 2010, it was revealed that the UK economy had grown by 0.3% within the last quarter of 2009 and UK was out of the recession.

Effect of Recession on Developing Countries

MALAYSIA

Its manufacturing sector has a crucial role in its economic growth. Its export industry was hit hard during the late 2000 economic recession. Total export fell down to 156.4 billion dollars in 2009 from 198.7 billion dollars in 2008. Imports also fell from 154.7 billion to 119.5 billion dollars (www.economywatch.com/world_economy/Malaysia/export-import.html).

Malaysia's well developed manufacturing sector produces a diverse range of goods. The first three quarters of 2009, however, saw a deep decline in the country's economic growth. The volume of exports reduced drastically due to reduced consumer good demand globally. In January 2009, Malaysia banned the hiring of foreign workers in factories, stores and restaurants to protect its citizens from mass unemployment amid the global economic crisis. The country's GDP contracted by 1.7% (en.wikipedia.org/wiki/late-2000s_recession_in_Asia#cite-note-18).

200% of the GDP of the Malaysian economy is contributed by the international trade (Zin, R. H. M & Shahadan, F. (2009). Foreign direct investment (FDI) inflows and a robust capital market also contributed to the growth of the economy. Zin in his paper indicated, as a highly open economy, Malaysia was affected by the recession in the following ways, :-

- i) Exports declined by 27.8%.
- ii) Commodity exports, crude oil, palm oil and gas in particular, have experienced a sharp fall in prices.
- iii) Decline in FDI in line with the global recession, where FDI inflows were expected to be half of that in 2008.
- iv) The global meltdown in equity markets resulted in a significant decline in Bursa Malaysia, which adversely affected investor and consumer sentiment.

By the first quarter of 2009, the Malaysian economy had already contracted by 6.2% due to the deepening global recession. All sectors, except for construction, registered lower output. The services sector registered a mild contraction of 0.2% due to the lackluster performance in sub-sectors, closely linked to external trade and financial activities. The manufacturing sector deteriorated by a further 17.6% compared to 8.8% fall in Q4 2008. Production of passenger cars fell by 18.9% in Q1 2009 compared to the 24.9% fall in Q4 2009.

SINGAPORE

Jordan, R (2009) indicates in his paper that Singapore was one of the fastest growing economies of Southeast Asia during 2004 to 2007. The country is a

deeply export oriented country and highly dependent on exports made to Japan, the USA and Europe. As a result, the last economic recession had a profound impact on the country's economy, damaging not only global demand for its exports but also its finance sector. According to Rolf Jordan, during the current recession Singapore was effected by the following ways :

Effects on GDP

As a result of the global economic downturn, Singapore's manufacturing sector fell by 10% in the 3rd quarter of 2008 while construction fell by the same rate and services dropped by 22%. In the fourth quarter of 2008, the nation's GDP fell by 12.5%, which is the greatest drop recorded within Singapore yet, since 1976.

Early in 2009, it was found that Singapore's economy had contracted in the previous quarters more than it had in the last 30 years. Along with Japan, Hong Kong and several other key economies within the region, Singapore had fallen into severe recession, the economy having shrunk for three quarters straight. The most dramatic downturn was witnessed within the first three months of 2009 during which the country's GDP plunged by about 20% compared to the previous quarter's fall. In face of such an economic downturn, the government was forced to switch their economic forecast to a contraction of between 6 to 9% for 2009.

Effects on the Export Sector

Singapore's export to GDP ratio is more than 180% compared to an Asian average of 60 to 70%. As a result, the country's economy was particularly vulnerable to external shock. The total amount of exports fell in October 2008 by 15% as a result of reduced demand from the USA, Europe and Japan. Electronics, which

constituted a third of all manufacturing, fell by 14% while pharmaceuticals fell by 31%.

In January 2009, Singapore's non-oil exports, which accounted for about 2/3rds of the state's GDP fell by another 35% as global demand continued to fall. In the preceding months, manufacturing had again fallen by 10.7% compared to the previous year and even the services industry dropped by a revised 1.3% in Q4 2008.

Only the constructions sector regained 18.5% due to heavy government spending. Once again, electronics exports had the leading decrease, going down by two fifths compared to earlier records as a result of the country's main market declining.

Exports to Europe fell by as much as 13% in December 2008, while sales to the USA dropped by half the amount they had reached the year before. Even the city-state's exports to neighboring Malaysia fell, going down 40%.

As a result of Singapore's dependency on exports to the outside, the power of the Singaporean dollar also began to decline with the decline in global demand for goods produced by the country. The Singapore dollar lost more than a tenth of its value against the US dollar, making it amongst the worst performing currencies of 2009.

Effects on Employment

When global demand for goods and services declined sharply during the late 2000s economic recession, Singapore's employers immediately began to reduce unemployment in order to cope with the initial phase of the recession. In Q2 2008,

more than 71,000 jobs had been created, but this reduced to less than 58,000 in Q3 2008. Overall, some 2,000 workers were made redundant in this initial phase of the recession, 1,500 of whom were from the manufacturing industry.

It was Singapore's semi-conductor production industry that had the strongest downturn, with the state-owned Chartered Semi-Conductors Manufacturing, one of the largest producers of microchips in the world, asking their employees to work less hours as global AD had fallen. Employers in the sector also released plans to cut wages by as much as 20%. The situation became even more intense in Q4 2008 when 8,100 workers were made redundant. This was a 10% increase compared to the final nine months of the year when some 7,400 workers lost their jobs.

In the fourth quarter of 2008, the number of new jobs sank to less than 27,000, about half of those in the previous quarter.

Despite signs of economic recovery in Q2 2009, the labor market was still in a state of disarray. The country's services industry had shrunk for 3 quarters continuously and exports had been dropping for 14 consecutive months when the govt. predicted a further 18, 600 rise in unemployment. The government's continued efforts to stem the increase in unemployment have yet to bring a positive change.

Late 2000's Recession and its effect on the economy of Bangladesh

According to the statistic of the Export Promotion Bureau (EPB), Bangladesh export earnings in the December 2008 dropped by over 10% due to the declining demand and prices in global market. "The export order from the country's main

export markets- Europe and United States- have declined modestly due to the global economic meltdown", said the officials in EPB. Fazlul Haque ,President of the Bangladesh knitwear Manufactures and Exporter Association (BKMEA), said that exports from knitwear, the Country's largest exporting item that witnessed robust growth for years, went down by 2.5% in December 2008 (<http://english.people.com.cn/90001/90778/90858/90863/6588598.html>).

Besides, the raw jute and jute goods exports in Bangladesh, the largest exporter of raw jute and jute products in the world, declined by 6.84% and 12.47% respectively in the first five months of the current 2008-09 fiscal year (July 2008-June 2009).

