DIVERSIFICATION OF EXPORT TO CHINA: A STUDY ON THE POTENTIALITY OF LEATHER AND FOOTWEAR INDUSTRY OF BANGLADESH

Md. Ekram Hossain ✉

Research Associate, Institute of Industrial Economic

Business School, Hohai University, Nanjing, China

mdekram_hossain@hhu.edu.cn

Huang Dechun

Professor and Director, Institute of Industrial Economics

Business School, Hohai University, Nanjing, China

Zhang Changzheng

Associate Professor, Institute of Industrial Economics

Business School, Hohai University, Nanjing, China

Abstract

The main purpose of this study is to explore the product diversification options of Leather and Footwear industry of Bangladesh to occupy larger share of China's import. To find out the objectives of this research, we applied Trade intensity, Herfindahl-Hirschman Index (HHI) for Bilateral Concentration and Revealed Comparative Advantage indices for analyzing data from 1995 to 2015. The results reveal that; regarding to trade intensity, Bangladesh has much potential to increase its trade with China while the HHI for Bilateral Concentration possesses the import diversification of Bangladesh from China is higher than the export diversification. However, the analyzed revealed comparative advantage (RCA) of 35 products evolve that Bangladesh reveals high comparative advantage over 6, medium over 8 and low over 21 products of leather and footwear industry in its exports. On the other hand, China exposes high comparative advantage over 12, medium over 9 and low over 14 products in its import from the world in this industry. However, our analysis of diversification suggests that Bangladesh should

diversify 4 products in leather sector, 4 in footwear sector and 6 products in leather goods sector. Based on the empirical results, policy recommendations are addressed to improve the export diversification of Bangladesh to China.

INTRODUCTION

Manufacturing sector has a critical role in the economic transformation of Bangladesh, for making break-through into backwardness of the economy by enhancing economy wide productivity and diversifying the economic activities and increasing scale economies. The textile and apparel, leather and footwear, pharmaceuticals, textiles, cement, food products, leather footwear, wooden furniture, rerolling steel, wooden furniture and ceramics have high growth potentials contributing significantly to manufacturing growth of the country (Nath, 2012). Bangladesh's success in textile and apparel sector indicates it's specialization in labor incentive products. Leather and Footwear industry is another sector, where Bangladesh might possess the potentiality to be specialized. Availability of indigenous raw material (hides and skins), facilitate the leather processing in this country for a long heritage of over decades (S. Islam & Siddique, 2014). Leather and Footwear industry developed in Bangladesh on a large scale basis from the 1970s. The leather and Footwear industry is now reasonably well established in Bangladesh, with about 200 tanneries, 3,500 SMEs, 2500 footwear making units and 90 large firms (Institute, 2016). Bangladesh meets the demand for about 10% of the world's total leather market. The sector generates direct and indirect employment for about 850,000 people, 53% of the workforce are women in the leather products industries. Bangladesh leather and footwear is widely known around the world for its high qualities of fine grain, uniform fiber structure, smooth feel and natural texture (LFMEAB, 2015; Leathertech, 2017; Ahamed, 2015).

The leather and Footwear industry has now emerges as the second largest export earner after textile and apparel industry. Exports from the leather industry account for 5.1 percent (US $1.7 billion) of total export (US $32.4 billion) in 2015, (Saha, 2014). Because of its high value addition and huge growth and employment opportunities, leather and footwear sector has already been declared a thrust sector of the country (H. Paul, Antunes, Covington, Evans, & Phillips, 2013). Currently, Bangladesh has emerged as an ideal offshore location for low-cost and high-quality leather and leather products manufacturing. Local leather experts calculate potential exports at US $5 billion 2020 which could be accelerated to 16 billion by 2030 if

environment and compliance issues in this sector are appropriately addressed (ITA, 2017; Ali, Naher, Hasan, Nawze, & Ferdous, 2015).

The traditional export partners of Bangladesh's leather and footwear industry were mostly the European and North American countries since the earlier beginning of its export (figure 1). Gradually the export share to Asian countries increased significantly. While in 1995 European countries accounted 25.5% share in the total export of Bangladesh's lather and footwear exports, the share dropped down 17.4% in 2015. Similar scenario shows the export to the USA dropped down from 18.7% in 1995 to 6% in 2015 (figure 1). The investigation showed that USA is the single largest country for the highest export of Bangladesh's export of leather and footwear industry since the early stage of the export but the export dropped down very significantly because of the withdrawal of US GSP privileges to Bangladesh in 2013 (Mirdha, 2013). On the contrary the export share to the Asian countries is very impressive (Khan, Hossin, & Akbor, 2015). Asian countries share of export increased from 9.4% in 2015 to 17.1% in 2015 (figure 1). Among the export destinations, China has emerged on of the important partner for the export of Bangladesh's leather and footwear industry. In 1995 the export value to China was 4.2 million accounting US$18 million whereas the export value enlarged into 40 times within the last two decade having value in US $165.6 million in 2015 (figure 1).

Figure 1: Export Destination of Bangladesh's Leather and Footwear Industry from 1995 to 2015
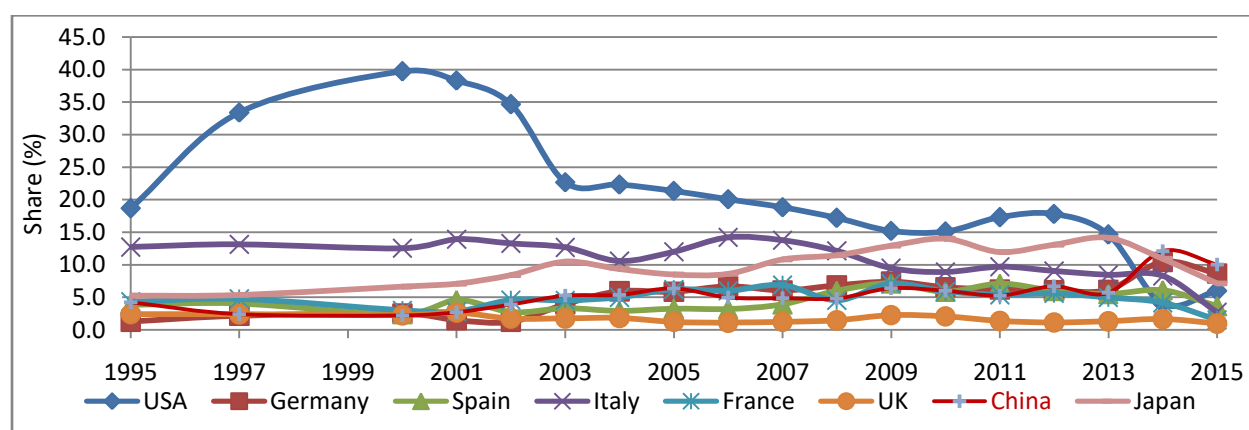
Source: WITS (World Integrated Trade Solution); http://wits.worldbank.org, and Atlas of MIT Media Lab; http://atlas.media.mit.edu/en/, compiled by the authors in January 2017

Since the establishment of diplomatic relations in 1975, China and Bangladesh have been good neighbors, friends and partners based on equality, mutual respect and mutual trust. (Jun, 2014) Currently, Bangladesh and China are enjoying a robust and comprehensive partnership. Bangladesh-China bilateral trade has been increasing significantly over the years, both in terms

of absolute amount and percentage change among Bangladesh's top trade partners. According to Chinese Embassy in Dhaka, 'the economic and trade cooperation between China and Bangladesh have maintained good momentum in recent years (Kohli, 2015). Bangladesh's exports growth to China has averaged about 40 percent per annum in the past five years. On the other hand, import growth averaged 23 percent annually. Going forward, under even a conservative trade growth scenario, a back-of-the-envelope calculation indicates that the two-way trade between the two countries could exceed USD 25 billion by 2021 (M. S. Islam, 2016) Bangladesh now has become China's third biggest trade partner in South Asia, while China is the largest origin of Bangladesh's imports. The export volume of China to Bangladesh reached 13.9 billion USD in 2015, 110 times more than that of 1990 (US $126 million) (figure 1). It is projected that in the year of 2020, Chinese exports in Bangladesh would be twice than that of in 2016. But the problem lies in huge trade imbalance which favors China. For instance, in 2015, Bangladeshi imports from China amounted to US$13904 million while Bangladeshi exports to China amounted to US$803 million, resulting trade ratio between Dhaka and Beijing in 1:13.1, as noted by Dhaka Chamber of Commerce and Industry. The total trade gap between two countries stood at over US$13.1 billion (DCCI, 2016).

Figure 2: Comparison of Bangladesh's Export to the World by different Sectors in 1985 and 2015
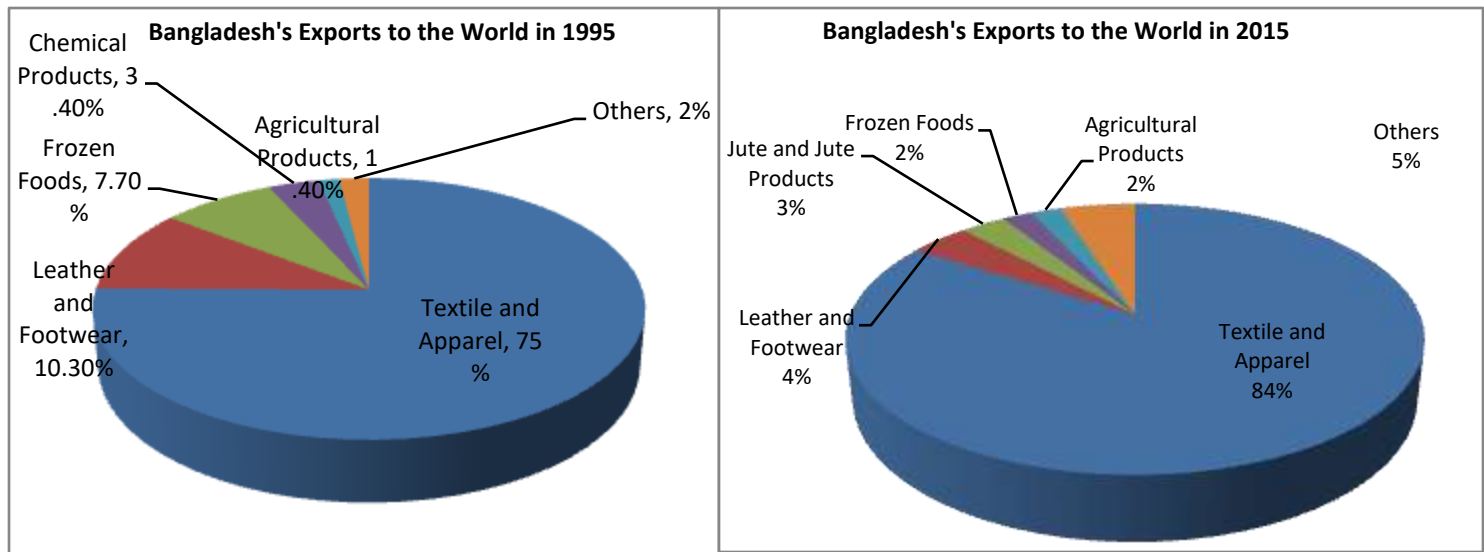
Source: Bangladesh Bank Economic Data; https://www.bb.org.bd/econdata/; and WITS (World Integrated Trade Solution); http://wits.worldbank.org, compiled by the authors in January 2017

However, the export earnings of Bangladesh have grown about 10 times in the past 20 years. The once $3.5 billion segment, over the years, has steadily grown to a strong $32.4 billion segment. But once looked into the constituents of our export earnings, Bangladesh has been

suffering badly for its narrow export base. And the alarming fact is that the dependence on a single segment has grown even more in recent years. 30 years back in 1985, the biggest share of the export was belonged to Jute and Jute goods that contributed 54% of the total earnings (WITS, 2017). In 1995 the export segmentation shows that the textile and apparel sector replaced the position of Jute and jute products having 75% share in the total export figure 2. In 2015, almost the whole export pie is occupied by textile and apparel while other sectors represent a meager 16% of total earnings. The risk associated with such over dependence on a single category is not sustainable for a certain economy for the long run. Currently, the concept of 'Export Diversification' received fresh attention from all relevant stakeholders of Bangladesh (Erina, 2015; Bank, 2016).

Moreover, Bangladesh's export to China also concentrated into few product groups. In fact the export segment to China in 1995 was quite interesting having 37% share in leather and footwear industry and chemical sector 33% although the largest export share of the country in that year was belong to the textile and apparel sector (figure 3). But, after twenty years the scenario changed significantly; occupying 65% share by the textile and apparel sector, frozen foods 10 % and leather and footwear 9% (figure 3). It seems the export to China is becoming more concentrated rather to diversify. In 2015 the trade deficit of Bangladesh was around US $13 billion while the export to China was around US $803 million. Regarding to minimize the huge gap, the export and product diversification to China is highly recommended by the experts (H. Paul et al., 2013).

