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FOUR DECADES OF BANGLADESH-SOUTH KOREA RELATIONS: ECONOMIC DIMENSIONS

Abstract

South Korea has been a significant trading and development partner of Bangladesh for quite long time. This year both the countries are celebrating the fortieth anniversary of their bilateral relations. Bangladesh imports considerable volume of raw materials and intermediate goods along with capital and consumer items from South Korea. Currently, Bangladesh is getting significant amount of development assistance, and investment from the country. This paper analyses the economic aspects of bilateral relations, viz. commodity-specific trade, investment from South Korea by sector, and trend and salient features of official development assistance by category from Bangladesh perspective. The paper reveals that there is a substantial unrealised potential of export to South Korea, which should be tapped through institutional measures but sensitive sectors like textiles and apparels should be kept aside to derive desired benefits from bilateral free trade area. There is also scope for Bangladesh to attract South Korean grants for financing development projects and strengthen cooperation in industrial development, science and technology, and human resource development.

1.   Introduction

The Republic of Korea, popularly known as South Korea, is a trusted friend and development partner of Bangladesh for long. This year both the countries are celebrating the anniversary of their diplomatic relations of four decades. South Korea extended significant cooperation and support to Bangladesh since early-1970s. A strong development partner of Bangladesh, South Korea opened its embassy in Dhaka in early-1975, more than a year after the establishment of the diplomatic relations in 1973. Bangladesh-South Korea cooperation covers a wide range of areas that include, among others, trade, investment, infrastructure development, human resource development, and science and technology. It has emerged to be an important potential destination of manpower export of Bangladesh.

This paper intends to analyse the economic dimensions of Bangladesh-South Korea relations of the last four decades and suggests way forward for strengthening the economic relations drawing lessons from the past. In doing so, the paper has been organised as follows. After this brief prelude, section 2 describes the country characteristics including major aspects in the economic arena. Section 3 analyses

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the performance of trade and investment with special focus on commodity-specific bilateral trade and Foreign Direct Investment (FDI) from South Korea. Section 4 presents the other areas of bilateral economic relations that mostly cover development assistance from South Korea. The untapped trade potential has been discussed in section 5 while policy recommendations for strengthening bilateral economic relations have been suggested in section 6. Finally, concluding remarks have been made.

2.   Major Economic Aspects

Bangladesh is amongst the Least Developed Countries (LDCs) that performed impressively over the last two decades through remarkable economic growth, reducing poverty (head count ratio of about 58 per cent to 31.5 per cent) and achieving significant progress in socio-economic indicators. It was also successful in overcoming 'Malthusian catastrophe' literally over the last four decades as its population doubled while food production tripled, attaining near self-reliance in food production.[1] It is now aiming to become 'middle income' country by 2021 according to 'Vision 2021' of the present government through attaining double-digit growth and considerable progress in economic and social sectors.[2]

Bangladesh has undergone substantial changes in economic policies in the 1980s and 1990s and experienced an increased degree of integration with the global economy.[3] Still, the country is characterised by one of the least liberal trade policy regimes in the world in terms of Trade Tariff Restrictiveness Index (TTRI), leading to low trade integration amongst regional countries. The recent Most Favoured Nation (MFN) simple applied average tariff is high. The tariff overhang is very high, which demonstrates its reluctance to bind the trade policy regime at rates close to the MFN applied rates. The non-tariff measures frequency ratio is higher than that of Bhutan and Thailand, but much lower than that of India. The country's governance indicators are generally poor.

Textile and clothing industry is a crucial part of Bangladesh's manufacturing sector and contributes most of the export earning of the country. The Readymade Garments (RMG) industry of the country alone comprised of 4 per cent of the gross

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[1] M. Kabir and R. Salim, "Bangladesh: Market Overview", in *Encyclopaedia of Emerging Markets*, New York: Gale Publishing (forthcoming), 2013.

[2] General Economics Division, *Outline Perspective Plan of Bangladesh 2010-2021: Making Vision 2021 a Reality*, Dhaka : Ministry of Planning, Government of Bangladesh, 2010.