Meanwhile, the country also experienced a sharp fall of 45% in the manpower export in January due to declining demand in some Middle East countries which downsized their development activities amid the financial slowdown. The country's inflow of remittance contributed by the manpower sector plays significant role in the economy(<http://english.people.com.cn/90001/90778/90858/90863/6588598.html>).

The developing economies of Asia fared better than their developing counterparts during the crisis, growing by 6.6% on 2009.The IMF projected the growth of the Asian economies at 8.7% in the 2010 as the severity of the financial crisis diminishes. The global economies downturn has negatively impact most of the developing countries in terms of exports, foreign investment, remittance flow and foreign assistance (www.mof.gov.bd/en/budget/10_11/mtbf/en/Chapter_I.pdf).

At the outset, initially, Bangladesh was somehow what unaffected; later different sectors of the economy, especially exports gradually felt the negative impact of the recession. The export growth rate in FY09 registered a double growth of 10.3% .It was 15.9% on the previous year. In the July-April of the FY10, export recorded on the 1.0% growth over the same period of previous year. In the FY09 import expenditure recorded only a modest growth of 4.1% and it was 26.1% in the previous year. Import expenditure plummeted mainly due to the fall in global commodity prices. Import declined by 1.5% in the July- March of FY10.

Due to its low integration with foreign investment (only 2.5%), stock market in Bangladesh met with slight impact. The capital markets in Bangladesh, in fact, experienced a moderate boom during this period.

Following the global downturn, labor exports from Bangladesh declined as construction sector In the Middle East collapsed and demand for labor declined in countries like Malaysia. At the same time, emerging new labor markets like Libya helped neutralize the negative impact on the overall flow of remittance. Consequently, remittance had a robust growth of 22.4% in the 2008-09 and the July- April time period, the remittance growth registered 16.7% compared to the corresponding period of the last year (www.mof.gov.bd/en/budget/10_11/mtbf/en/Chapter_1.pdf).

Taka 34.24 billion stimulus package was announced in April 2009 by the Bangladesh government. The package includes increase in cash subsidy to the selected export industries by 70.0% of the support, enhancement of the of the

Export Development Fund, raising of the export credit ceiling, lowering of bank interest rates on commercial lending etc.

The government had also declared a second stimulus package for which taka 5,046 crore had been allocated in the budget of FY10. The stimulus package had been prepared to encourage new areas like product diversification, ship building, and frozen food industry but with prime focus on the garments sector. The government's swift decisions and strategic actions have curbed the effects of global recession, the success is also attributable (www.mof.gov.bd/en/budget/10_11/mtbf/en/Chapter_1.pdf).

5 Methodology

5.1 Data

The study utilizes both primary and secondary data. The data for merchandise exports disaggregated into woven, knit and others are taken from the Export Promotion Bureau (EPB), Statistical Yearbooks (BBS, 2009,2006) ,annual reports and others relevant documents of BGMEA .

The primary data are collected by a sample survey conducted in the apparel industry. Respondents included both workers and managers and they were interviewed with two structured questionnaires. Both the groups of respondents were randomly selected from 5 woven and 5 knit firms. While the selected firms are of varying size in terms of annual turnover, workers and managers are randomly drawn across skill types (as defined later) and experiences (years in apparel production). A motivation is to ensure that the sample is as representative of the population as possible. In each of the woven firms ,three types of activities(Sample and Pattern Making, Sewing, Finishing & Quality Control) are conducted and hence, the workers were categorized into three groups. From each group 10 workers were randomly selected as respondents .Thus ,30 workers were selected from each firm and a total of 150 workers were selected. In the knitting firms ,five types of activities(Sample and Pattern Making, Knitting, Dying & Fabric Processing, Sewing, Finishing & Quality Control) are carried out. Accordingly we divided the workers into 5 groups. Attempts were first made to interview 10 workers from each group and 50 workers from each firm . However ,the desired number of workers do not exist in some firms ,since some firms operate some activities on a small scale. Finally we interviewed 158 workers. The distribution of respondents of each firm has been shown in the following table.

Factories	Workers	Manager
Woven		
1.AJ Fashion LTD	30	1
2.Cambridge garment LTD.	20	1
3.Hameem group.	30	1
4.Vertex LTD.	30	1
5.Voyager	30	1
	140	5
Knitting		
1.Dulal Brothers LTD.	30	1
2.MB Fashion LTD.	40	1
3.Momotaz knitting	30	1
4.New Age Knitting	38	1
5.MS dying LTD.	20	1
	158	5
Total	140+158= 298	5+5 =10

The questionnaire for the workers included time varying information on their skill types, nominal wages, cash benefits including attendance and festival bonuses, non-cash benefits including transport facilities, medical care, day care facilities, provisions for lunch and snacks. The questionnaire included two more questions related to workers' welfare. One of them is concerned with changes in the per capita consumption of food items and the other relates to changes in the quality of housing of workers. Skill types

are the activity types workers perform in an apparel factory. They include helper (the most unskilled activity), sample and pattern making, sewing and finishing & quality control in the case of a woven firm. On the other hand, the skill types further include knitting and dyeing & fabric processing for a knit firm and thus a knit firm is further integrated than a woven firm. The other questionnaire was required to be answered by managers. The questionnaire included few qualitative questions. They were intended to elicit information on the effects of global recession on export volume, price and value, and employment at the firm level and whether the firm received any significant government support either *ex anti* or *ex post*.

In both the cases, a recall survey was made in the sense that interviewer asked respondents to recall relevant information over the last five years provided that respondents were employed in the apparel industry for the period. Due care was exercised to collect consistent information for workers who made substantial upward progression across skill types.

5.2 Method of analysis

The study reports only descriptive statistics and conducts no parametric analysis. Wage pattern is examined by both mean wage and min-max range. Mean wages are further defined for workers across activity types and years. Likewise, a minimum-maximum range is reported for every category for workers and over the years. The motivation is to examine if workers faced substantial variability in nominal wages particularly in recession years. Other cash and non-cash benefits such as attendant and festival bonuses, transport facilities, medical care and day care facilities are summarized by indicator responses as to whether workers received such benefits or not.

Information on workers' consumption at the household levels and quality of housing is also studied by indicator responses. Descriptive statistics are reported across responses and worker types. Cell values thus represent number of valid worker-responses.