Figure 3: Share (%) of the products Groups regarding Bangladesh's export to China from 1995 to 2015
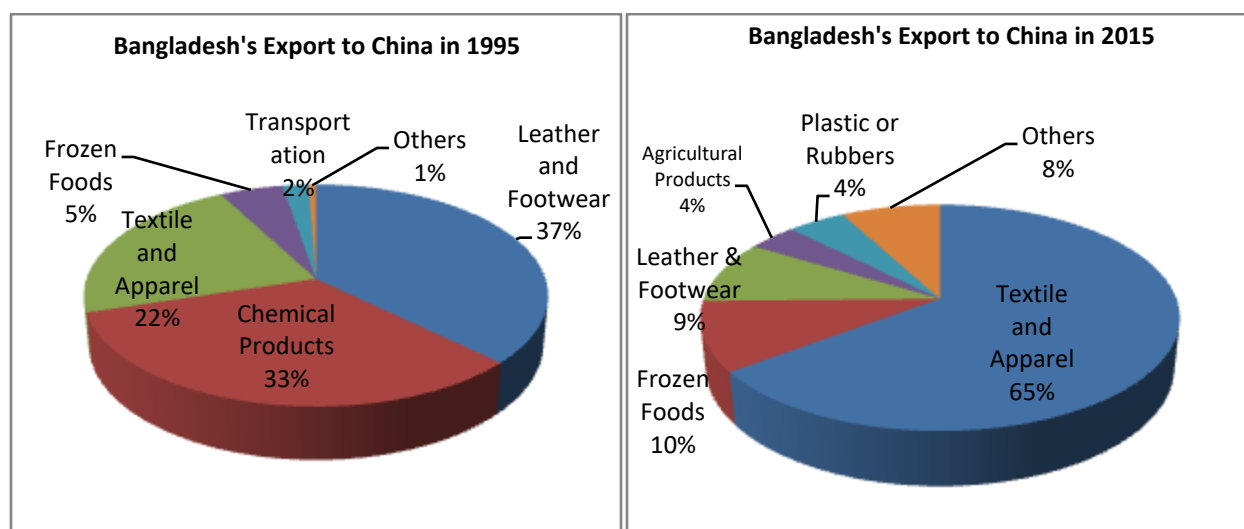
Source: Bangladesh Bank Economic Data; https://www.bb.org.bd/econdata/;and WITS (World Integrated Trade Solution); http://wits.worldbank.org, compiled by the authors in January 2017

In this study, it is found that some largest exporters in leather and footwear sector e.g. China, Vietnam, and Brazil have shifted their focus to other technology based industry rather than the leather and footwear due to rising labor costs (Footwear, 2015). Bangladesh has the potential to take a larger share of the global export market and become a key driver of the nation's development (Syed A. Al-Muti, 2015). The global leather market is worth USD 528 billion where Bangladesh accounts for about 0.3 % in 2015. Although China is the largest exporter in leather and footwear industry, they are also one of the largest importers in this industry having US \$11.7 billion in 2015 (Institute, 2016; H. Paul et al., 2013). Recent trends in the Bangladesh's exports of leather products shows a large portion has shifted to the Asian markets. Specially, the recent economic emergence of China and its growing middle class and their demand has created new opportunity for Bangladesh's export sectors. At this stage, the leather and footwear sector of Bangladesh has the potential capability to occupy the import share of China in greater extent because of its capacity of rapid growth as it has a huge supply of hide, competitive cost base, huge workforce, tariff-free access and supportive policy of Bangladesh government (Rashid, 2015; Rahman, 2015; BGCCI, 2016; INSPIRED, 2013). Moreover, In July 2010, China offered a zero-duty benefit for exports of 4,721 types of Bangladeshi products. Since 2010 the export to China increased around six times in 2015 than that of in 2009. While the export in textile and apparel increased 7.6 times in 2015 than that of in 2009. It is assumed by many experts that China is likely to be next big export destination of Bangladesh textile and apparel industry (Wahid, 2016; Council, 2016).

OBJECTIVES OF THE STUDY

This study mainly focused on the trade relationship between Bangladesh and China in Leather and Footwear industry. Therefore, the study has been carried out the following specific objectives;

I.   What is the composition of trade between China and Bangladesh in Leather and Footwear industry?

II. In what extent the Leather and Footwear industry could contribute to diversify the export of Bangladesh to China?

III. In which product group of Leather and Footwear industry of Bangladesh should emphasize more to get the larger export share to China?

IV. What are the recommendations to successfully capture the import share of China's Leather and Footwear Industry?

LITERATURE REVIEW

Composition of Trade of Bangladesh in Leather and Footwear Industry

Bangladesh has a long established tanning industry which produces around 1.13% of the world's leather from local supply of raw materials. The average value addition in this sector is 85%. Bangladesh accounts for 3% share in the global leather & products market. Almost 95% of its annual output is being exported. The export of leather and leather products increased manifold over the past decades. The compound annual export earnings crossed billion dollar mark in the year of 2013-2014.

Figure 4: Export composition of Bangladesh's Leather and Footwear from 1995 to 2015
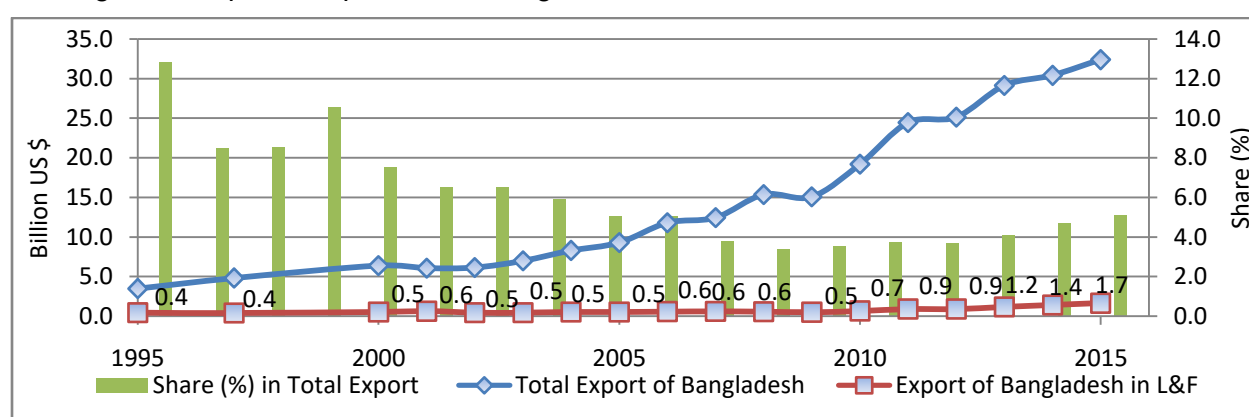
Source: WITS (World Integrated Trade Solution); http://wits.worldbank.org, and Atlas of MIT Media Lab; http://atlas.media.mit.edu/en/, compiled by the authors in January 2017

The composition of leather and leather goods from Bangladesh underwent a structural change. Whereas in 2008, 62% of all export earnings from the sector came from finished leather, by 2014, this proportion came down to 39%. The growth of the footwear industry has increased from 20% of total sectorial export earnings in 2003 to 43% in 2015. Products such as fabric-based footwear are also now being produced in Bangladesh for global retailers. Because of sustained growth performance and its increasing competitiveness in producing quality products at least 51 foreign companies have shown interest in establishing footwear units in Bangladesh. The country has a long established tanning industry which produces around 1.13 % of the world`s leather from a local supply of raw materials (LFMEAB, 2015; Leathertech, 2017). Although the leather and footwear sector occupied a major share (12.8%) of Bangladesh's export earning US $0.4 billion in 1995, gradually the export share shirked (figure 4). In 2009 the share came down to 3.4% having export value US $0.5 billion. Later on the share of the industry increased gradually. In 2015, the share reached in 5.1% having export value US $1.7 billion

which was three times bigger in value and 1.5 times larger in share compare to year of 2009 (figure 4). Overall the industry is showing very promising growth in recent years.

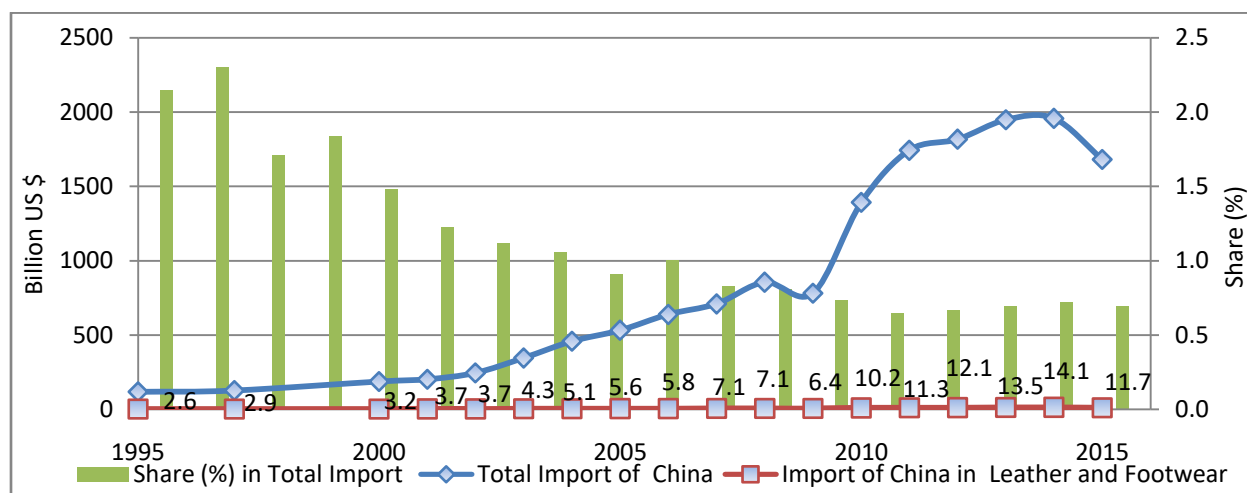**Composition of Trade of China in Leather and Footwear Industry**

The leather industry occupies a place of prominence in the Chinese economy in view of its massive potential for employment, growth and exports. China's leather industry is one of the oldest industries which have modernized very fast during last three decades especially during last decade. As evidenced by its industrial output of US$ 201.6 billion and over 6 million workforces (Chen, 2009), China is the largest producer, consumer and exporter of leather and leather products in the World. The industry reports reveal that the annual production of leather in China is around 7.7 billion square feet accounting for over 20% of total global output; annual footwear output is about 10.7 billion pairs accounting for over 70% of global output; annual leather garments output is around 0.97 billion pieces accounting for over 35%; leather bags 980 million pieces accounting for 25% of the World output (Pakistan, 2011). Also, China is leader in the production of other leather products as well. In China's leather industry there are about 26,520 enterprises of various levels of which 2,079 are leather processing enterprises, 10,206 shoe manufacturers, 7,416 make handbags/ suitcases, some 3,338 are leather garments enterprises and 3,020 are in the leather bags or suitcases manufacturing, with total workforce of over 6 million (B. T. Association, 2017).

While leather products constitute a major component in exports; China's import of leather goods has been a growing scenario in recent years with the rising demand in the domestic market and transfer of the world leather production, China has emerged as a major leather processing and trade center hence import of leather has now been increasing. The consumption structure changes with the increase of resident income in China, which leads to the dominant position of leather goods and footwear sector. The consumption of leather goods and footwear expands from urban to rural areas, and the products develop from low-end to mid-end and high-end ones (Research, 2016). As e-commerce has become a new point of growth in the domestic market of leather and footwear products in China. According to the report of China leather industry association, in 2014 the online retail sales reached US $442.8 billion, which rose by 49.7% compared with the previous year (C. L. I. Association, 2015).

The main imports of China in leather sector are; Raw hides and Skins, semi-finished and finished leather; articles of leather including leather bags and suit cases and leather garments and leather shoes. China is the largest importers of raw hide and skins; semi-finished and finished leather in the world (Intelligence, 2016).

Figure 5: Import composition of China's Leather and Footwear from 1995 to 2015

The import composition of China's leather and footwear sector has been increasing significantly in last two decades. The imports increased 4.5 in last two decades having US $2.6 billion in 1995 to US $11.7 billion in 2015 (figure 5). The major shift is shown from 2010 when the imports accounted around double than the previous year. After that the import has been raising around US $1 billion year by year. The analysis reveals the increasing domestic demand in China which creates the opportunity for the countries like Bangladesh who has the capacity of producing high quality and low priced leather products because of their competitive advantage in production and labor costs. Besides US $2.05 billion imports in footwear products in 2014, Bangladesh also has the opportunity to capture a portion of China's US $10.2 billion's (Lab, 2017) share in hides and skin in coming years where Bangladesh has higher comparative advantage in terms of quality and price.