[3] See, for example, R. Salim, "Economic Liberalization and Productivity Growth: Further Evidence from Bangladesh", *Oxford Development Studies*, Vol. 31, No. 1, 2003, pp. 85-98; R. Jenkins and K. Sen, "International Trade and Manufacturing Employment in the South: Four Country Case Studies", *Oxford Development Studies*, Vol. 34, No. 3, 2006, pp. 299-322; and M. Kabir, *Trade Response to Preferential Liberalization: Evidence from Some Emerging Asian Countries*, Germany: Lambert Academic Publishing, 2010.

domestic product (GDP) of the economy back in 1991-92 which increased over the last two decades by a spectacular 11 percentage points and currently stands at 13 per cent of the GDP. Export earnings from this sector increased from 59 to 77 per cent during this period.[4]

Table 1: Major Trade and Economic Indicators[5]		
Indicators	Bangladesh	South Korea
GDP (nominal, billion US$)*	114	1,116
GDP per capita (nominal, US$)*	701	22,424
Share in world trade (%)	0.11	2.67
Trade per capita (US$)*	352	24,727
Trade policy rank (out of 125)	97	83
External environment rank (out of 125)	72	109
Institutional environment rank (out of 183)	119	19
Trade facilitation rank (out of 155)	79	23
Trade outcome rank (out of 157)	23	91
Tariff Trade Restrictiveness Index (MFN applied tariff)	11.3	8.2
MFN applied tariff-simple average (%)	14.8	12.2
Applied tariff-trade weighted average (%)	13.6	7.1
Import duties (% of imports)	15.7**	2.0
Tariff overhang (MFN bound minus MFN applied rate, %)	153.3	4.4
Anti-dumping initiations	0.0	5.0
MFN zero-duty exports (% of total exports)	7.9	45.6

* 2011, ** 2001-04, and the rest indicators are based on 2008 data.

From almost similar socio-economic performance back in early 1960s, South Korea has emerged as an 'Asian Tiger' in early 1990s, in just three decades. It speaks volume about the country's developmental ambition to become East Asian economic powerhouse. Its GDP crossed US$1trillion in 2011 with a per capita GDP of US$22,424. It entered the elite club, the Organisation for Economic Co-operation and Development (OECD) in 1996. It is amongst the countries highly integrated with the world economy, with per capita trade of US$24,727.

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[4] Bangladesh Bank, available at http://www.bangladesh-bank.org, accessed on 02 December 2012.
[5] Based on World Development Indicators and World Trade Indicators 2009/10, available at http://www.worldbank.org, accessed on 16 February 2013.

Figure 1: Trade-GDP Ratio (per cent)[6]
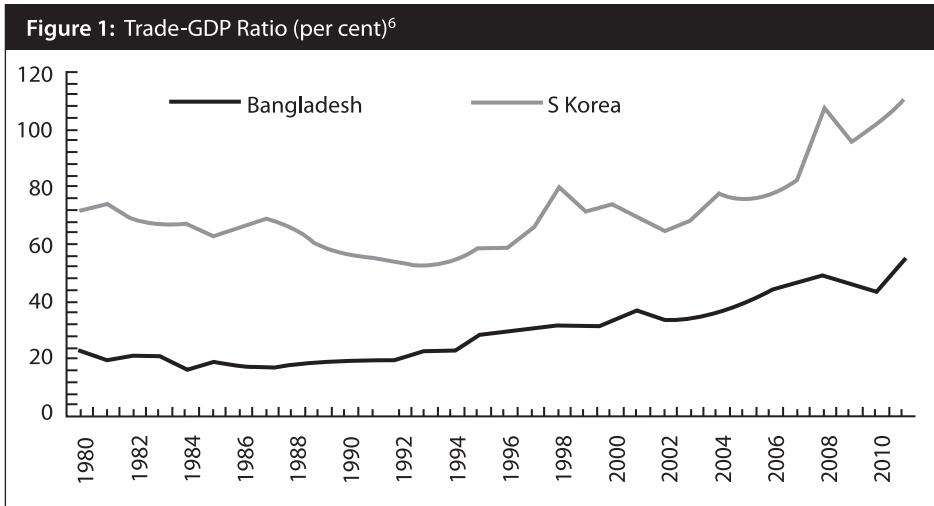
After the East Asian crisis, trade of South Korea has opened up further to world trade. Despite many liberalisation measures, some protectionism still continues to protect domestic industries. The country's MFN TTRI for overall trade has somewhat decreased in the past few years to 8.2 per cent. South Korea's protection level is higher than the 3.7 per cent average TTRI (all goods) for high-income countries while it is 3.9 per cent among OECD high-income countries. The simple average of the MFN applied tariff rate now stands at 12.2 per cent, which is above the 5.7 per cent average tariff of its income group counterparts, while it is very close to that of Bangladesh. During the 1995-2008 period, Korea emerged to be the 9th most frequent initiator of anti-dumping investigations (108) in the world. The MFN zero-duty export was 45.6 per cent of total exports in 2008, which was only 7.9 per cent in Bangladesh. It clearly helped South Korea to become highly integrated with regional as well as world economy.