Chapter 6: Findings and Interpretation

This section discusses findings of the study. The findings are organized in terms of a number of specific criteria. The criteria are defined such that the effects of global recession are evident on firm-level output value, volume and prices, employment levels, wages and other financial and non-financial benefits. The time dimension of the survey data spans over 2007 to 2011 and so the period reasonably covers the recession period in the developed economies in the West. A geographic distribution of Bangladeshi exports indicates that more than 80 percent of the manufactured exports of the country are apparel exports (EPB, 2010). And the main destinations of these exports are the United States, the European Union (EU) and Canada. As the US financial crisis, which began in September 2008, rapidly evolved as the global economic crisis, its aftermath was predicted to be a protracted recession in the developed economies. Both the policy makers and apparel manufacturers in Bangladesh then feared a sudden slowdown in demand for the country's flagship manufactured exports, i.e., the woven and knit garments. Provided that the stability in Bangladesh balance of payment (BOP) totally depends on the apparel exports and flow of foreign remittances, a sudden slump in export earnings would cause serious risk for macroeconomic stability. More importantly, since the apparel sector employs low-skilled labor force, of which women account for more than two-thirds, the risk of the global recession then threatened social stability of the country. It was expected that both output and employment growth would slowdown in the apparel industry. The Government of Bangladesh feared that a cost-cutting strategy on the part of apparel manufacturers would be to reduce both financial and non-financial benefits of the workers. A consequence would be substantial unrest in the

industry and cause serious social problem. The present study shows that many of the adverse predictions proved not true.

Table 1 shows that the merchandise exports of the country increased from 14 billion US dollar in 2008 to over 16 billion dollars in 2010. Of this apparel exports continued to account for more than 75%. The findings further show that the relative contribution of woven and knit exports remained largely stable. Tables 2-4 reflect on firm-level evidences on the effects of global recession. The findings show that more than 80 percent of the firms experienced a rising price and an increasing volume and so the value of apparel exports. Table 5 indicates that the recession had no effect on employment in the apparel sector.

The findings that Bangladesh apparel exports continued to grow during the recession period can be explained by several factors. First, as the recession deepened, China in particular experienced a substantial relative price appreciation against the US and EU. Relative wage of workers has also risen in China. An outcome has been significant shift in global apparel demand away from China to some low-wage countries. Bangladesh has indeed been one of them and the country thus increased its market share in the global apparel market. Second, apparels being low-cost final consumer goods did hardly face the adverse effects of a relative income decline in the developed countries. And since Bangladesh is yet specialized for the production of relatively low cost garments for mass markets, the impact of decline in relative income was limited. Third, a de facto exchange rate policy of pegging taka, the local currency, to the US dollar accompanied a substantial monetary expansion in last few years. Interest rates were relatively low and both industrial and trade credits were made cheaper. Cost of borrowing for export production thus declined significantly. Finally, the Government of

Bangladesh provided a package of additional financial supports to the apparel manufacturers. Table 6 shows that firms actually received government support during the recession. All these factors, both external and domestic, helped apparel production and exporting continue its growth.

An interesting finding is that the Bangladeshi exporters reported a nominal price appreciation, in addition to the rising volume, for their exports. Given that local pricing of our exports in foreign markets faced increasing price competition in recession times, the finding of a price appreciation may be that exporters made a dynamic progression along the global apparel value chain. It likely indicates that our apparel manufacturers have moved away from low-valued garments to more high-valued products and/or the firms have an increasing integration of back-end and front-end operations in their production processes. The front-end and back-end operations include product development, production planning, quality control and logistics and they are generally high value added activities in the apparel value chain. This is a positive development though, a policy question is whether the expectation of increased price competitiveness and/or an adverse shift in global apparel demand would reduce monetary and non-monetary benefits of the garments workers in the developing world. Another question is whether livings standards of workers have declined over time. Both the issues bear significant policy implications provided that the

Bangladesh apparel industry has recently faced some violent protests by its workers for increase in wages and other benefits.

Tables 7-20 summarize pattern of monthly nominal wages earned by the apparel workers. The statistics reported include mean wages and their minimum and maximum range for the sample workers. The min-max range is reported in order to see if

extraordinary variability in pay is evident during the recession time. The findings are disaggregated across woven and knit workers and then within each industry across worker types in terms of activities they perform. The findings are based on the recall survey conducted among the randomly selected garments workers. Though nominal wages deflated by price index would have been a better indicator, the conclusion would by and large remain same for nominal wages too.

Table 7 shows that the average monthly nominal pay increased by more than 12 percent per annum over the study period. The dispersion of wages as measured by the range between minimum and maximum levels has though widened in some years, it was not because of a downward wage adjustment, which would adversely affect relatively low-skilled and new workers. Rather, the findings indicate that it was often due to growing maximum fuelled by growing productivity of the workers. Table 8 reflects on the monthly wages of workers engaged in the woven industry. Tables 9-13 focus on nominal wages for woven workers by their skill/activity types. The skill types for the woven industry are defined to be helper (the most unskilled activity), sample & pattern making, sewing, and finishing & quality control. The findings show that workers performing the sample & pattern making activity receive the largest pay and appear to be the most skilled activity in the woven production. Sewing and finishing workers earn a comparable pay. For all the cases, wage growth seems independent of global recession. The findings indicate neither a significant decrease in wages nor a substantial rise of variability in a year.

Tables 14-19 reflects on monthly wages of workers engaged in the knit industry. Some key observations include a persistent rise in nominal wages and much less variability in wages compared with that of the woven sector. The study thus finds that both the

employment and wages of workers observed a consistent rise in the apparel industry over time. This is in line with our earlier observation that apparel exports remained buoyant during the period under study. To further deepen the inquiry, the study interviewed workers with respect to other financial and nonfinancial benefits such as attendant bonuses, festival bonuses, and transport facilities, on-the-job medical care, day care facilities for working mothers, and provision for meals, snacks etc. A common finding is that majority of the workers of all skill types received these benefits and we observe no significant variability in giving these benefits. These findings are detailed in Tables 20-83 in the appendix.

The earlier findings document a time varying pattern of monetary and non-monetary benefits earned by the sampled workers from 2007 to 2011. These are direct benefits paid out by firms to its work force. An important question is to evaluate their welfare incidence at the household levels. In doing that, the present study collects information on workers' living standards. Tables' 84-105 document results on the per capita consumption of food items by garments workers during the period. Each table shows a bivariate distribution of workers in terms of activity types and discrete responses on their per capita consumption of food items. As defined earlier, the activity types include helper (the most unskilled activity in the apparel production), sample and pattern making, sewing and finishing & quality control in the case of woven firms. For knit firms that are further integrated than the woven firms, the activity types include two additional categories, i.e., knitting and dyeing & fabric processing. An objective to elicit information across activity types is to examine if a potential slowdown would affect living standards more for the unskilled workers than the skilled workers. The findings are unequivocal that more than 80 percent workers claimed that their food consumption had moderately

improved over time. The findings do not significantly vary across skill types of workers and are largely similar for the workers of both woven and knit firms. Tables 17-26 reflect on the quality of housing of the workers. The survey results indicate that about 70 percent of the workers experienced moderate improvement, 20 percent experienced significant improvement and about 10 percent experienced no significant changes. Again, the findings are quite similar across skill types and for the workers of both woven and knit firms.