Composition of Trade between Bangladesh and China in Leather and Footwear

In this investigation on the export insights of Bangladesh's to China in last two decades, interesting findings were exposed. In statistical analysis it is found that in last two decades the share of export to China in the Leather and Footwear industry decreased significantly from 37.5% in 1995 to 9.63% in 2015 that exposes 25.7% down flow in the export share (figure 6). Unlikely the volume of the export increased US $18.9 million in 1995 to US $77.3 million in 2015 that a 10.5% upsurge in terms of export value (figure 6). The investigation reveals that the share of this industry has occupied by the textile and apparel industry in a large extent where Bangladesh has the highest competitive advantage (figure 3).
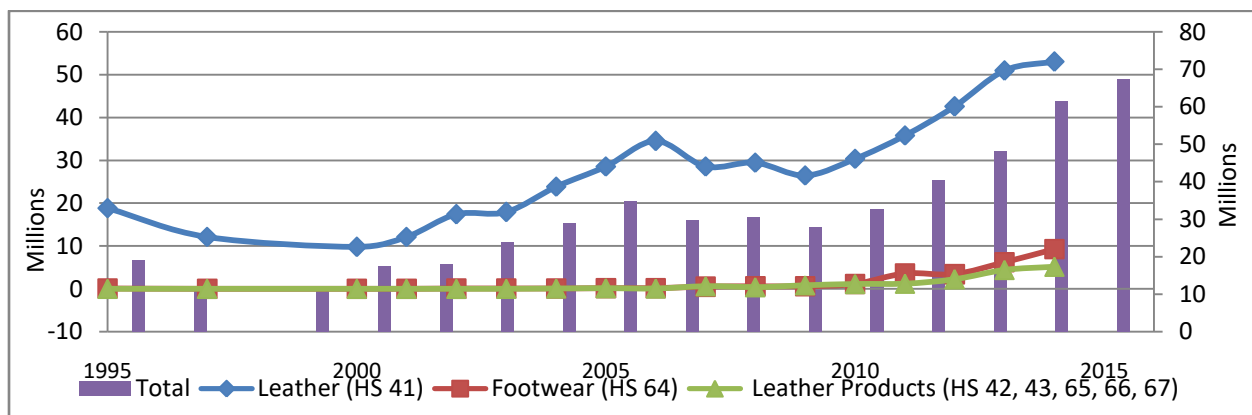
Figure 6: Leather and Footwear Industry's Share (%) in Total Export to China (1995 to 2015)
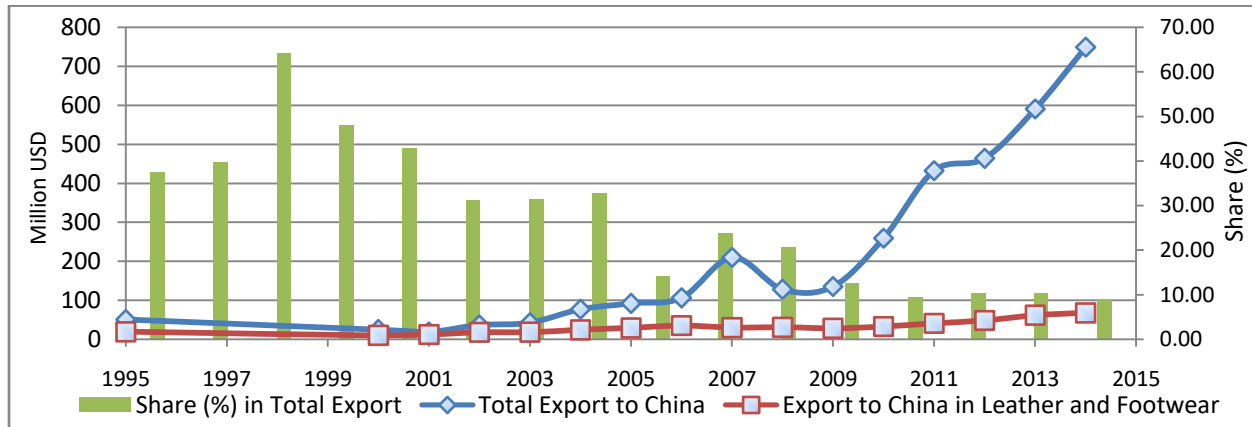
However the competitive advantage of leather and footwear industry positioned the second after the textile and apparel in the export to China. It can be assumed that this industry also has the potentiality to expand more to take up bigger share of China's import.

Figure 7: Export Value of Bangladesh's Leather and Footwear in different
sectors to China from 1995 to 2015

As it is known that the leather and footwear industry is consists with three sector, leather, footwear and leather goods. The figure 7 shows the export volume of Bangladesh's leather and footwear industry in last two decades. The data shows that the leather (hides and skin) accounts the largest volume in export to China. In the volume increased US $18.8 million to US

$53 million in 2015 which is 282% increase in last two decades. It shows the strength of leather sector. For the export of Footwear the statistics shows that the export in this sector also developed significantly in last two decade.

In 1995 the export value of footwear was US $0.09 million that increased to US $9.3 million in 2015 which is around 103 times larger in that of 1995 (figure 7). The footwear sector also shows a promising strength to export to China. The statistics of leather goods also shows very impressive scenario regarding the export. In 1995 the export volume in this segment was zero while in 2015 the export volume of this sector was US $5.1 million that reveal an intense growth of this sector. Also this fact reveals the profound growth of the leather goods manufacturing industry of Bangladesh. As the manufacturing sector of China has been shrinking because of higher wage and labor shortage Bangladesh has a high potentiality to grasp the US $450 billion domestic demand of China in coming years if the country could prepare its leather and footwear sectors with effective plan.

Figure 8: Leather and Footwear Industry's Share (%) in Total Import from China (1995 to 2015)
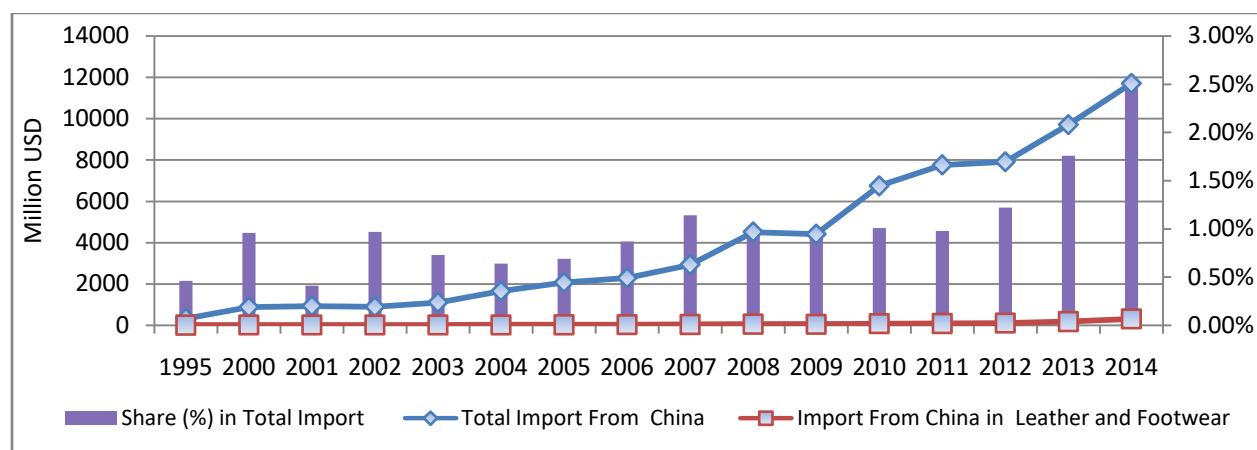
Source: WITS (World Integrated Trade Solution); http://wits.worldbank.org, compiled by the authors in January 2017

Regarding the import of Bangladesh in leather and footwear from China, the sector occupies 2.51% in 2015 which was 0.46% in 1995. The analysis shows around 5.4 times increase of share in imports in last two decades in this industry (figure 8). While the import value increased around 200 times in last twenty years having volume US $1.6 million in 1995 to US $322.4 million in 2015 (figure 8).

Sector wise exports are shown in the figure 9 where its reveals that the leather (Hides and Skin) sector's value in the export is the lowest and the value of export in this sector quite insignificant as Bangladesh's raw leather sector is quite self-sufficient for its strengths of

producing one of the top qualities lather in the world. While the import volume of footwear sector shows quite sharp growth having import value US $1.1 million in 1995 to $129 million in 2015. However, the leather products sector shows the highest import volume than the other two sectors. The import volume of leather products shows that in 1995 the value was US $1.1 million and in 2015 the value reached to US $167 million which reveals around 150 times growth in last two decades.

Figure 9: Imports (value) of Bangladesh from China according to the sectors of Lather and Footwear Industry of from 1995 to 2015
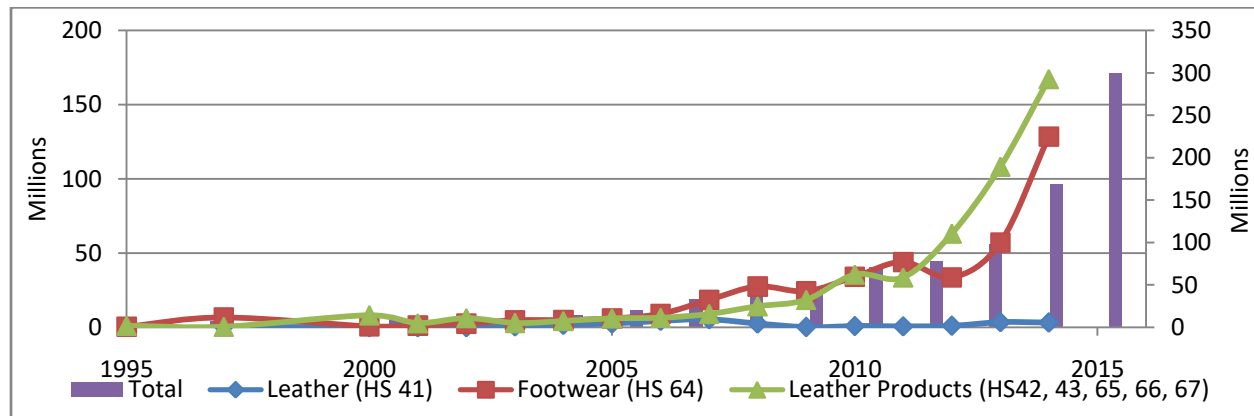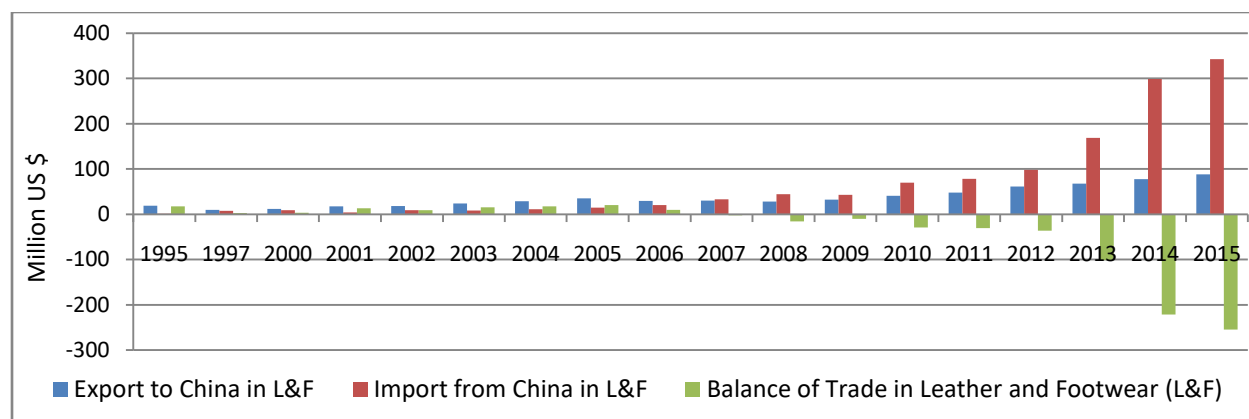

Source: WITS (World Integrated Trade Solution); http://wits.worldbank.org, and MIT Media Lab Atlas, compiled by the authors in January 2017

Overall, this industry still suffers with negative deficit with China that was US $222 million in 2015 and the negative trends shows an increase year by year (figure 10). This investigation shows that imports growth is lower than the export growth which indicates a higher competitive advantage for Bangladesh's export to China in leather and footwear industry. In coming years if proper steps in export policy product diversification process according to the demand in Chinese market are taken the scenario will be improved significantly. Moreover, during the visit of Chinese President on October 14th 2016 assured Bangladesh's Prime Minister of reducing the trade gap between the two countries though necessary measures. At that time a trade and investment deals worth US$13.6 billion was signed by the two governments. As a mark of deepening economic ties, the two nations also signed an agreement to conduct a feasibility study on a China-Bangladesh free trade agreement. Bangladesh has been so far reluctant to sign a bilateral FTA with China and instead sought unilateral duty-free and quota-free access for its products in the Chinese market, the world's second largest economy which could be a big

milestone to reduce the deficit of trade in different export sectors of Bangladesh to China (R. Paul, 2016; Times, 2016; Nath, 2012).