Given the overall economic performance, trade regime and integration with the world economy of the two countries, the next section describes bilateral relations in key economic areas.

## 3.	Trade, Investment and Manpower Export

### 3.1	Bilateral Trade

Bangladesh-South Korea bilateral trade has reached US$1.76 billion in 2011-12. From a meagre US$22.86 million in 2005, exports to South Korea became US$209.7 million in 2011-12, which implies 136 per cent growth per year. In terms of volume,

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[6] Based on World Development Indicators, *op.cit.*

imports also increased considerably by the same period from US$446 million into as high as US$1,551 million, with the annual average growth rate of 41 per cent.

The bilateral trade as the share of total trade with the world shows a growing trend. It was 6.82 per cent in 2000, which reached 9.44 per cent in 2011-12. It indicates that the Bangladesh economy is becoming gradually more integrated with the South Korean economy. Moreover, Bangladesh is increasingly opting for South Korea as its major import source.

| **Table 2:** Bangladesh's Trade with South Korea (Million US$)[7]					
	1980	1990	2000	2005	2011-12
Exports	10.44	1.18	11.53	22.86	209.71
Imports	30.16	156.06	347.78	446.16	1,550.70
Total	40.6	157.24	359.31	469.02	1,760.41
Export to the World	790.22	1,670.50	5,589.58	8,494.40	24,210.70
Import from the World	2,610.56	3,656.09	9,000.78	13,850.90	31,329.40
Trade with World	3,400.78	5,326.59	14,590.36	22,345.30	55,540.10
% of Total Trade	1.87	3.6	6.82	9.26	9.44
Trade Deficit	-19.72	-154.88	-336.25	-423.3	-1,340.99

While annual average trade growth rates provide fluctuating figures, the compounded annual growth rates (CAGR) demonstrate much smoothened trend of bilateral trade calculated as follows:

$$CAGR(t_0, t_n) = \left[\frac{V(t_n)}{V(t_0)} \right]^{\frac{1}{(t_n - t_0)}} - 1 \qquad (1)$$

where $V(t_0)$ = start value, $V(t_n)$ = end value, t_0 = start year, and t_n = end year.

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[7] Based on the data of International Monetary Fund, *Direction of Trade Statistics,* available at www.imf.org, accessed on 02 January 2010; Export Promotion Bureau of Bangladesh, *Export Statistics* of 2011-12, Dhaka, 2012; and Bangladesh Bank, *Import Payments* 2011-12, Statistics Department, Dhaka, Bangladesh Bank, 2012a.