Chapter 7: Summary and Concluding Remarks

This work concludes that (i) the export volume of the apparel industries have increased during the recession time,(ii)During the period ,the labor recruitment ,wages and benefits of the labors of the apparel industries have increased gradually ;and (iii) Due to cheap labor cost ,Bangladesh remain competitive in the international apparel market.

The findings of the statistical analysis of the survey have shown that the apparel export of the readymade garment sector of Bangladesh was not affected during the recession period. The volume of the apparel export of Bangladesh have increased from 2007 to 2010.During this period RMG workers wages have also increased at a significant rate, along with the other benefits given by the industries. RMG workers were not lay-off from the industries; moreover more workers were recruited to handle the increased amount of apparel export.

U.S.A and EU are the two main importers of the Bangladesh's apparel products. Recent financial crisis began to have a negative impact on the US clothing sector from 2007. In 2008, US retail clothing sales declined by 8.05% and US's imports of apparel products declined by 3%. However, U.S's apparel imports from Bangladesh (as a low cost country) increased by 18.5% in the 4th quarter of 2008.U.S's apparel import from Bangladesh was also increase in 2009 ,when U.S's apparel import from China, Vietnam and Cambodia had declined.

Appreciations of the Chinese and Indian currency make their exportable products more expensive in the world market, at the same time, due to the GFC the importers of the apparel products were searching for the low cost producers. As a result, orders have obviously started to come to Bangladesh, as a low cost country. Moreover ,due to the

increase of the Chinese RMG workers wage, Chinese apparel products have become expensive in the international market .More international buyers are coming to Bangladesh due to the high price of the Chinese apparel products. Therefore Bangladesh was able to capture larger share of global apparels market during the recession period.

In 2009 Bangladesh, was also able to increase its apparel export volume to the EU-15.The reason behind this success is that, all the leading apparel suppliers in the EU-15 are receiving duty free or preferential tariff treatment. Bangladesh is also benefited from the generalized system of preferences. Recently, EU has withdrawn zero tariff facilities from Srilanka, Bangladesh is also benefited from it by getting more orders from the international buyers.

During the discussion with the executive bodies of the apparel industries, they have informed us that beside the advantage of a cheap labor cost, which has made their product less expensive in the international market, they have also explored new market/destination and have maintained good relationship with the old buyers which have helped them to get the excess orders during the recession period.

Summarizing all the findings and the statistical analysis it can be said that the current recession has no adverse effect on the export oriented RMG sector of Bangladesh. At present, in the global economy Bangladesh is known as a developing country, whose target is to become a middle order income country within the next fifteen years. In the past few years, the industrial sectors share has increased in the national GDP; the RMG sector is the lead contributor of the industrial sector. It is an utmost importance to take appropriate measures to further stimulate the RMG exports and increase the

international apparel market share of Bangladesh which would contribute to achieve the higher growth rate of the country. The following policy implications can be taken to achieve the optimum growth from the RMG sector of our country.

Infrastructure improvement:

According to the findings, during the recession period Bangladesh's overall RMG export has increased as a low cost country ,but the country is seriously suffering from the infrastructure problem which is one of the main hinder of achieving the efficient growth of the RMG sector of Bangladesh. Most of the industries are suffering from the inadequate supply of electricity and gas, which are reducing their optimum productivity and sometimes they are not able to submit the order in due time. Many entrepreneurs have expressed that they have adequate supply of labor force, enough capital and huge international orders which are the favorable conditions for the expand of the sector ,but they are not daring to establish more new industries because of the shortage of electricity and gas supply. To increase the international apparel market share

Of Bangladesh, government have to ensure the adequate supply of electricity and gas .Moreover, our port facilities are also expensive than the other RMG exporting countries. Government also has to carefully handle this matter, so the ports can be used more efficiently with lower cost.

Government incentives:

An important information we have found from the study, that during the current recession ,other low cost Asian RMG exporting countries such as China, India ,etc. have got enough incentives and stimulus packages from their government .These govt. aids have helped them to remain competitive in the international apparel market. Our

govt. should also take care of this issue. As a small, export-oriented developing country, Bangladesh should provide enough facilities to the other potential export oriented industrial sectors and should provide as much incentives and stimulus packages to the RMG sector as possible. So, the RMG sector of our country will be able to remain competitive in the world market.

Political Stability:

To remain competitive in the world market, it is very important to ensure the investment environment in the domestic market. Political stability is the pre-condition for the better investment environment. Another, very crucial factor for the RMG industries to remain competitive in the international apparel market is to submit the orders in due time, for which the domestic political stability is very important. Government should take appropriate measures on this matter to accelerate the RMG export of Bangladesh.

Market drive:

To increase the international apparel market share, it is very important to be well connected with the buyers of the developed countries. New apparel markets should be explored while maintaining the old market. Individual RMG entrepreneurs, BGMEA and Bangladesh government can keep significant contribution in this issue to stimulate the growth of the export oriented RMG sector of Bangladesh.

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Appendixes

Table 1

Bangladesh's merchandise exports by product group, 1980-2008

(in percent of total exports)	1980	1985	1990	1995	2000	2005	2008	2009	2010
Total merchandise exports	100	100	100	100	100	100	100	100	100
Of which: Exports of manufactured goods	69	66	79	87	92	93	93	94	95
Total apparel exports	0	12	41	64	76	74	76	79	77
Woven apparels	0	12	40	53	54	42	37	38	37
Knitwear apparels	0	0	1	11	23	33	39	41	40
(in billions of U.S. dollars)	1980	1985	1990	1995	2000	2005	2008	2009	2010
Total merchandise exports	0.7	0.9	1.5	3.5	5.8	8.7	14.1	15.6	16.2
Of which: Exports of manufactured goods	0.5	0.6	1.2	3.0	5.3	8.0	13.1	14.7	15.4
Total apparel exports	0.0	0.1	0.6	2.2	4.4	6.4	10.7	12.4	12.5
Woven apparels	0.0	0.1	0.6	1.8	3.1	3.6	5.2	5.9	6.0
Knitwear apparels	0.0	0.0	0.0	0.4	1.3	2.8	5.5	6.4	6.5

Export data pertain to fiscal year ending on June 30. Export Promotion Bureau (EPB) compiles daily bills of exports in US\$. Other manufactured exports, not shown separately, include pharmaceuticals and chemicals and specialized textile and linen products. Primary commodities, which were once major export commodities, mainly include raw jute, tea, fish & frozen foods and some agricultural produces accounting for less than 10 percent of total exports.

Sources: Rahman and Sayeda (2010).