Figure 10: Balance of trade in Leather and Footwear Industry of Bangladesh with China from 1995 to 2015

Source: WITS (World Integrated Trade Solution); http://wits.worldbank.org, and MIT Media Lab Atlas, compiled by the authors in January 2017

During our literature review, we found very few researches on the Leather and Footwear industry of Bangladesh or even about the industry of China. In 2011 the Commercial Section of the Consulate General of Pakistan in Chengdu, China (Pakistan, 2011) investigated the leather market in China where the authority explored some important insights the domestic leather and footwear market of China as well as the export-import compositions and future opportunities in Chinese market to enter. Ahmed N, Bakht Z (2010) conducted a case study on the leather footwear industry in Dhaka where they explored some insights of the industry. N. C. Nath (2012) analyzed the growth, structure and strategies for future development of the manufacturing sector of Bangladesh where he made some valuable recommendation for the leather and footwear industry of Bangladesh. H. L. Paul and et al. (2013) explored the recent sustainable developments of Bangladeshi leather industry. Saiful Islam (2014) analyzed the comparative advantage and the pattern of trade flows of Bangladeshi leather industry with comparison to other selected Asian countries. Wahiduzzaman (2015) Khan and et al did a brief review of the existing relevant literature on the leather industry of Bangladesh. A working paper conducted by the Asian Foundation on the Leather Sector Reform in Bangladesh (Harris, 2016) where they conducted a case study on the politically informed approach in relocating the leather tanneries in Dhaka to a more environmentally and economically sustainable new location in Savar, Dhaka, Bangladesh. Bangladesh Foreign Trade Institute (Institute, 2016) carried a research on

the sector-based assessment of business promotion leather sector of Bangladesh. (Mamun, Howlader, Yeahyea, & Uddin, 2016) conducted a study on the export diversification of the leather industry of Bangladesh. However, all the above literatures are either conducted on the leather industry of China and Bangladesh but didn't find any literature on the trade between Bangladesh and China in leather and apparel industry which inspired us to carry on this research.

RESEARCH METHODOLOGY

This study explored the issues by constructing various trade indices using export and import data disaggregated at the Product group classification based on 2 digits and 4 digits Harmonized System (HS) 1988/92 for the period 1995-2015 based on secondary data sources of United Nations Commodity Trade database UN COMTRADE (Database, 2016), World Trade Organization (WTO, 2016), Bangladesh Bank (2016), and Export Promotion Bureau of Bangladesh (EPB, 2016).

To analyze the indices Microsoft Excel and SPSS (18 version) software were used. In this research the core products group (7) of leather and footwear industry in HS 2 digit classification level; HS41 Raw hides and skins (other than fur skins) and leather; HS 42 articles of leather; saddler and harness; travel goods, handbags and similar containers; articles of animal gut (other than silk-worm gut); HS 43 fur skins and artificial fur; manufactures thereof; HS 64 footwear; gaiters and the like; parts of such articles; HS 65 headgear and parts thereof; HS 66 umbrellas, sun umbrellas, walking-sticks, seat sticks, whips, riding crops; and parts thereof; and HS 67 feathers and down, prepared; and articles made of feather or of down; artificial flowers; articles of human hair. Here there subsectors of Leather and Footwear are as following according to the HS two digit classification that represent the total industry; Leather (HS 41); Footwear (HS 64); Leather Products (HS 42, HS43, HS65, HS66, and HS67) Furthermore, 35 products of HS 4 digits classification are also analyzed to explore the objectives.

Trade Intensity

The intensity of trade index was pioneered by Brown (Brown, 1974) and was later developed and popularized by Kojima (Kojima, 1964). Kojima's intensity of trade index concentrates on variations in bilateral trade levels that result from differential resistances Bano (2014). Trade may be more intense with a country and its trading partners than with the rest of the world because the resistance between them is lower. Trade intensity provides a way of measuring these trading relations without the bias resulting from the comparative size of the trading

partners (Bano, 2014). In studying the strength of trade ties, it is often desirable to take into account the importance of a country's trade partners' share in world trade (Bhattacharyay & Mukhopadhyay, 2015). One group of indices that does this is the trade intensity index (TII) (WITS, 2013). The intensity of bilateral trade between two countries can be measured from either an export or import perspective. The trade intensity statistic is the ratio of two export shares (Raj, Wing, & Ambrose, 2014). The numerator is the share of the destination of interest in the exports of the region under study. The denominator is the share of the destination of interest in the exports of the world as a whole (UNSCAP, 2016).

In order to examine whether the bilateral trading relationship between Bangladesh and China is strengthening or weakening, both export-intensity index and import-intensity index have been estimated. Here, Bangladesh is reported as the home country i and trading partner (China) as country j. For trade flows from country i to country j, these indices are measured as follows;

$$TII = \frac{X_{ij} / X_{it}}{X_{jw} / X_{wt}}$$

(1)

Where: TII represents the trade intensity index for country I; Xij represents the value of country i's exports to country j; Xit represents the value of country i's total exports to the world; Xjw represents the total value of country j's exports to the world and Xwt represents the total value of world exports.

The index determines whether bilateral trade between countries i and j is greater or lesser than might be expected given the importance of the trading partner's share in total world trade. As discussed by Bano (2008) (Bano & Tabbada, 2012), trade intensity indices provide a way to measure the strength of v trading relations without the bias caused by the comparative size of the trading partners. A value greater than one indicates that the relationship between the home country and the trading partner is greater than is expected given the trading partner's share of world trade, while a value of less than one indicates that the strength of the trading relationship is less than is expected (Bano & Tabbada, 2012).

Limitations: As with trade shares, high or low intensity indices and changes over time may reflect numerous factors other than trade policy (WITS, 2013).

Herfindahl-Hirschman Index (HHI) for Bilateral Concentration of Indices

The Hirfindahl-Hirschman Index (HHI) index was postulated by both Hirschman (1945 &1964) and Herfindahl (1950) as a measure of trade and industry concentration. The concentration index shows how exports and imports of individual countries or group of countries are concentrated on several products or otherwise distributed in a more homogeneous manner

among a series of products (Vassilopoulos, 2003). The index is normally calculated for all trading partners, but it can be broken down by specific trading partners for more detailed analysis (Berger, 2014). Therefore bilateral concentration index enables user to specify the group of countries as destination/origin (Tesfay & Solibakke, 2016). It has been normalized to obtain values ranking from 0 to 1, with values close to 0 indicating highly diversified exports and values close to 1 indicating highly concentrated exports. The formula is as following:

$$H_{jk} = \frac{\sqrt{\sum_{i=1}^{n}\left(\frac{X_{ijk}}{X_{jk}}\right)^2} - \sqrt{1/n}}{1 - \sqrt{1/n}}$$ (2)

With $$X_{jk} = \sum_{i=1}^{n} X_{ijk}$$

Where, H_{jk} = concentration index of country or country group j exports to / imports from partner country group k. X_{ijk} = exports or imports of product i for reporter country j and trading partner k. X_{ik} = total value of exports/imports for country j to/from country k and product i and n = number of products (WITS, 2013; Canada, 2016).

Revealed Comparative Advantage

Revealed comparative advantage indices (RCA) use the trade pattern to identify the sectors in which an economy has a comparative advantage, by comparing the country of interests' trade profile with the world average. In other words, it is the ratio of the exports of the commodity from the source to total exports from the source, over the same ratio for the world (Fertő & Hubbard, 2002). In this paper we used Balassa's (1965) RCA model to measure the relative export performance by country and industry/commodity, defined as a country's share of world exports of a commodity divided by its share of total world exports (Balassa, 1977, 1979; Bela, 1986; Seyoum, 2007). The index for country i commodity j is calculated as follows:

$$RCA_{ij} = \frac{X_{ij} / X_{wj}}{X_t / W_t}$$ (3)

Where RCA_{ij} is revealed comparative advantage of country i for Product j,

The value of i implies from 1 to n numbers, likely j implies from 1 to m numbers.

X_{ij} denotes export by country i of Product j; X_{wj} denotes total amount of global exports of Product j; X_t denotes total global exports of country i; X_w denotes total amount of global exports.

Range of values

The index of revealed comparative advantage RCA_{ij} has a relatively simple interpretation. It Takes values between -∞ and +∞. The value may be equal, greater or less than 1.

If it is greater than one; $RCA_{ij} \rangle 1$ it means the country i has a comparative advantage in exports of commodity j because its market share is larger in the commodity than its share in total exports and vice versa. If the value $RCA_{ij} \langle 1$ it interprets the vice versa.

The advantage of using the comparative advantage index is that it considers the intrinsic advantage of a particular export commodity and is consistent with changes in an economy's relative factor endowment and productivity. The disadvantage is that it cannot distinguish improvements in factor endowments and pursuit of appropriate trade policies by a country (De Benedictis & Tamberi, 2001; Sanidas & Shin, 2010; Hanson, Lind, & Muendler, 2015; FAO, 2015).

ANALYSIS AND DISCUSSION OF RESULTS

The analyzed results ad discussions are given here. Some of the results are put in figures instead of numbers because the authors made a comparative observation of the results in this article and decided that the results shown in figures give more clear understanding for the readers.

Trade Intensity Analysis

The figure 11 gives the export, import intensity indices between Bangladesh and China. From the analyzed results the following reconciliations are come out. The export intensity value of Bangladesh to China is derived near to zero (0) (figure 11) which means that the export level from Bangladesh to China is highly lower than that of China's in the world market share. Even according to the statistics of MIT media lab, in 2014 China's export share to Bangladesh was 0.49 % (accounting $11.7 billion) of her total export to the world ($2.37 Trillion). Moreover, the export share of Bangladesh to China in 2015 (appendix 3) shows 3% which is a bit higher than past years but still lower than the import share (22%). The result shows a bit decreased in 2000 (0.006) than the value of 1995 (0.049). Later on the intensity increased a little year by year reaching 0.027 in 2015 (figure 11). It can be concluded from such a declining trend that Bangladesh could not diversified enough its export basket over the years to Chinese market, and it has been exporting the similar items, whose demands have been declining over the

years. This demonstrates that Bangladesh`s commodity concentration in export is more than in its import from China.
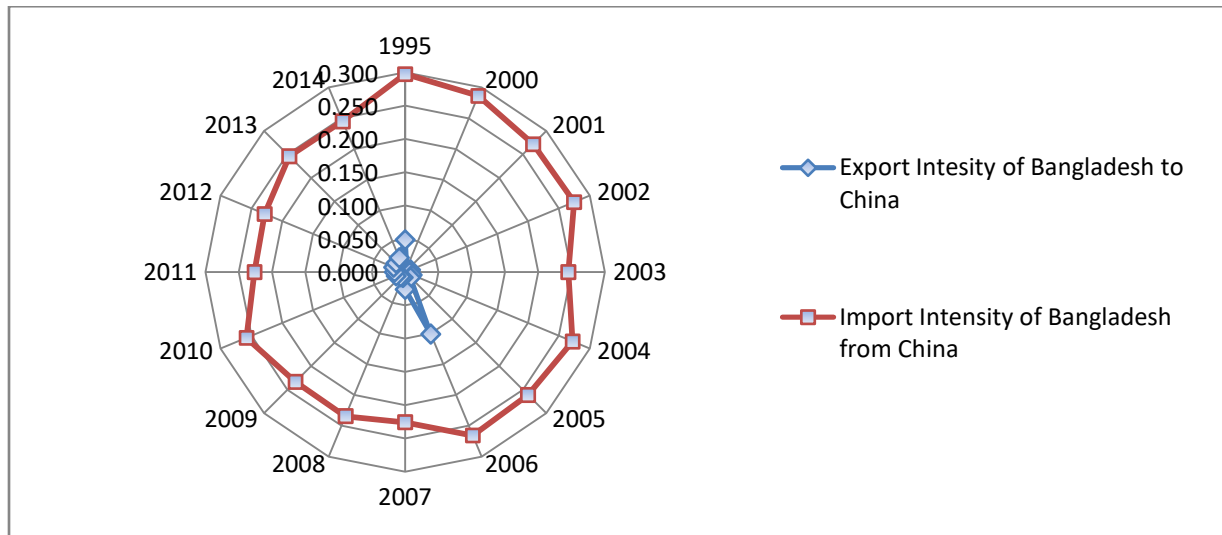

Figure 11: Trade Intensity Indices for Bangladesh's Bilateral Trade with China, 1995-2015

In terms of import intensity of Bangladesh from China during 1995 to 2015 is less than one (1) but not very near to Zero (0) (figure 11) which interprets that the import level from China to Bangladesh is higher than that of Bangladesh's share of import from the world. If we see the statistics, it shows the share of import of Bangladesh from China is 22%. The inter-temporal change of import intensity over years shows; in 1995 it was 0.30 in 2005 it was 0.26 and in 2015 the value increased to 0.32 (figure 11). The bilateral trade balance also shows the same scenario (figure 1) indeed. However, import intensity index is much more noticeable compare to the export intensity index. The increasing trend in imports may be credited to the fact that China is also a major import partner of Bangladesh and its importance has been growing in recent years.