**Figure 2:** Bangladesh's Annual Average Trade Growth with South Korea (per cent)[8]
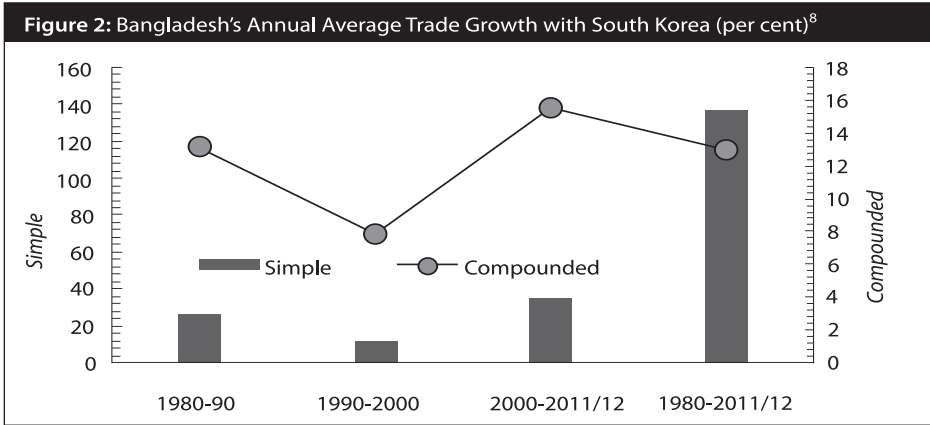
The CAGR figure shows that during the last thirty years or so the bilateral trade grew at 12.9 per cent per annum. However, even though the earlier trend shows higher growth in the period 1980-90, it dampened in 1990-00 period. Conversely, it again demonstrated a steadily increasing growth in 2000s onward even after dampening the volatility of trade (Figure 2).

Figure 3: Trends of Imports and Exports[9]
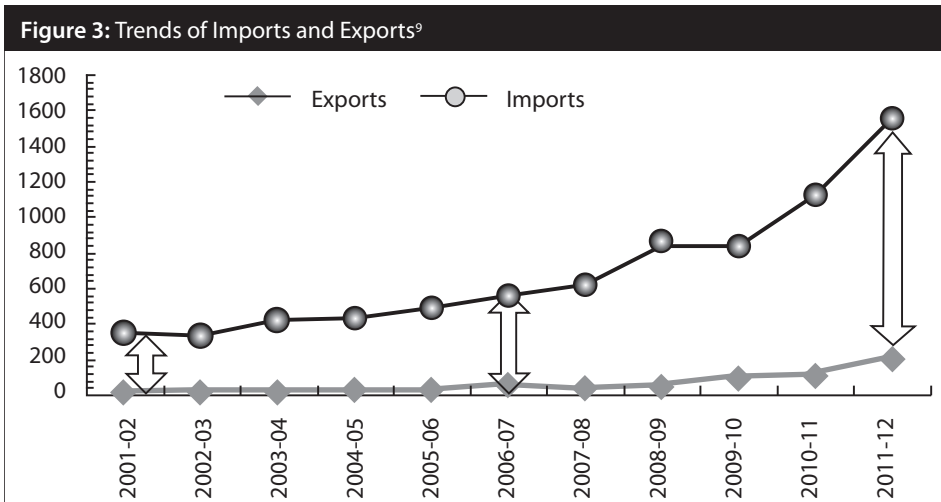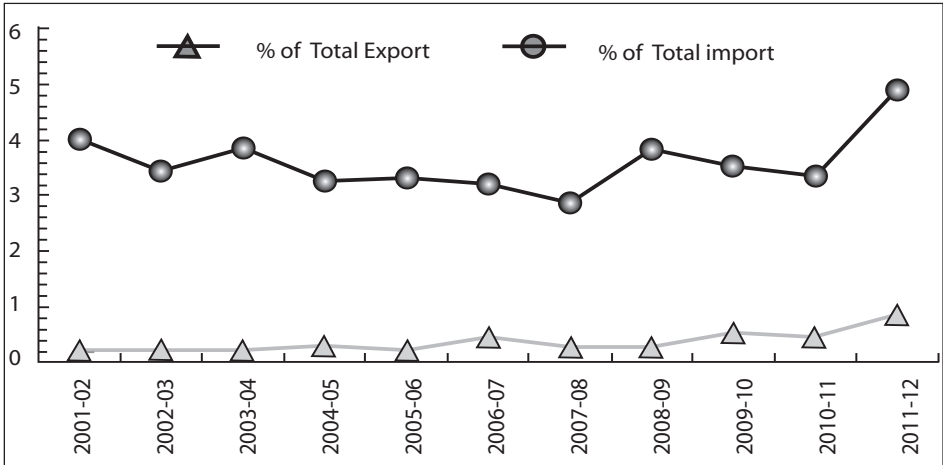
South Korea occupied the 3rd position as import source of Bangladesh in 2011-12, with US$1,550.7 million. It was the 20th export destination in the same year, with US$209.71 million. However, trade gap has been mounting. Bangladesh also witnessed significant flow of FDI, both 100 per cent and joint venture, which are employment intensive in nature. It is also becoming an important source of remittance albeit of small annual manpower export. Moreover, South Korea provides considerable foreign assistance, which is mostly in terms of loan.