Table 2: Effects of recession on export prices in the apparel industry

Year	Decreasing	Increasing	No change	Total
2007	0	4	8	13
2008	4	13	13	29
2009	8	13	8	29
2010	0	25	4	29
Total	13	54	33	100

Table 3: Effects of recession on quantity exported in the apparel industry

Year	Decreasing	Increasing	No change	Total
2007	0	8	4	13
2008	4	21	4	29
2009	4	25	0	29
2010	4	21	4	29
Total	13	75	13	100

Table 4: Effects of recession on exports value in the apparel industry

Year	Decreasing	Increasing	No change	Total
2007	0	8	4	13
2008	8	17	4	29
2009	4	25	0	29
2010	4	21	4	29
Total	17	71	13	100

Table 5: Effects of recession on employment in the apparel industry

Year	Increasing	No change	Total
2007	4	21	25
2008	4	21	25
2009	4	21	25
2010	4	21	25
Total	17	83	100

Table 6: Supports given by the government in the apparel industry for recession

Year	Increasing	No change	Total
2007	6	6	12
2008	24	6	29
2009	24	6	29
2010	24	6	29
Total	76	24	100

Table 7: Monthly wages of workers in the apparel industry, 2007-2011

Year	Number of workers	Mean wages	Minimum wage	Maximum wage
2007	294	3510	1600	15000
2008	294	3983	1665	22000
2009	294	4523	2150	26000
2010	294	5055	2400	26000
2011	292	5578	2800	30000

Table 8: Monthly wages of workers in the woven industry, 2007-2011

Year	Number of workers	Mean wages	Minimum wage	Maximum wage
2007	138	3531	1600	15000
2008	138	4063	1665	22000
2009	138	4692	2300	26000
2010	138	5280	2600	26000
2011	137	5797	3000	30000

Table 9: Monthly wage of helpers (unskilled production workers) in the woven industry, 2007

Year	No. of workers	Mean wages	Minimum wage	Maximum wage
2007	29	2399	1600	5000

Table 10: Monthly wage of sample & pattern making workers in the woven industry, 2007-2011

Year	No. of workers	Mean wages	Minimum wage	Maximum wage
2007	42	5044	1800	15000
2008	46	5711	2200	22000
2009	47	6577	2600	26000
2010	47	7464	3000	26000
2011	46	8201	3300	30000

Table 11: Monthly wage of sewing workers in the woven industry, 2007-2011

Year	No. of workers	Mean wages	Minimum wage	Maximum wage
2007	32	2988	1800	8000
2008	44	3171	1665	8500
2009	44	3730	2300	9200
2010	44	4183	2600	10200
2011	44	4637	3000	11500

Table 12: Monthly wage of finishing & quality control workers in the woven industry, 2007-2011

Year	No. of workers	Mean wages	Minimum wage	Maximum wage
2007	29	3262	1800	8000
2008	45	3284	2000	8500
2009	44	3688	2500	9000
2010	44	4106	3000	11000
2011	44	4529	3500	13000

Table 13: Monthly wages of workers in the knit industry, 2007-2011

Year	No. of workers	Mean wages	Minimum wage	Maximum wage
2007	156	3491	1600	6000
2008	156	3913	1800	6500
2009	156	4374	2150	7000
2010	156	4856	2400	7500
2011	155	5384	2800	9000

Table 14: Monthly wage of helpers (unskilled production workers) in the knit industry, 2007

Year	No. of workers	Mean wages	Minimum wage	Maximum wage
2007	28	2480.357	1600	3600

Table 15: Monthly wage of sample & pattern making workers in the knit industry, 2007-2011

Year	No. of workers	Mean wages	Minimum wage	Maximum wage
2007	20	3335	2000	5500
2008	29	3383	1800	6000
2009	29	3839	2150	6500
2010	29	4285	2400	7000
2011	29	4746	2800	7500

Table 16: Monthly wage of knitting workers in the knit industry, 2007-2011

Year	No. of workers	Mean wages	Minimum wage	Maximum wage
2007	29	4059	2200	6000
2008	34	4293	2200	6500
2009	34	4764	2600	7000
2010	34	5293	2950	7500
2011	34	5884	3500	8000

Table 17: Monthly wage of dying and fabric processing workers in the knit industry, 2007-2011

Year	No. of workers	Mean wages	Minimum wage	Maximum wage
2007	14	3843	3100	5000
2008	22	3957	3200	5400
2009	22	4455	3500	6300
2010	22	4936	3800	7000
2011	21	5743	4200	9000

Table 18: Monthly wage of sewing workers in the knit industry, 2007-2011

Year	No. of workers	Mean wages	Minimum wage	Maximum wage
2007	15	2887	2500	3500
2008	19	3103	2500	4000
2009	19	3472	3000	4500
2010	19	3851	3300	5000
2011	19	4117	3050	5500

Table 19: Monthly wage of finishing & quality control workers in the knit industry, 2007-2011

Year	No. of workers	Mean wages	Minimum wage	Maximum wage
2007	45	3974	2300	6000
2008	51	4261	2500	6500
2009	51	4740	2800	7000
2010	51	5253	3300	7500
2011	51	5766	3825	8000

Table 20: Attendance bonuses enjoyed by workers in the woven industry in 2007

Activity	Not received	Received	Total
Helper	1	24	25
Sample & pattern making	13	24	37
Sewing	2	26	28
Finishing & quality control	6	14	20
Total	22	88	110

Table 21: Attendance bonuses enjoyed by workers in the woven industry in 2008

Activity	Not received	Received	Total
Sample & pattern making	13	28	41
Sewing	2	34	36
Finishing & quality control	7	28	35
Total	22	90	112

Table 22: Attendance bonuses enjoyed by workers in the woven industry in 2009

Activity	Not received	Received	Total
Sample & pattern making	14	28	42
Sewing	2	34	36
Finishing & quality control	6	28	34
Total	22	90	112

Table 23: Attendance bonuses enjoyed by workers in the woven industry in 2010

Activity	Not received	Received	Total
Sample & pattern making	14	28	42
Sewing	2	34	36
Finishing & quality control	6	28	34
Total	22	90	112

Table 24: Attendance bonuses enjoyed by workers in the woven industry in 2011

Activity	Not received	Received	Total
Sample & pattern making	14	28	42
Sewing	2	34	36
Finishing & quality control	6	28	34
Total	22	90	112

Table 25: Attendance bonuses enjoyed by workers in the knit industry in 2007

Activity	Not received	Received	Total
Helper	3	21	24
Sample & pattern making	1	15	16
Knitting	5	15	20
Dying & fabric processing	4	9	13
Sewing	0	15	15
Finishing & quality control	1	32	33
Total	14	107	121

Table 26: Attendance bonuses enjoyed by workers in the knit industry in 2008

Activity	Not received	Received	Total
Sample & pattern making	1	22	23
Knitting	5	19	24
Dying & fabric processing	10	10	20
Sewing	0	19	19
Finishing & quality control	2	37	39
Total	18	107	125