Regarding the trade intensity, the intensity declined to 0.01 than the value in 1995 (0.05) but from 2010 the intensity has been increasing. This implies Bangladesh has much potential to increase its trade with China. This also may be due to immense economic structural change in both countries in last two decades. In 1995 Bangladesh was more an importing country than a exporting. On the contrary in 2015, Bangladesh becomes one of the important manufacturing countries in world. Especially, the textile and apparel sector of Bangladesh which is in the top second suppliers of readymade garments in the world after China.

Herfindahl-Hirschman Index (HHI) for Bilateral Concentration of Indices Analysis

The analyzed result of export concentration shows; from 1995 to 2006 the HHI values range in average 0.5 that means concentration of export in particular industries of Bangladesh to China.

Since 2007 to 2015 the export concentration has changed significantly and the average HHI values shrank down to 0.21 which indicates; during this period the export pattern of Bangladesh to China has gradually converted from concentration to diversification. The export share of Bangladesh in 1995 was 1.2% but the share dropped down up to 2005.

Figure 12: Herfindahl-Hirschman Index (HHI) or the Export Diversification indices for Bangladesh's Bilateral Trade with China, 1995-2015
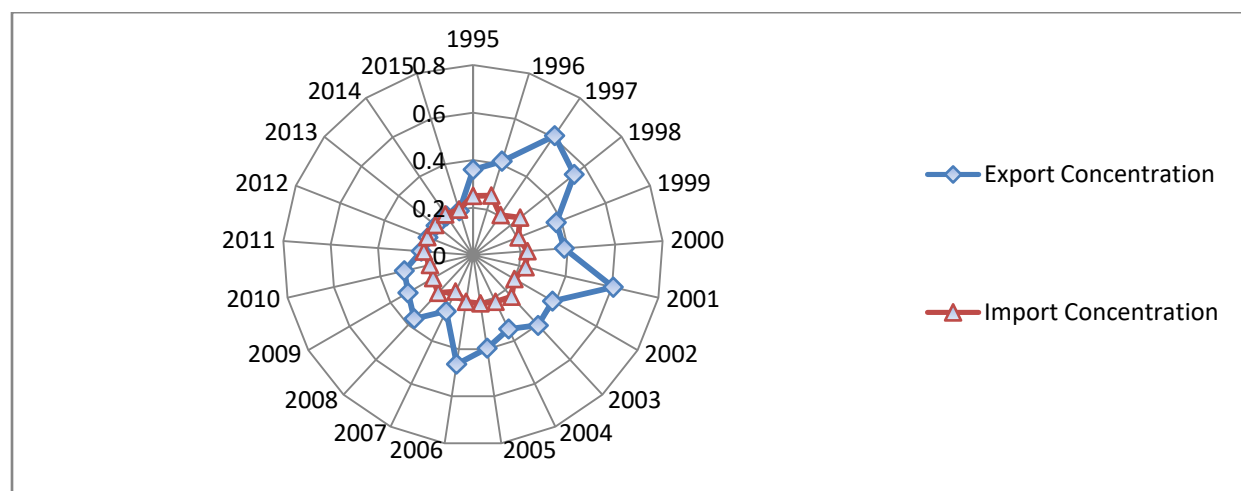
The export share begun to increase from 2005 and after a decade to share reached to 2.89% in 2015. After the year of 2010 the export share showed growing significantly. At the same time the HHI value for export concentration also dropped down significantly and changed steadily to export diversification. It could be the effect of China's duty-free, quota-free (DFQF) market access program for 33 LDCs including Bangladesh on 1 July 2010 covering products of 4,788 tariff lines (8-digit level) to export to Chinese market (Bangladesh, 2016).

However, the trend of import concentration values show 0.21 in average from 1995 to 2015 (figure 12). The values indicate import diversification because China is one of the largest import sources of Bangladesh and the imports are from various products and industries.

Revealed Comparative Advantage

The revealed comparative advantage (RCA) analysis of Bangladesh's four most prominent export sectors are shown in the figure 13. The RCA values provided very insights of the products of this industry both for Bangladesh and China. According to the RCA values in figure 13, in 1995 leather and footwear industry occupied the second highest (14.6) comparative advantage, the Animal sector was in the third position (2.25) while the textile and apparel industry ranked the first position (23.1) and the mineral products (0.9) didn't have any

comparative advantage in the export basket of Bangladesh. Within last two decades a lot of reforms and economic restructure took place in Bangladesh which changed the industry competency of the country as well as the export segments.

Figure13: Revealed Comparative Advantage (RCA) Values of Bangladesh's Leather and Footwear Industry compared with some other higher RCA valued industries from 1995-2015
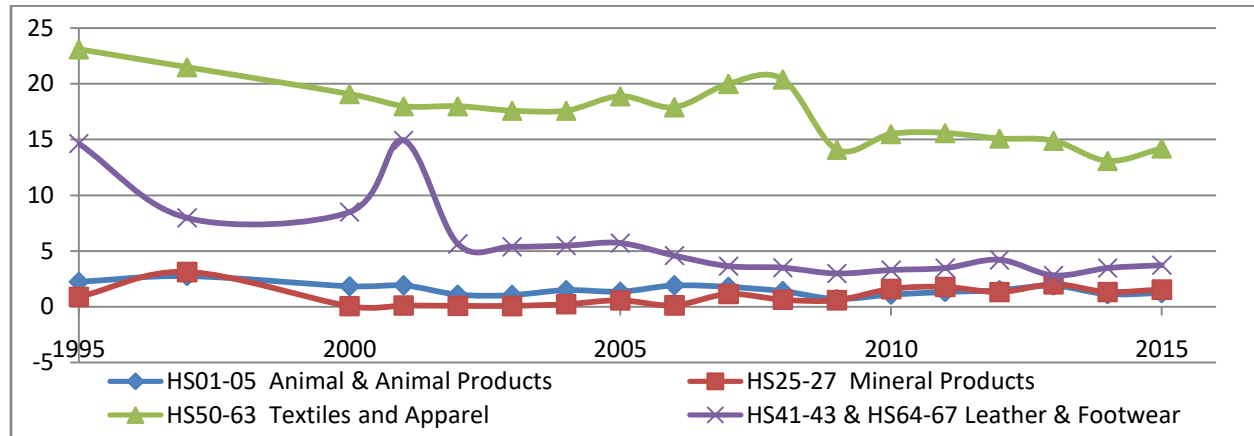
The animal and animal products group lost its comparative advantage a bit while the mineral products group gained revealed comparative advantage significantly. The textile and apparel sector and leather and footwear sectors have been maintaining their positions accordingly. Interestingly, the volume of trade increased in great extent but the export baskets concentrated in few product groups which arise as a threat for the diversification of the export segment of Bangladesh.

RCA of Leather and Footwear (L&F) trade in terms of Bangladesh's exports and China imports in the industry in HS 2 digit classification level.

The analyzed revealed comparative advantage of the subsectors of leather and footwear are shown in the table 1. The results provide very interesting insights of the export competitiveness of Bangladesh to China. In leather sector Bangladesh has quite significant RCA values in last two decades, while China also shows higher RCA in its import of leather. If we see the statistics, in 2015 the export RCA of Bangladesh is 1.3 while for China 1.1 (appendix 1). The RCA values reveal that China has the comparative advantage in its imports of leather; similarly Bangladesh also has export competitiveness in exporting leather. In this case Bangladesh has higher opportunity to its lather to China and the trend of the RCA values for both China's imports and Bangladesh's export have been maintaining credible (RCA≥1) value in last two decades (table 1).

Table 1: Analyzed results of RCA of Bangladesh (Exports) and China (Imports) of Leather and Footwear Industry from 1995-2015

	1995	1997	2001	2003	2005	2007	2009	2011	2013	2015
Import of Leather (CN)	2.3	2.0	1.7	1.3	1.6	1.7	1.8	1.5	1.3	1.1
Export of Leather (BD)	11.4	4.6	4.6	3.1	2.9	1.5	1.5	1.7	1.3	1.3
Import of Footwear (CN)	1.6	1.3	0.9	0.7	0.6	0.6	0.4	0.4	0.4	0.3
Export of Footwear (BD)	3.2	3.4	10.3	2.3	2.8	2.1	1.5	1.7	1.5	2.4
Import of L&F (CN)	3.92	3.33	2.6	2.01	2.18	2.27	2.2	1.92	1.67	1.44
Export L&F (BD)	14.64	7.98	14.94	5.39	5.73	3.65	2.99	3.48	2.83	3.74

Note: BD-Bangladesh, CN-China, L&F-Leather and Footwear

Regarding to the footwear sector, China had quite higher import advantage up to 1997 (table 1). After that China lost the comparative advantage of imports and up to 2015 China couldn't regain its comparative advantage over footwear import which indicates China's capability of producing the footwear goods for its local market. On the other hand, Bangladesh has been maintaining quite imposing comparative advantage in last two decades and the trend of the RCA value seems rising in last couple of years which indicates Bangladesh's capacity in producing and exporting footwear has been in surging.

However, the leather and footwear industry of China shows quite high comparative advantage in its imports; accordingly Bangladesh's leather and footwear industry has also been keeping high value of RCA (appendix 2). At the ending it can be assumed that Bangladesh has the capability and comparative advantage to upsurge its export of leather and footwear to China in coming years.

Furthermore, in our deep analysis of revealed comparative advantage of leather and footwear industry (35 products) of Bangladesh in exports and China in imports; the findings reveal that in leather sector among 7 products Bangladesh has high comparative advantage over 3 products group (HS4104, HS4106, and HS4107), medium over 1 (4105) and lower comparative advantage over 3 products group (HS4101, HS4102, and HS4103).

While among those 7 products of Leather sector, China reveals high comparative advantage over 6 products group (HS4102, HS4103, HS4104, HS4105, HS4106, and HS4107) and low revealed comparative advantage over 1 products group (HS4101) (table 2). In leather sector China imported US $6.4 billion in 2015 that reveals a high export opportunities for Bangladesh.

Table 2: Analyzed results of RCA of Bangladesh (Exports) and China (Imports) of Footwear Leather Goods and sector for 35 products (HS 4 Digit Classification)

	High RCA Level (RCA>5)		Moderate RCA Level (RCA=1-5)		Low RCA Level (RCA<1)	
Total PG -35	Bangladesh (6)	China (12)	Bangladesh (7)	China (9)	Bangladesh (22)	China (14)
Leather (PG-7)	4104, 4106, 4107	4102, 4103, 4104, 4105, 4106, 4107	4105		4101, 4102, 4103	4101
Footwear (PG-6)	6403	6403, 6406	6402, 6404, 6406	6404	6401, 6405	6401, 6402, 6405
Leather Goods (PG-22)	6505, 6704	4301, 4302, 6701, 6703	4202, 4203, 6501, 6703	4202, 4303, 4205, 4303, 4304, 6507, 6602, 6603	4201, 4205, 4206,4301, 4302, 4303, 4304, 6502, 6504, 6506, 6507, 6601, 6602, 6603, 6701, 6702	4201, 4206, 6501, 6502, 6504, 6505, 6506, 6601, 6702, 6704

Note: PG-Products Group, RCA-Revealed Comparative Advantage

However, the footwear sector's findings affirm that among the 6 products group, Bangladesh reveals high comparative advantage over 1 products group (HS6403), moderate comparative advantage over 3 products group (respectively HS6402, HS6404 and HS6406) and have no comparative advantage over 2 products group (HS6401 and HS6405) among 6 products group of footwear sector in its exports. While China reveals high comparative advantage over 2 products group (HS6403, HS6406), medium comparative advantage over 1 products group (HS6404) and have comparative disadvantage over 3 products group (HS6401, HS6402 and HS6405) among the 6 products group of footwear sector in her imports from the world (table 2).

The last subsector; leather goods sector's analysis shows that Bangladesh reveals high comparative advantage over 2 products group (HS6505 and HS6704), medium comparative advantage over 4 products groups (HS4202, HS4203, HS6501 and HS6703) and have no comparative advantage over 16 products group (respectively, HS4201, HS4205, HS4206,HS4301, HS4302, HS4303, HS4304, HS6502, HS6504, HS6506, HS6507, HS6601, HS6602, HS6603, HS6701 and HS6702) among 22 products group of leather goods sector in its export to the world.

Regarding the import comparative advantage of China in leather goods sector, the analysis confess that China revealed high comparative advantage over 4 products group (HS4301, HS4302, HS6701, and HS6703); medium comparative advantage over 8 products group (HS4202, HS4303, HS4205, HS4303, HS4304, HS6507, HS6602, and HS6603) and comparative disadvantage over 10 products group (HS4201, HS4206, HS6501, HS6502, HS6504, HS6505, HS6506, HS6601, HS6702, and HS6704) among 22 products group (table 2) of leather goods sector in its import from the world.