In spite of recent impressive performance, South Korea remains a minor export destination of Bangladesh with only 0.87 per cent of total exports in 2011-12 and less than 0.5 per cent in most of the times (Table 3). In 2011-12, South Korea has superseded many developed countries to become the third highest import source of Bangladesh (around 4.9 per cent of total imports) surpassing Japan, Singapore and Hong Kong. However, the trade gap has been mounting increasingly disfavouring Bangladesh given the fact that the country has become unable to bridge this huge trade gap with its short export list.

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9 *Ibid.*

Table 3: Bangladesh's Major Trading Partners by Share in Total Trade (per cent)[10]

IMPORTS

	China	India	Singapore	Japan	Hong Kong	Taiwan	S Korea	USA	Malaysia	Others	Total
2001-02	10.28	11.93	10.20	7.67	5.16	3.65	4.05	3.06	1.70	42.30	100
2002-03	9.71	14.06	10.35	6.26	4.48	3.40	3.45	2.31	1.75	44.22	100
2003-04	10.99	14.69	8.36	5.06	3.97	3.46	3.85	2.07	2.34	45.21	100
2004-05	12.49	15.44	6.75	4.25	4.30	3.34	3.24	2.50	2.10	45.58	100
2005-06	14.10	12.67	5.76	4.41	4.25	3.21	3.32	2.34	2.05	47.90	100
2006-07	14.99	13.22	6.03	4.02	4.35	2.76	3.22	2.21	1.95	47.25	100
2007-08	14.50	15.69	5.89	3.85	3.80	2.21	2.87	2.27	2.09	46.85	100
2008-09	15.34	12.72	7.86	4.51	3.78	2.21	3.84	2.05	3.12	44.57	100
2009-10	16.09	13.54	6.53	4.41	3.32	2.28	3.53	1.98	5.19	43.13	100
2010-11	17.58	13.57	3.84	3.89	2.31	2.17	3.34	2.01	5.23	46.05	100
2011-12	20.50	15.10	4.70	4.60	1.90	2.40	4.90	2.30	4.40	39.20	100

EXPORTS

	USA	Germany	UK	France	Belgium	Italy	Netherland	Canada	S Korea	Others	Total
2001-02	37.07	11.38	10.82	6.91	3.53	4.38	4.73	1.84	0.22	19.12	100
2002-03	32.91	12.53	11.89	6.39	4.42	3.96	4.24	2.60	0.23	20.83	100
2003-04	25.87	17.08	11.81	7.27	4.30	4.16	3.82	3.74	0.25	21.70	100
2004-05	27.87	15.64	10.90	7.24	3.76	4.27	3.37	3.87	0.30	22.78	100
2005-06	28.79	16.76	9.96	6.44	3.41	4.04	3.11	3.86	0.21	23.42	100
2006-07	28.26	16.06	9.64	6.01	3.58	4.23	3.77	3.75	0.45	24.25	100
2007-08	25.45	15.41	9.74	6.75	3.46	4.10	4.63	3.78	0.27	26.41	100
2008-09	26.03	14.58	9.64	6.62	2.63	3.95	6.24	4.26	0.29	25.76	100
2009-10	24.38	13.50	9.31	6.33	2.41	3.85	6.28	4.12	0.56	29.26	100
2010-11	22.28	15.00	9.01	6.71	2.91	3.78	4.83	4.34	0.47	30.69	100
2011-12	21.07	15.24	10.10	5.70	3.06	4.04	2.68	4.10	0.87	33.14	100

[10] Author's calculation based on Ministry of Finance, 2012; Bangladesh Bank, 2012a; and Export Promotion Bureau of Bangladesh, 2012, *op.cit.*

As mentioned above, Bangladesh maintains a small basket of exports to South Korea. Unlike other most of the developed country destinations, as high as 35.07 per cent of export receipts are coming from raw hides and skins (other than fur skins) and leather (HS code 41), followed by woven garments (29.22 per cent). These two contribute nearly two-thirds of the country's export to South Korea. Knitwear is also in the list of top three, but its export share is considerably low — only about 9 per cent of total exports. However, only ten commodities at HS-2 code contribute more than 97 per cent to the total export basket, ranging from minerals, food items, footwear, tobacco, and toys besides textiles and clothing, and raw leather.