Table 27: Attendance bonuses enjoyed by workers in the knit industry in 2009

Activity	Not received	Received	Total
Sample & pattern making	1	22	23
Knitting	5	19	24
Dying & fabric processing	10	10	20
Sewing	0	19	19
Finishing & quality control	2	37	39
Total	18	107	125

Table 28: Attendance bonuses enjoyed by workers in the knit industry in 2010

Activity	Not received	Received	Total
Sample & pattern making	1	22	23
Knitting	5	19	24
Dying & fabric processing	10	10	20
Sewing	0	19	19
Finishing & quality control	2	37	39
Total	18	107	125

Table 29: Attendance bonuses enjoyed by workers in the knit industry in 2011

Activity	Not received	Received	Total
Sample & pattern making	1	22	23
Knitting	5	19	24
Dying & fabric processing	10	10	20
Sewing	0	19	19
Finishing & quality control	2	37	39
Total	18	107	125

Table 30: Festival bonuses enjoyed by workers in the woven industry in 2007

Activity	Not received	Received	Total
Helper	3	22	25
Sample & pattern making	3	34	37
Sewing	4	24	28
Finishing & quality control	2	21	23
Total	12	101	113

Table 31: Festival bonuses enjoyed by workers in the woven industry in 2008

Activity	Not received	Received	Total
Sample & pattern making	5	36	41
Sewing	5	31	36
Finishing & quality control	2	36	38
Total	12	103	115

Table 32: Festival bonuses enjoyed by workers in the woven industry in 2009

Activity	Not received	Received	Total
Sample & pattern making	5	37	42
Sewing	5	31	36
Finishing & quality control	2	35	37
Total	12	103	115

Table 33: Festival bonuses enjoyed by workers in the woven industry in 2010

Activity	Not received	Received	Total
Sample & pattern making	5	37	42
Sewing	5	31	36
Finishing & quality control	2	35	37
Total	12	103	115

Table 34: Festival bonuses enjoyed by workers in the knit industry in 2007

Activity	Not received	Received	Total
Helper	0	24	24
Sample & pattern making	0	16	16
Knitting	1	18	19
Dying & fabric processing	0	13	13
Sewing	0	15	15
Finishing & quality control	0	34	34
Total	1	120	121

Table 35: Festival bonuses enjoyed by workers in the knit industry in 2008

Activity	Not received	Received	Total
Sample & pattern making	0	23	23
Knitting	1	22	23
Dying & fabric processing	0	20	20
Sewing	0	19	19
Finishing & quality control	0	40	40
Total	1	124	125

Table 36: Festival bonuses enjoyed by workers in the knit industry in 2009

Activity	Not received	Received	Total
Sample & pattern making	0	23	23
Knitting	1	22	23
Dying & fabric processing	0	20	20
Sewing	0	19	19
Finishing & quality control	0	40	40
Total	1	124	125

Table 37: Festival bonuses enjoyed by workers in the knit industry in 2010

Activity	Not received	Received	Total
Sample & pattern making	0	23	23
Knitting	1	22	23
Dying & fabric processing	0	20	20
Sewing	0	19	19
Finishing & quality control	0	40	40
Total	1	124	125

Table 38: Transport facilities enjoyed by workers in the woven industry in 2007

Activity	Not received	Received	Not Relevant	Total
Helper	2	18	5	25
Sample & pattern making	0	36	1	37
Sewing	0	26	1	27
Finishing & quality control	1	22	0	23
Total	3	102	7	112

Table 39: Transport facilities enjoyed by workers in the woven industry in 2008

Activity	Not received	Received	Not Relevant	Total
Sample & pattern making	0	40	1	41
Sewing	1	32	2	35
Finishing & quality control	2	32	4	38
Total	3	104	7	114

Table 40: Transport facilities enjoyed by workers in the woven industry in 2009

Activity	Not received	Received	Not Relevant	Total
Sample & pattern making	0	41	1	42
Sewing	1	32	2	35
Finishing & quality control	2	31	4	37
Total	3	104	7	114

Table 41: Transport facilities enjoyed by workers in the woven industry in 2010

Activity	Not received	Received	Not Relevant	Total
Sample & pattern making	0	41	1	42
Sewing	1	32	2	35
Finishing & quality control	2	31	4	37
Total	3	104	7	114

Table 42: Transport facilities enjoyed by workers in the knit industry in 2007

Activity	Not received	Received	Not Relevant	Total
Helper	6	15	1	22
Sample & pattern making	3	11	0	14
Knitting	1	18	0	19
Dying & fabric processing	9	4	0	13
Sewing	1	14	0	15
Finishing & quality control	12	18	1	31
Total	32	80	2	114

Table 43: Transport facilities enjoyed by workers in the knit industry in 2008

Activity	Not received	Received	Not Relevant	Total
Sample & pattern making	6	14	1	21
Knitting	1	21	0	22
Dying & fabric processing	10	10	0	20
Sewing	1	18	0	19
Finishing & quality control	14	21	1	36
Total	32	84	2	118

Table 44: Transport facilities enjoyed by workers in the knit industry in 2009

Activity	Not received	Received	Not Relevant	Total
Sample & pattern making	6	14	1	21
Knitting	1	21	0	22
Dying & fabric processing	10	10	0	20
Sewing	1	18	0	19
Finishing & quality control	14	21	1	36
Total	32	84	2	118

Table 45: Transport facilities enjoyed by workers in the knit industry in 2010

Activity	Not received	Received	Not Relevant	Total
Sample & pattern making	6	14	1	21
Knitting	1	21	0	22
Dying & fabric processing	10	10	0	20
Sewing	1	18	0	19
Finishing & quality control	14	21	1	36
Total	32	84	2	118

Table 46: Medical care enjoyed by workers in the woven industry in 2007

Activity	Not received	Received	Total
Helper	1	24	25
Sample & pattern making	0	38	38
Sewing	0	27	27
Finishing & quality control	0	23	23
Total	1	112	113

Table 47: Medical care enjoyed by workers in the woven industry in 2008

Activity	Not received	Received	Total
Sample & pattern making	0	42	42
Sewing	0	35	35
Finishing & quality control	1	37	38
Total	1	114	115

Table 48: Medical care enjoyed by workers in the woven industry in 2009

Activity	Not received	Received	Total
Sample & pattern making	0	43	43
Sewing	0	35	35
Finishing & quality control	1	36	37
Total	1	114	115

Table 49: Medical care enjoyed by workers in the woven industry in 2010

Activity	Not received	Received	Total
Sample & pattern making	0	43	43
Sewing	0	35	35
Finishing & quality control	1	36	37
Total	1	114	115

Table 50: Medical care enjoyed by workers in the knit industry in 2007

Activity	Received	Total
Helper	24	24
Sample & pattern making	16	16
Knitting	19	19
Dying & fabric processing	13	13
Sewing	15	15
Finishing & quality control	34	34
Total	121	121