Analysis of Product Diversification to Occupy Larger Import Share

In this section, the insights of product diversification of leather and footwear industry are illustrated to enter into emerging Chinese market. To explain the analysis we discussed on the three subsectors of the industry individually over 35 products (HS 4 digits level). Among those 35 product groups; 5 of them showed high export opportunities (worth of US $9.6 billion), 16 of them revealed moderate export opportunities (worth of US $5.4 billion) and rest of the 14 products group demonstrated low export opportunity (worth of US $0.1 billion) in Chinese market (appendix 4). More detail analysis is shown in the following discussion.

Leather Sector

During the analysis it is found that the leather sectors the largest in terms of import of China in L&F industry where in 2015 the import volume was US $7 billion. In this sector HS4101, HS4104 and HS4107 have the high export opportunity for Bangladesh. In these three categories China imported US $6.4 billion in 2015 while Bangladesh exported US $0.27 billion to world market in 2015 (appendix 1 & 4). Among those three, HS4104 and HS4107 have quite high revealed comparative advantage 10.9 and 5.0 respectively that show the strength of Bangladesh in these product groups. Moreover, HS4102and HS4105 have modest export opportunity to China while these two product groups worth US $0.5 billion in 2015 (appendix 4). The rest of the two product groups HS4103 and HS4106 demonstrated low comparative advantage to export to China together worth US $0.1 billion. Regarding the players who are the largest grabber of Chinese market are USA 22.75 % having export value US $1.6 billion in 2015, the second one Brazil 11.6% (US $.81 billion), Australia 10.2%, Italy 8.5% and South Korea 6.7% in 2015. While Bangladesh exported US $60 million having 0.86% share in 2015 (appendix 5).

In overall analysis of leather sector, it is suggested that Bangladesh should emphasize to diversify 4 of its export products (HS4104, HS4105, HS4106 and HS4107) of leather sector that possess the highest export opportunity in China having Chinese imports value US $3.9

billion where Bangladesh also revealed to export US $0.29 billion in 2015 (appendix 6). Our study reveals that Bangladesh has the capacity to occupy a part of the US $3.9 billion of Chinese import share as Bangladesh is one of the world's finest producer of the products group in this sector. The stakeholders of this sector in Bangladesh could find the strategic ways to grasp more market share in China which could also contribute minimizing the trade deficit of Bangladesh with China in coming years.

Footwear Sector

The footwear sector positions the third according to the import value US $2.7 billion in 2015. In this sector, one product group (HS6403) has high export opportunity to China having US $1.8 billion import value and 2.9 RCA value in 2015. In this product group Bangladesh also possess high RCA (5.1 and export value US $0.57 billion in 2015 (appendix 2 & 4). On the other hand, 4 product groups have moderate market opportunity for Bangladesh to enter into Chinese market. Among those, HS6402 has US $ 0.24 billion import market demand in China. In fact, the products group doesn't have import comparative advantage but Bangladesh has comparative advantage (1.1) over this product group in its export to the world. The next one HS6404 possess high RCA value for both imports of China (2.7) and export of Bangladesh (2.2) in 2015 (appendix 3 &4). For HS6405 both China and Bangladesh have no comparative advantage. The rest one HS6406 possess high RCA value for the imports of China (4.3) and export of Bangladesh (1.2) and this group reveals high potential for Bangladesh to grasp the import share of China in coming future. In footwear sector, HS6401 showed the lowest export opportunity for Bangladesh's export to China while China has no comparative advantage in its import of this product group.

Furthermore, regarding the competitors in Chinese import market in footwear sector, our study finds that Italy is the largest player having 43.3% share of Chinese total imports (US $2.7 billion) (appendix 5). While Indonesia is the second largest having 28.8% share, USA (6.9%), Spain (4.8%) and South Korea occupies (3.5%) share in 2015. While Bangladesh exported to China in footwear sector worth of US $9.9 million having 0.77% share of China's import (appendix 5).

Furthermore, in our analysis of diversification, 4 products group (HS6402, HS6403, HS6404), and HS6406) reveal the diversification capacity for Bangladesh's footwear sector (appendix 6). These four products group accounted US $2.7 billion imports of China in 2015, while Bangladesh's export value was US $0.82 billion. If Bangladesh could able to diversify the products of the mentioned products group, the country could occupy larger share of China's import in the coming years.

Leather Goods Sector

The leather goods sector is the second largest import sector in leather and footwear industry of China. In 2015 the sector worth US $4 billion imports. In our investigation of market opportunity analysis in this sector of China, HS4202 possessed the high market opportunity having import value US $1.8 billion in 2015. This product group revealed 3.3 RCA value in terms of Chinese import while 1.4 for Bangladesh's export. Bangladesh exported US $0.18 billion in 2015 which reveals the export strength of Bangladesh in this product group. Furthermore, 9 other product groups demonstrated medium export opportunity to China and these 9 groups accordingly; HS4203, HS4205, HS4301, HS4302, HS4303, HS6505, HS6703 and HS6704 together worth US $2.1 billion in China's imports in 2015 (appendix 3 & 4). HS4203 and HS4205 have very high import RCA of China and HS4203 reveals high RCA value for Bangladesh's export which indicates the opportunity for Bangladesh export to China in this product group. Although China has high import RCA in these three product groups; HS4301, HS4302 and HS4303, Bangladesh does not possess any export competitiveness in these product group. The rest of the three, HS6505, HS6703 and HS6704 showed higher comparative advantage for Bangladesh's export but China does not have import comparative advantage in those product groups.

The last one low export opportunity category, 12 product groups accordingly; HS4201, HS4206, HS4304, HS6501, HS6502, HS6504, HS6507, HS6601, HS6602, HS6603, HS6701 and HS6702 were included having quite insignificant import value US $0.039 million in 2015. Except few, most of the products groups in this category showed lower comparative advantage both for china's import and Bangladesh's export (appendix 4).

The leather goods sector having imports value of China US $4 billion in 2015 is one of the diversified and competitive sector. As this sector related to the new innovation and design which is involved with world fashion industry, new innovation is a must to occupy the import share of China in this sector. In our investigation its reveals that Italy (15.48%) is the largest partner of China's import of leather goods in 2015 (appendix 5). While the other players in Chinese market are Denmark (10.55%), France (6.18%), India (4.14%), Finland (3.60%), Canada (2.96%), Hong Kong (2.32%), Cambodia (2.24%), Spain (1.77%), S. Korea (1.70%), Japan (0.55%), USA (0.46%), and Indonesia (0.05%). Bangladesh occupied 0.11% import share of China in 2015 having value of US $5.9 million (appendix 5).

In the diversification analysis, it is found that 6 products group (HS4202, HS4203, HS6501, HS6505, HS6703 and HS674) of Bangladesh reveals the highest export opportunity to China (appendix 6). If Bangladesh focuses on the diversification of its products of these products group, it could able to grab bigger share of China's import (US $2.3 billion) in near future. Bangladesh should continue with product diversification having new innovation, design

coping with the current and upcoming fashion trend, more import share of China could be grabbed in near future. As the middle class of China is emerged and the manufacturers in China are relocating to other countries, the import demand of China in leather goods will rise continuously in coming years.

CONCLUSION AND POLICY IMPLICATION

The study is conducted to evaluate the composition of trade between Bangladesh and China in leather and footwear industry and how Bangladesh could grab larger share of China's import in this industry. To explore the insights, Trade intensity, Herfindahl-Hirschman Index (HHI) for Bilateral Concentration and Revealed Comparative Advantage indices are applied to find out the objectives of this study. The analysis of trade intensity in last 20 years data (1995 to 2015), the results reveal that the intensity was 0.05 in 1995 then the intensity declined to 0.01 in 2010. After 2010 the intensity has been increasing and reached to 0.03 in 2015. This implies that Bangladesh has much potential to increase its trade with China. This also may be due to immense economic structural change in both countries in last two decades. In 1995 Bangladesh was more an importing country than a exporting. On the contrary in 2015, Bangladesh becomes one of the important manufacturing countries in world.

However, the result of Herfindahl-Hirschman Index (HHI) for Bilateral Concentration reveals that in last two decades the HHI value was 0.21 in average which indicates the import diversification of Bangladesh from China rather than the export diversification. It could be because of China is one of the largest import sources of Bangladesh and the imports are from various products and industries for Bangladesh's manufacturing industries.

Furthermore, we analyzed the revealed comparative advantage (RCA) in two levels; first we did it on HS (Harmonized System) 2 digits classification level 7 products group and HS 4 digits classification level 35 products group for the whole industry. The analysis of HS 2 digit level classification reveals that Bangladesh exhibits revealed comparative advantage over 5 and disadvantage over 2 products group while China reveals comparative advantage over 4 and disadvantage over 3 products group. The deeper analysis of the industry in HS 4 digits classification level of 35 products group of this industry shows that Bangladesh reveals high comparative advantage over 6, medium over 8 and low comparative advantage/comparative disadvantage over 21 products group in its export to the world. On the other hand, China exposes high comparative advantage over 12, medium over 9 and low comparative advantage over 14 products group in its import from the world in this industry.

The outcome of RCA analysis suggests that Bangladesh should diversify its products especially the products of leather goods where Bangladesh possess the highest comparative

disadvantage. Furthermore, the country should also focus on the products groups that reveal comparative advantage to enter into Chinese market. To occupy more import share of China, Bangladesh must do diversification of its products according to the demand of Chinese consumers.

The analysis of diversification suggests that Bangladesh should diversify 4 products group in leather sector, 4 in footwear sector and 6 products group in leather goods sector which Bangladesh possess high competitiveness to export into Chinese market. If Bangladesh could able to diversify the mentioned products group, the country will able to occupy larger share of China's import (US $8.9 billion) as well as the global market share. Being an emerging market the import comparative advantage of China would increase in coming years because of its ongoing industrial restructuring in labor intensive manufacturing sectors which are relocating to other countries; environmental policy changes and the changing scenario of Chinese economy. Furthermore, this study explores that the Asian economies which have been successful in terms of product diversification, their trends were similar like Bangladesh now. At the earlier stage, their export was mostly dependent on the labor intensive agricultural and manufactures sectors. Gradually the economies evolved, exports diversified into labor-intensive manufactured products. Later, with greater policy support and technology advancement, composition of manufactured items gradually shifted toward technology intensive higher value added products. Bangladesh is still in the middle stage, where the cheap labor puts the country in an advantageous position over its competitors. The Leather and footwear industry has the potentiality to diversify into leveraging these existing comparative advantages.

Here the recommendations are addressed based on our research as well as the existing literatures and reports from different stakeholders of leather and footwear industry. Although many of the recommendations are not directly related to the objectives of this article but most of them are indirectly related to further sustainable development of this industry.

Technology Transfer and Capacity Building related recommendations

   a) The local farms should adopt advanced technology and design to cope up the new innovations in this industry

   b) To be competent in the global leather and footwear markets, more Research & Development facilities should be in initiated from government and private sector to accelerate the unique innovation in the industry.

   c) Improved Infrastructural facilities and appropriate institutional development should be emphasized.

d) Strengthening competitiveness by increasing productivity leading to reduced cost of production and reducing time of delivery and trade transaction cost and increasing quality of the products.

e) The shortage of educated and skilled technical workforce, lack of uniform training initiatives results in shortage of manpower in both tanning and footwear industry should be in sincere concern to the government and industry stakeholders.

f) Coping with crisis in power and energy sectors is another important issue of this sector that needs high attention from the government as well as the other stakeholders.

Product and Market Diversification related recommendations

a) Exports of footwear, leather and readymade garment are now maintaining an upward trend in China, but it is not satisfactory as the demand for such products is high in the Chinese market. The local exporters should give more attention to diversification of the three products in a bid to boost the export to China. The government should speed up investment for product diversification keeping the Chinese market in mind to decrease the trade deficit between Bangladesh and China

b) Diversification among existing product categories and exploring and developing new products and markets with emphasis on aggressive marketing and branding.

a) Diversification of markets and products for exports is very important to compete in the international Market.

b) Initiatives in leather industry for standardized and distinctive designed products by sophisticated technological production system.

c) Trade Facilitation Measures and reduction of trade transaction costs

d) Diversification of industrial structure for domestic and for export markets

e) Economic zoning and Geographical diversification is also important for the future sustainable growth of the industry.

Economic Cooperation related recommendations

a) Economic Cooperation with regional powers and multinationals for domestic manufacturing capacity building.

b) Trade related diagnostic study and formulation of Policy matrix and its effective execution for manufacturing development at sub sector level.

c) Exploring Market potentials in different countries and Export restructuring in a globalized economy for strategic use of cross national production networks.

d) Integrated manufacturing and trade in tasks and horizontal manufacturing in consonance with competitive advantage.

International Trade and Development related recommendations

e) Facing tougher competition in the global market amidst more protected trade regimes and greater stimulus package in the buying countries and competing exporting countries;

f) A Bangladesh-China Free Trade Agreement may reduce give Bangladesh to grab more opportunity of growing Chinese market. China's investment in the footwear and leather goods sector could be a big gain for Bangladesh to improve the competitiveness of its industry as recent years China's manufacturing in this sector are relocating to other countries which opportunity Bangladesh should grab. It could support Bangladesh's sector in terms of high technology and innovation that China has the capacity.

g) China's investment in the Leather and footwear sector could be a big support to improve the competitiveness as well as the capacity of this industry. Those products could be exported to China and other international markets as Bangladesh enjoy different tax and tariff subsidy being a LDC country. Bangladesh government should remove trade barriers and bottlenecks in attracting Foreign Direct Investment (FDI) in this regard.

h) Exploring Market potentials in China as well as other countries and export restructuring in a globalized economy for strategic use of cross national production networks

i) Economic cooperation with regional powers and multinationals for domestic manufacturing capacity building

j) Trade related diagnostic study and formulation of Policy matrix and its effective execution for manufacturing development at sub sector level.

k) Price and non-price competitiveness strengthening in all products whether for export or to substitute imports.

l) We should also have academic and industry level research; how FDI from China and other country could supportive for this industry.

Banking and Financial Instructional Support related recommendations

a) There have low confidence on the sector from the banking industry. Due to environmental compliance challenges banks cannot rely on local small firms for the repayment of the loan. High interest rate high rate of interest on term loans and working capital, limited access to finance

b) This liquidity problem in money market and capital market should be minimize by taking measures from the government and private sectors as this industry already recognized as a thirst industry of the country after textile and apparel.

Environment and Complacence Related Recommendations

a) Strong environmental safety initiatives should be implemented in order to improve consumer safety & compliance standards.

b) Compliance with WTO rules and uncertainty of WTO Negotiations and regulations should be maintained accordingly.

c) The relocation of the Tanneries to the new industrial area in Savar would be supportive for this industry in the long run development. The industry stakeholders should follow the rules of the government in this regard.

LIMITATIONS OF THE STUDY

During conducting this research, the bilateral trade data could be accessed only up to 2015. If the data of 2016could be accessed, more recent scenario could be explored. Furthermore, this research is carried based on the quantities methods. More effective policy and trade related barriers, opportunities and recommendations could be come out through qualitative research with survey and interview of the concern stakeholders of this industry.

ACKNOWLEDGEMENT

REFERENCES

Ahamed, M. (2015). A Report on Leather and Leather Goods Industry of Bangladesh. Accessed in February 2017;http://jbbc.co.jp/wp-content/uploads/2014/08/A-Report-on-Leather-Leather-Goods-Industry-of-Bangladesh.pdf

Ahmed, N., & Bakht, Z. (2010). Leather Footwear Industry in Dhaka: A Case Study. Dhaka, Bangladesh: Bangladesh Institute of Development Studies

Ali, M. F., Naher, U. H. B., Hasan, M. M., Nawze, M. S., & Ferdous, S. (2015). Analyzing The Factors For Rejection 0f Leather In Bangladesh. International Journal of Scientific & Technology Research, 4(11).

Association, Bangladesh Tannery (2017). Statistics, data & other necessary information of the tanning industry Bangladesh. Accessed in February 2017;http://www.tannersbd.com/

Association, of China Leather Industry (2015). Development of China Leather and Footwear Industry Accessed in February 2017; http://www.worldleathercongress2015.com/documents/13/china_tanning_footwear_industry_clia@wlc2015milan.pdf

Balassa, B. (1965). Trade Liberalization and "Revealed" Comparative Advantage. The Manchester School, 33(2), 99-123.

Balassa, B. (1977). Revealed Comparative Advantage Revisited: An Analysis of Relative Export Shares of the Industrial Countries, 1953-1971. The Manchester School of Economic & Social Studies, 45(4), 327-344.

Balassa, B. (1979). The changing pattern of comparative advantage in manufactured goods. The Review of Economics and Statistics, 259-266.

Bangladesh, Eexport Promotion Bureaue, (2016). Market Access Facilities for Bangladeshi Exportable. Accessed in February 2017;http://www.epb.gov.bd/site/page/7bd7d4d7-cdba-4da3-8b10-f40da01e49b6/Market-Access-Facilities

Bank, Bangladesh (2016). Bangladesh Bank Open Data Initiative. Accessed in February 2017;https://www.bb.org.bd/econdata/

Bano, S. (2014). An Empirical Examination of Trade Relations between New Zealand and China in the Context of a Free Trade Agreement.

Bano, S., & Tabbada, J. (2012). Economic relations between New Zealand and the Philippines: An empirical analysis. Paper presented at the 53rd New Zealand Association of Economists Annual Conference, Palmerston North.

Bela, B. a. (1986). Comparative Advantage in Manufactured Goods: A Reappraisal. The Review of Economics and Statistics, 68(2), 315-319.

Berger, E. A. (2014). Survival of the fittest: an assessment of the herfindahl index and product market competition. Available at SSRN 2367374.

BGCCI, Bangladesh German Chamber of Commerce & Industry (2016). Leather Industry The Next Big Thing. Accessed in February 2017;https://issuu.com/bgcci/docs/magazin_8_issue

Bhattacharyay, B. N., & Mukhopadhyay, K. (2015). A comprehensive economic partnership between India and Japan: Impact, prospects and challenges. Journal of Asian Economics, 39, 94-107.

Brown, A. J. (1974). Applied economics: Aspects of the world economy in war and peace. London: Allen and Urwin.

Canada, G. o. (2016). Dependency or diversity? The concentration of Canadian exports (Accessed in December 2016). Accessed in February 2017;http://tradecommissioner.gc.ca/canadexport/158554.aspx?lang=eng

Chen, U. (2009). Market Development Reports-Guangdong market for leather weathers the storm, spells demand for American hides and finished leather (Vol. CH9619). China: GAIN.

Council, Leather Sector Business Promotion Council (LSBPC), Bangladesh, (2016). Export Scenario of Leather. Accessed in February 2017;http://bpc.org.bd/lsbpc_export.php

Database, U. C. (2016). Database of UN COMTRADE. Accessed in February 2017;https://comtrade.un.org/

DCCI. (2016). Bangladesh-China Bilateral Trade. Dhaka Bangladesh: Dhaka Chamber of Commerce and Industries (DCCI), Accessed in December 2016.

De Benedictis, L., & Tamberi, M. (2001). A note on the Balassa index of revealed comparative advantage. Available at SSRN 289602.

Erina, S. A. (2015). Diversify or Perish? The way forward to export diversification. Bangladesh German Chamber of Commerce & Industry (BGCCI).

Export Promotion Bueraue of Bangladesh, E. (2016). Statistic Data-2016-2017d (Accessed in December 2016;http://www.epb.gov.bd/site/files/51916ae6-a9a3-462e-a6bd-9ef074d835af/Statistic-Data-2016-2017

FAO. (2015). RCA Indices (pp. 69). Banckok FAO (Food and Agricultural Organization of United Nations).

Fertő, I., & Hubbard, L. J. (2002). Revealed comparative advantage and competitiveness in Hungarian Agri-food sectors. In I. o. E. H. a. o. sciences (Ed.), Discussion papers new series. Budapest, . Budapest, Hungary: Institute of Economics Hungarian academy of sciences.

Footwear, W. (2015). Leather footwear exports with good progress in Bangladesh. Accessed in February 2017;https://www.worldfootwear.com/news.asp?id=1087&Leather_footwear_exports_with_good_progress_in_Bangladesh

Hanson, G. H., Lind, N., & Muendler, M.-A. (2015). The Dynamics of Comparative Advantage: National Bureau of Economic Research.

Harris, D. (2016). Leather Sector Reform in Bangladesh WORKING POLITICALLY IN PRACTICE SERIES – CASE STUDY NO. 7 UAS: The Asia Foundation.

Herfindahl, O. C. (1950). Concentration in the U.S. Steel Industry., Columbia University, NY.

Hirschman, A. O. (1945). National Power and the Structure of Foreign Trade. Los Angeles: University of California Press.

Hirschman, A. O. (1964). The Paternity of an Index. The American Economic Review, 54(5)(761).

INSPIRED, T. E. U. s. (2013). Leather Sector Includes a Value Chain Analysis and Proposed Action Plans.Accessed in February 2017;http://euinspired.org.bd/docs/grant_scheme/INSPIRED%20-%20Leather%20Sector%20Report%20-%20Jan%202013.pdf

Institute, Bangladesh Foreign Trade (2016). Sector-based Need Assessment of Business Promotion Council Leather Sector. Accessed in February 2017;http://www.bfti.org.bd/pdf/BPC%20research-Leather.pdf

Intelligence, C. R. (2016). Leather Shoe Industry Overview in China, 2011-2020 - Status Quo, Barriers, Top 5, Cost and Sales Analysis. Accessed in February 2017;http://www.researchandmarkets.com/research/dprql4/leather_shoe

Islam, M. S. (2016). Xi Jinping's visit: Implications for Bangladesh-China relations, The Daily Star. Accessed in December 2016;http://www.thedailystar.net/op-ed/economics/implications-bangladesh-china-relations-1298533

Islam, S., & Siddique, P. J. (2014). Revealed comparative advantage of Bangladeshi leather industry with selected Asian economies. IOSR Journal of Business and Management, 6(12), 44-51.

ITA, The International Trade Administration (ITA), U.S.A,(2017). Bangladesh - Leather and Leather Goods Production. Accessed in February 2017;https://www.export.gov/article?id=Bangladesh-Leather-and-Leather-Goods-Production

Jun, L. (2014). A new opportunity for China-Bangladesh cooperation, Bd News 24. Accessed in February 2017;http://opinion.bdnews24.com/2014/03/12/a-new-opportunity-for-china-bangladesh-cooperation/

Khan, W., Hossin, M. E., & Akbor, M. J. (2015). Leather Industry in Bangladesh: A Systematic Literature Review. Asian Business Review, 5(3), 111-118.

Kohli, S. C. (2015). Bangladesh's sprouting bilateral relations with China: An overview, Merinews. Accessed in December 2016; http://www.merinews.com/article/bangladeshs-sprouting-bilateral-relations-with-china-an-overview/15904634.shtml

Kojima, K. (1964). The pattern of international trade among advanced countries. Hitotsubashi Journal of Economics, 5(1), 16-36.

Lab, MIT Media. (2017). Atlas of Economic Complexity. Acessed in February 2017; http://atlas.media.mit.edu/en/visualize/tree_map/hs92/import/bgd/chn/show/2014/

Leathertech. (2017). Footwear exports record impressive growth. Accessed in February 2017;http://leathertechbangladesh.com/readmore.html

LFMEAB, Leathergoods & Footwear Manufacturers & Exporters Association of Bangladesh(2015). Investment Prospects In Bangladesh Leather Sector. 2017, Acessed in February 2017;http://lfmeab.org/images/report/LEATHER_SECTOR_INVESTMENT_BROCHURE_LFMEAB.pdf

Mamun, A., Howlader, S., Yeahyea, H. B., & Uddin, M. R. (2016). Leather Industry of Bangladesh: A new hope for export diversification. Dhaka, Bangladesh: Emerging Credit Rating Limited.

Map, Trade Competitiveness (2015). Exports and imports of Bangladesh. Acessed in February 2017;http://tradecompetitivenessmap.intracen.org/TP_TP_CI_HS4.aspx?IN=41&RP=050&YR=2015&TY=T

Mirdha, A. D. a. R. U. (2013). US suspends GSP for Bangladesh, The Daily Star. Acessed in February 2017;http://www.thedailystar.net/news/us-set-to-suspend-bangladeshs-gsp

Nath, N. (2012). Manufacturing Sector of Bangladesh-Growth, Structure and Strategies for Future Development. Biennial Conference " Global Economy and Vision 2021", 12-14 July,2012.

Pakistan, Trade Development Authority (2011). Leather Market in China. Acessed in February 2017;http://www.tdap.gov.pk/doc_reports/TDAP%20REPORT%20ON%20LEATHER%20MARKET%20IN%20CHINA.pdf

Paul, H., Antunes, A. P. M., Covington, A. D., Evans, P., & Phillips, P. S. (2013). Bangladeshi leather industry: An overview of recent sustainable developments. Journal of the Society of Leather Technologists and Chemists, 97(1), 25-32.

Paul, R. (2016). China signs deals worth billions with Bangladesh as Xi visits, REUTERS. Acessed in February 2017; http://www.reuters.com/article/us-bangladesh-china-idUSKCN12D34M

Rahman, S. B. (2015). Shining future for Bangladesh leather sector as China shifts focus, bdnews24.com. Acessed in February 2017; http://bdnews24.com/business/2015/03/09/shining-future-for-bangladesh-leather-sector-as-china-shifts-focus

Raj, P. S., Wing, E., & Ambrose, D. (2014). A brief analysis of India-Japan bilateral trade: A trade intensity approach. International Journal of Economics, Commerce and Management, Vol. II(2).

Rashid, M. H. (2015). Leather industry of Bangladesh, The Daily Sun. Acessed in February 2017; http://www.daily-sun.com/printversion/details/69284/Leather-industry-of-Bangladesh

Research, H. (2016). China's Footwear Market (7 June 2016 ed., Vol. 2017). Hong Kong: Hong Kong Trade Development Council.