Table 51: Medical care enjoyed by workers in the knit industry in 2008

Activity	Received	Total
Sample & pattern making	23	23
Knitting	23	23
Dying & fabric processing	20	20
Sewing	19	19
Finishing & quality control	40	40
Total	125	125

Table 52: Medical care enjoyed by workers in the knit industry in 2009

Activity	Received	Total
Sample & pattern making	23	23
Knitting	23	23
Dying & fabric processing	20	20
Sewing	19	19
Finishing & quality control	40	40
Total	125	125

Table 53: Medical care enjoyed by workers in the knit industry in 2010

Activity	Received	Total
Sample & pattern making	23	23
Knitting	23	23
Dying & fabric processing	20	20
Sewing	19	19
Finishing & quality control	40	40
Total	125	125

Table 54: Day care facilities enjoyed by workers in the woven industry in 2007

Activity	Not received	Received	Not Relevant	Total
Helper	6	13	2	21
Sample & pattern making	9	14	7	30
Sewing	3	18	1	22
Finishing & quality control	3	7	1	11
Total	21	52	11	84

Table 55: Day care facilities enjoyed by workers in the woven industry in 2008

Activity	Not received	Received	Not Relevant	Total
Sample & pattern making	11	16	7	34
Sewing	6	23	1	30
Finishing & quality control	5	14	3	22
Total	22	53	11	86

Table 56: Day care facilities enjoyed by workers in the woven industry in 2009

Activity	Not received	Received	Not Relevant	Total
Sample & pattern making	11	16	8	35
Sewing	6	23	1	30
Finishing & quality control	5	14	2	21
Total	22	53	11	86

Table 57: Day care facilities enjoyed by workers in the woven industry in 2010

Activity	Not received	Received	Not Relevant	Total
Sample & pattern making	11	16	8	35
Sewing	6	23	1	30
Finishing & quality control	5	14	2	21
Total	22	53	11	86

Table 58: Day care facilities enjoyed by workers in the knit industry in 2007

Activity	Not received	Received	Total
Helper	9	13	22
Sample & pattern making	4	11	15
Knitting	10	8	18
Dying & fabric processing	11	2	13
Sewing	0	15	15
Finishing & quality control	14	17	31
Total	48	66	114

Table 59: Day care facilities enjoyed by workers in the knit industry in 2008

Activity	Not received	Received	Total
Sample & pattern making	5	17	22
Knitting	11	10	21
Dying & fabric processing	16	4	20
Sewing	0	19	19
Finishing & quality control	18	18	36
Total	50	68	118

Table 60: Day care facilities enjoyed by workers in the knit industry in 2009

Activity	Not received	Received	Total
Sample & pattern making	5	17	22
Knitting	11	10	21
Dying & fabric processing	16	4	20
Sewing	0	19	19
Finishing & quality control	18	18	36
Total	50	68	118

Table 61: Day care facilities enjoyed by workers in the knit industry in 2010

Activity	Not received	Received	Total
Sample & pattern making	5	17	22
Knitting	11	10	21
Dying & fabric processing	16	4	20
Sewing	0	19	19
Finishing & quality control	18	18	36
Total	50	68	118

Table 62: Meal facilities enjoyed by workers in the woven industry
in 2007

Activity	Not received	Received	Not Relevant	Total
Helper	4	13	0	17
Sample & pattern making	2	14	0	16
Sewing	0	14	1	15
Finishing & quality control	0	10	0	10
Total	6	51	1	58

Table 63: Meal facilities enjoyed by workers in the woven industry
in 2008

Activity	Not received	Received	Not Relevant	Total
Sample & pattern making	2	17	0	19
Sewing	0	18	1	19
Finishing & quality control	4	17	0	21
Total	6	52	1	59

Table 64: Meal facilities enjoyed by workers in the woven industry
in 2009

Activity	Not received	Received	Not Relevant	Total
Sample & pattern making	2	18	0	20
Sewing	0	18	1	19
Finishing & quality control	4	16	0	20
Total	6	52	1	59

Table 65: Meal facilities enjoyed by workers in the woven industry in 2010

Activity	Not received	Received	Not Relevant	Total
Sample & pattern making	2	18	0	20
Sewing	0	18	1	19
Finishing & quality control	4	16	0	20
Total	6	52	1	59

Table 66: Meal facilities enjoyed by workers in the knit industry in 2007

Activity	Received	Total
Helper	18	18
Sample & pattern making	13	13
Knitting	13	13
Dying & fabric processing	13	13
Sewing	15	15
Finishing & quality control	29	29
Total	101	101

Table 67: Meal facilities enjoyed by workers in the knit industry in 2008

Activity	Received	Total
Sample & pattern making	17	17
Knitting	16	16
Dying & fabric processing	18	18
Sewing	18	18
Finishing & quality control	34	34
Total	103	103

Table 68: Meal facilities enjoyed by workers in the knit industry in 2009

Activity	Received	Total
Sample & pattern making	17	17
Knitting	16	16
Dying & fabric processing	18	18
Sewing	18	18
Finishing & quality control	34	34
Total	103	103

Table 69: Meal facilities enjoyed by workers in the knit industry in 2010

Activity	Received	Total
Sample & pattern making	17	17
Knitting	16	16
Dying & fabric processing	18	18
Sewing	18	18
Finishing & quality control	34	34
Total	103	103

Table 70: Per capita consumption of food items of workers in the woven industry in 2007

Activity Type	Declined	No change	Moderately improved	Significantly improved	Total
Helper	0	4	25	0	29
Sample & pattern making	1	4	27	7	39
Sewing	0	2	28	2	32
Finishing & quality control	0	2	26	1	29
Total	1	12	106	10	129

Table 71: Per capita consumption of food items of workers in the woven industry in 2008

Activity Type	Declined	No change	Moderately improved	Significantly improved	Total
Sample & pattern making	1	4	31	7	43
Sewing	0	4	37	2	43
Finishing & quality control	0	4	40	1	45
Total	1	12	108	10	131

Table 72: Per capita consumption of food items of workers in the woven industry in 2009

Activity Type	Declined	No change	Moderately improved	Significantly improved	Total
Sample & pattern making	1	4	32	7	44
Sewing	0	4	37	2	43
Finishing & quality control	0	4	39	1	44
Total	1	12	108	10	131

Table 73: Per capita consumption of food items of workers in the woven industry in 2010

Activity Type	Declined	No change	Moderately improved	Significantly improved	Total
Sample & pattern making	1	4	32	7	44
Sewing	0	4	37	2	43
Finishing & quality control	0	4	39	1	44
Total	1	12	108	10	131

Table 74: Per capita consumption of food items of workers in the knit industry in 2007

Activity	No change	Moderately improved	Significantly improved	Total
Helper	2	26	0	28
Sample & pattern making	1	18	1	20
Knitting	2	26	1	29
Dying & fabric processing	0	12	2	14
Sewing	1	13	1	15
Finishing & quality control	6	34	5	45
Total	12	129	10	151

Table 75: Per capita consumption of food items of workers in the knit industry in 2008

Activity	No change	Moderately improved	Significantly improved	Total
Sample & pattern making	1	27	1	29
Knitting	2	31	1	34
Dying & fabric processing	0	20	2	22
Sewing	3	15	1	19
Finishing & quality control	6	40	5	51
Total	12	133	10	155

Table 76: Per capita consumption of food items of workers in the knit industry in 2009

Moderately improved	No change	Moderately improved	Significantly improved	Total
Sample & pattern making	1	27	1	29
Knitting	2	31	1	34
Dying & fabric processing	0	20	2	22
Sewing	3	15	1	19
Finishing & quality control	6	40	5	51
Total	12	133	10	155

Table 77: Per capita consumption of food items of workers in the knit industry in 2010

Activity	No change	Moderately improved	Significantly improved	Total
Sample & pattern making	1	27	1	29
Knitting	2	31	1	34
Dying & fabric processing	0	20	2	22
Sewing	3	15	1	19
Finishing & quality control	6	40	5	51
Total	12	133	10	155

Table 78: Quality of housing of workers in the woven industry in 2007

Activity	Declined	No change	Moderately improved	Significantly improved	Total
Helper	1	4	22	2	29
Sample & pattern making	0	5	32	3	40
Sewing	0	7	20	4	31
Finishing & quality control	0	9	18	2	29
Total	1	25	92	11	129

Table 79: Quality of housing of workers in the woven industry in 2008

Activity	Declined	No change	Moderately improved	Significantly improved	Total
Sample & pattern making	0	6	35	3	44
Sewing	1	8	27	6	42
Finishing & quality control	0	11	32	2	45
Total	1	25	94	11	131

Table 80: Quality of housing of workers in the woven industry in 2009

Activity	Declined	No change	Moderately improved	Significantly improved	Total
Sample & pattern making	0	6	36	3	45
Sewing	1	8	27	6	42
Finishing & quality control	0	11	31	2	44
Total	1	25	94	11	131

Table 81: Quality of housing of workers in the woven industry in 2010

Activity	Declined	No change	Moderately improved	Significantly improved	Total
Sample & pattern making	0	6	36	3	45
Sewing	1	8	27	6	42
Finishing & quality control	0	11	31	2	44
Total	1	25	94	11	131

Table 82: Quality of housing of workers in the knit industry in 2007

Activity	No change	Moderately improved	Significantly improved	Total
Helper	10	18	0	28
Sample & pattern making	5	15	0	20
Knitting	7	20	2	29
Dying & fabric processing	1	11	2	14
Sewing	8	6	1	15
Finishing & quality control	11	30	4	45
Total	42	100	9	151

Table 83: Quality of housing of workers in the knit industry in 2008

Activity	No change	Moderately improved	Significantly improved	Total
Sample & pattern making	5	24	0	29
Knitting	8	24	2	34
Dying & fabric processing	3	17	2	22
Sewing	10	8	1	19
Finishing & quality control	15	32	4	51
Total	41	105	9	155

Table 84: Quality of housing of workers in the knit industry in 2009

Activity	No change	Moderately improved	Significantly improved	Total
Sample & pattern making	5	24	0	29
Knitting	8	24	2	34
Dying & fabric processing	3	17	2	22
Sewing	10	8	1	19
Finishing & quality control	15	32	4	51
Total	41	105	9	155

Table 85: Quality of housing of workers in the knit industry in 2010

Activity	No change	Moderately improved	Significantly improved	Total
Sample & pattern making	5	24	0	29
Knitting	8	24	2	34
Dying & fabric processing	3	17	2	22
Sewing	10	8	1	19
Finishing & quality control	15	32	4	51
Total	41	105	9	155

Table 86: Awareness of global recession of workers in the woven the industry

Activity	Un-aware	Aware	Total
Helper	12	17	29
Sample & pattern making	53	171	224
Sewing	114	94	208
Finishing & quality control	79	127	206
Total	258	409	667

Table 87: Awareness of global recession of workers in the knit industry

Activity	Un-aware	Aware	Total
Helper	9	19	28
Sample & pattern making	13	123	136
Knitting	33	132	165
Dying & fabric processing	34	68	102
Sewing	53	38	91
Finishing & quality control	48	21	249
Total	190	581	771

Title: Effects of global recession on the readymade garment industries of Bangladesh

Labor Survey

Questionnaire

Woven: **Type:**

Knitting: **Type:**

Date:

1. **Name:**

2. **Present address:**

3. **Permanent address:**

4. a) Do you work in the woven firm? Yes No

If yes, in which activity? Sample & Pattern Making Sewing

Finishing & Quality Control

b) Do you work in knitting firm? Yes No

If yes, in which activity? Sample & Pattern Making Knitting

Dying & Fabric Processing Sewing

Finishing & Quality Control

5. **When was employed?**

6. **What were the activities in the first year of employment:**

7. **Monthly wage rate in different years:**

Year	Wage
2007	
2008	
2009	
2010	

8. Other benefits received:

Year	Others benefits	Remarks
2007		
2008		
2009		
2010		

9. Did living standard change?

	Change	Explanation / Description
Per capita consumption of food items	<input type="checkbox"/> Significantly improved <input type="checkbox"/> More or less improved <input type="checkbox"/> Did not Improved <input type="checkbox"/> Declined <input type="checkbox"/> Significantly declined	
Housing	<input type="checkbox"/> Significantly improved <input type="checkbox"/> More or less improved <input type="checkbox"/> Did not Improved <input type="checkbox"/> Declined <input type="checkbox"/> Significantly	

	declined	
Other expenses	<input type="checkbox"/> Significantly improved <input type="checkbox"/> More or less improved <input type="checkbox"/> Did not Improved <input type="checkbox"/> Declined <input type="checkbox"/> Significantly declined	

10. Have you heard of global recession? Yes No

11. Did it affect you in any way? Explain.

12. Monthly wage (time rate): How many days do you work in a month?

13. Wage based on (piece rate) :How many units of output do you produce per day (on an average)

Title: Effects of global recession on the readymade garment industries of Bangladesh: a case study of five large factories

Discussion with Managers of the factories

Woven: **Type:**

Knitting: **Type:**

1. Name of the factory:
2. Address of the factory:
3. Year of establishment:
4. Name of the respondent (manager):
5. Did recession affect your volume of exports?
6. Did it affect employment in your factory?
7. Did it affect your export earning?

449933

Year	Quantity exported			Average Price		
	Increased	No change	Decreased	Increased	No change	Decreased
2007						
2008						
2009						
2010						

8. What measures you adopted to overcome the challenges of recession?

9. If no effect, then why not? Explain.

10. Did government provide any support? What?