Saha, S. (2014). Leather sector sees record exports, The Daily Star. Acessed in February 2017; http://www.thedailystar.net/leather-sector-sees-record-exports-33201

Sanidas, E., & Shin, Y. (2010). Comparison of revealed comparative advantage indices with application to trade tendencies of East Asian countries. Paper presented at the 9th Korea and the World Economy Conference, Incheon.

Seyoum, B. (2007). Revealed comparative advantage and competitiveness in services: A study with special emphasis on developing countries. Journal of Economic Studies, 34(5), 376-388.

Syed A. Al-Muti, N. A. (2015). Bangladesh: Billion Dollar Leather Sector Poised for Growth after Environmental ReformAcessed in February 2017; http://asiafoundation.org/2015/04/15/bangladesh-billion-dollar-leather-sector-poised-for-growth-after-environmental-reform/

Tesfay, Y. Y., & Solibakke, P. B. (2016). Structure of the Norwegian Imports Trade Concentration: The Seemingly Unrelated Autoregressive Regression Modelling Approach. Global Business and Management Research, 8(2), 19.

Times, A. (2016). Bangladeshi and Chinese firms ink deals worth US$13.6 billion, The Asia Times. Acessed in February 2017; http://www.atimes.com/article/china-sign-record-us25-billion-loans-bangladesh/

UNSCAP, A. (2016). Trade Intensity – Technical Notes. Acessed in February 2017; http://artnet.unescap.org/APTIAD/trade%20intensity.pdf

Vassilopoulos, P. (2003). Models for the identification of market power in wholesale electricity markets. UFR Sciences of Organizations, DEA, 129.

Wahid, S. (2016). China: A worthy trade partner, The Daily Star (Accessed in December 2016). Acessed in February 2017; http://www.thedailystar.net/op-ed/business-analysis/worthy-trade-partner-138334

WITS. (2013). Trade Outcomes Indicators. Acessed in February 2017; http://wits.worldbank.org/WITS/docs/TradeOutcomes-UserManual.pdf

WITS. (2017). World Integrated Trade Solution (Accessed in January 2017). Acessed in February 2017; http://wits.worldbank.org/

WTO. (2016). World Trade Organization, Time Series Data Accessed in December 2016; http://stat.wto.org/Home/WSDBHome.aspx

APPENDICES

Appendix 1: The Composition of Revealed Comparative Advantage (RCA), Exports and Imports in Leather Sector of Bangladesh and China in 2015

HS 4 Digit Classification Level Products	RCA of China in Imports	RCA of Bangladesh in Exports	China Imports from the World (Million US $)	Bangladesh Exports to the World (Million US $)
4100 All industries in sector HS41	0.3	4.8	7 498.4	302.6
4101 Raw hides & skins of bovine/equine animals	0.5	0.0	2.6	o.3
4102 Raw skins of sheep or lambs	59.2	0.1	402.	0.2
4103 Raw hides & skins nes	10.2	0.2	57.3	0.2
4104 Leather of bovine/equine animal, other than leather of hd 4108/4109	27.7	10.9	1 686.4	136.8
4105 Sheep/lamb skin leather, other than leather of hd no4108/4109	13.7	2.1	63.2	2
4106 Goat/kid skin leather, other than leather of hd no 41.08/41.09	11.7	17.2	60.5	17.5
4107 Leather of other animals, o/t leather of hd no 41.08/41.09	19.2	5.0	2 113	130.7

Appendix 2: The Composition of Revealed Comparative Advantage (RCA), Exports and Imports in Footwear Sector of Bangladesh and China in 2015

HS 4 Digit Classification Level Products	RCA of China in Imports	RCA of Bangladesh in Exports	China Imports from the World	Bangladesh Exports to the World (Million US$)
6400 All industries in sector HS64	2.4	2.9	2 748.3	826.8
6401 W/p foot, outer sole/upper of rbr/pla upper not fixd to sole nor assembld	0.0	0.8	3.1	2.6
6402 Footwear nes, outer soles and uppers of rubber or plastics	0.1	1.1	254 .4	87.1
6403 Footwear, upper of leather	2.9	5.1	1 447.6	571
6404 Footwear, upper of textile mat	2.7	2.2	728	142.5
6405 Footwear, nes	0.1	0.4	25.8	3.6
6406 Part of footwear; romovable in-soles, heel cushion etc. gaiter etc.	4.3	1.2	289.5	20.1

Appendix 3: The Composition of Revealed Comparative Advantage (RCA), Exports and Imports in Leather Goods Sector of Bangladesh and China in 2015

HS 4 Digit Classification Level Products	RCA of China in Imports	RCA of Bangladesh in Exports	China Imports from the World	Bangladesh Exports to the World (Million US$)
4200 All industries in sector HS42	3.3	1.3	2 106.8	205.5
4201 Saddlery and harness for any animal	0.0	0.2	2.1	0.7
4202 Trunks, suit-cases, camera cases, hand bags etc. of leather, plas, tex etc.	3.3	1.4	1 762.4	183.5
4203 Articles of apparel & clothing access, of leather or composition leather	3.4	1.1	254	19.4
4205 Articles of leather or composition leather, nes	3.8	0.3	88	2
4206 Articles of gut, of goldbeater's skins.	0.1	0.0	0.4	0.02
4300 All industries in sector HS43	20.5		1 505	0.0
4301 Raw fur skins & pieces suitable for furriers' use	24.9		944.7	0.0
4302 Tanned or dressed furskins& pieces, unassembled or assembled	26.3	0.0	510.2	0.005
4303 Articles of apparel, clothing access and other articles of fur skin	3.1		47.6	0.005
4304 Artificial fur and articles thereof	3.8	0.1	2.4	0.009
6500 All industries in sector HS65	0.1	12.8	54.6	241.3
6501 Hat-forms, hat bodies; plateau.	0.0	3.7	0.012	0.4
6502 Hat-shapes, plaited or made by assembling strips of any material	0.0	0.2	0.015	0.01
6504 Hats &other headgear, plaited	0.0	0.8	0.995	702
6505 Hats & o headgear, knit/chroch from lace	0.0	22.6	22.1	236.8
6506 Headgear, nes.	0.1	0.5	24.1	3.3
6507 Head-bands, linings, covers, etc. for headgear	3.0	0.1	7.3	0.1
6600 All industries in sector HS66	0.1	0.4	14.1	3.3
6601 Umbrellas and sun umbrellas	0.0	0.5	5.7	3.2
6602 Walking-sticks, seat-sticks, whips, etc.	2.4	0.0	4.1	0
6603 Parts, trimmings and accessories of art of heading no 66.01 or 66.02	1.7	0.1	4.4	0.07
6700 All industries in sector HS67	5.2	2.8	270.3	52.8
6701 Skins & other parts of birds, articles of, nes.	11.8	0.0	9.6	0
6702 Artificial flowers, foliage & fruit	0.0	0.0	2.6	0.03
6703 Human hair, worked; wool/animal hair & other tex. mat, prepared for wigs etc.	39.7	1.6	234.9	2.1
6704 Wig, eyebrow, eyelash, etc.	0.1	5.2	23.2	50.7

Note: RCA-Revealed Comparative Advantage

Appendix 4: The Categorized product groups (according to HS 4 digit Classification) based on Export Opportunity in China

High Export Opportunity RCA>1; CN Imp. Vol. ≥1 Billion	Moderate Export Opportunity RCA=1; CN Imp. Vol. ≥10 Million	Low Export Opportunity RCA<1; CN Imp. Vol. <10 Million
High Export Opportunity total-US $9.6 Billion	Moderate Export Opportunity total-US $5.4 Billion	Low Export Opportunity total-US $0.1 Billion
4101 Raw hides & skins of bovine/equine animals	4102 Raw skins of sheep or lambs	4103 Raw hides & skins nes
4104 Leather of bovine/equine animal, other than leather of hd 4108/4109	4105 Sheep/lamb skin leather, other than leather of hd no4108/4109	4106 Goat/kid skin leather, other than leather of hd no 41.08/41.09
4107 Leather of other animals, o/t leather of hd no 41.08/41.09	4203 Articles of apparel & clothing access, of leather or composition leather	4201 Saddlery and harness for any animal, of any material
4202 Trunks, suit-cases, camera cases, handbags etc. of leather, plas etc.	4205 Articles of leather or composition leather, nes	4206 Articles of gut, of goldbeater's skins, of bladders or of tendons
6403 Footwear, upper of leather	4301 Raw fur skins & pieces, nes	4304 Artificial fur and articles thereof
	4302 Tanned or dressed fur skins & pieces, unassembled or assembled	6401 W/p foot, outer sole/upper of rbr/pla upper not fixd to sole nor assembled
	4303 Articles of apparel, clothing access and other articles of fur skin	6501 Hat-forms, hat bodies; plateaux and manchons of felt
	6402 Footwear nes, outer soles and uppers of rubber or plastics	6502 Hat-shapes, plaited or made by assembling strips of any material
	6404 Footwear, upper of textile mat	6504 Hats & other headgear, plaited
	6405 Footwear, nes	6507 Head-bands, linings, covers, etc.
	6406 Part of footwear; removable in-soles, heel cushion etc.; gaiter etc.	6601 Umbrellas and sun umbrellas
	6505 Hats&o headgear, knit/chroch lace	6602 Walking-sticks, seat-sticks, whips, etc.
	6506 Headgear, nes	6603 Parts, trimmings and accessories of art of heading no 66.01 or 66.02
	6703 Human hair, worked; wool/animal hair & other tex mat, prepared for wigs etc.	6701 Skins & other parts of birds, articles of, nes
	6704 Wig, eyebrow, eyelash, etc.	6702 Artificial flowers, foliage & fruit

Note: The Products shown in the table are HS 4 Digit Classification; CN-China, Imp.-Imports, Vol.-Volume, Data are analyzed for 2015 exports

Appendix 5: Top Competitors of Bangladesh's Export to China in Leather and Footwear Industry

Leather Chinese import market worth US $7 Billion			Footwear Chinese import market worth US $2.7 Billion			Leather Goods Chinese import market worth US $4 Billion		
Country	US $ Million	Share (%)	Country	US $ Million	Share %	Country	US $ Million	Share %
USA	1586.5	22.75	Italy	562.7	43.26	Italy	835.7	15.48
Brazil	809.6	11.61	Indonesia	374.6	28.80	Denmark	569.3	10.55
Australia	712.9	10.22	USA	89.5	6.88	France	333.5	6.18
Italy	593.9	8.52	Spain	62.4	4.80	India	223.5	4.14
S. Korea	467.9	6.71	S. Korea	45.8	3.52	Finland	194.2	3.60
Bangladesh	60.2	0.86	Bangladesh	9.9	0.77	Canada	159.7	2.96

Hong Kong	125.2	2.32
Cambodia	120.8	2.24
Spain	95.6	1.77
S. Korea	91.8	1.70
Japan	29.8	0.55
USA	24.7	0.46
Indonesia	2.9	0.05
Bangladesh	5.9	0.11

Appendix 6: The Product Groups (HS 4 digits Classification) that Bangladesh Should Focus on Product level Diversification to Grab Larger Import Share of China

	HS 4 Digit Classification Level Products	China (RCA)	Bangladesh (RCA)	China (Imports)	Bangladesh (Exports)
Leather	4104 Leather of bovine/equine animal, other than leather of hd 4108/4109	27.7	10.9	1686396	136844
	4105 Sheep/lamb skin leather, other than leather of hd no4108/4109	13.7	2.1	63190	1963
	4106 Goat/kid skin leather, other than leather of hd no 41.08/41.09	11.7	17.2	60549	17478
	4107 Leather of other animals, o/t leather of hd no 41.08/41.09	19.2	5.0	2112933	130678
	Total			3923068	286963
	Total in US $ billions			3.9	0.29
Footwear	6402 Footwear nes, outer soles and uppers of rubber or plastics	0.1	1.1	254424	87087
	6403 Footwear, upper of leather	2.9	5.1	1447574	570968
	6404 Footwear, upper of textile mat	2.7	2.2	727936	142525
	6406 Part of footwear; removable in-soles, heel cushion etc.; gaiter etc.	4.3	1.2	289494	20043
	Total			2719428	820623
	Total in US $ billions			2.7	0.82
Leather Goods	4202 Trunks, suit-cases, camera cases, handbags etc., of leather, plas, tex etc.	3.3	1.4	1762412	183454
	4203 Articles of apparel & clothing access, of leather or composition leather	3.4	1.1	253978	19387
	6501 Hat-forms, hat bodies; plateaux and manchons of felt	0.0	3.7	12	352
	6505 Hats &o headgear, knit/chroch lace	0.0	22.6	22127	236777
	6703 Human hair, worked; wool/animal hair &other tex mat, prepared for wigs	39.7	1.6	234887	2116
	6704 Wig, eyebrow, eyelash, etc.	0.1	5.2	23243	50668
	Total			2296659	492754
	Total in US $ billions			2.3	0.49
	Grand total US $ billions			8.9	1.6