Table 4: Exports Items: HS-2 Code (2011-12)[11]			
SI	Items	US$	%
1	41: Raw hides and skins (other than fur skins) and leather	73,538,266	35.07
2	62: Articles of apparel, accessories, not knit or crochet	61,266,658	29.22
3	61: Articles of apparel, accessories, knit or crochet	18,745,851	8.94
4	74: Copper and articles thereof	15,838,865	7.55
5	53: Vegetable textile fibres n.e.s., paper yarn, woven fabric	9,587,657	4.57
6	64: Footwear, gaiters and the like, parts thereof	9,254,907	4.41
7	27: Mineral fuels, oils, distillation products, etc.	6,387,267	3.05
8	63: Other made textile articles, sets, worn clothing, etc.	5,418,843	2.58
9	24: Tobacco and manufactured tobacco substitutes	3,132,251	1.49
10	94: Toys, games, sports requisites	978,255	0.47
	Others	5,558,470	2.65
	Total (50 items)	209,707,288	100.00

At the highly disaggregated level (HS-8 code), it is revealed that only 20 products comprise more than 84 per cent of the total export volume. Like the above, tanned or crust hides and skins of bovine (HS 41044900) earns about 34 per cent of the total exports, followed by woven garments (men's or boys' jackets and blazers) and copper waste and scrap, which are together more than half of the total export receipts. This clearly indicates very high concentration of few items that may make the exports vulnerable to shocks in some top products.

Table 5: Exports Items: HS-8 Code (2011-12)[12]			
SI	Items	US$	%
1	41044900: Tanned or crust hides & skins of bovine (including buffalo)	71,158,384	33.93
2	62033300: Men's or boys' jackets & blazers, not knitted or crocheted	24,562,052	11.71

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[11] Export Promotion Bureau of Bangladesh, 2012, *op.cit.*

3	74040000: Copper waste & scrap	15,458,755	7.37
4	62034200: Men's or boys' trousers, bib & brace overalls, breeches & shorts	10,344,327	4.93
5	61091000: T-shirts, singlets & other vests, knitted or crocheted, of cotton	8,741,943	4.17
6	27090000: Petroleum oils & oils obtained from bituminous minerals, crude.	6,387,248	3.05
7	63062200: Tents of synthetic fibres	4,754,848	2.27
8	64041900: Footwear, (excluding sports footwear), with outer soles of rubber	4,515,405	2.15
9	64039900: Footwear With Rubber... Soles, Leather Upp	3,887,947	1.85
10	24012000: Unmanufactured tobacco, partly or wholly stemmed/stripped	3,132,251	1.49
11	53031000: Jute and other textile bast fibres, raw or retted	3,065,454	1.46
12	53039000: Jute & other textile bast fibres, other than raw or retted	2,802,866	1.34
13	62043300: Women's or girls' jackets & blazers, not knitted or crocheted	2,625,816	1.25
14	62034900: Men's or boys' trousers, bib & brace overalls, breeches & shorts	2,524,968	1.20
15	62019300: Men's or boys' anoraks (including ski-jackets), wind-cheaters, jackets	2,426,693	1.16
16	62052000: Men's or boys' shirts, not knitted or crocheted, of cotton	2,174,978	1.04
17	61109000: Jerseys, pullovers, cardigans, waist-coats & similar	2,161,504	1.03
18	62031900: Men's or boys' suits, not knitted or crocheted, of textile	2,080,427	0.99
19	61102000: Jerseys, pullovers, cardigans, waist-coats & similar articles	2,047,364	0.98
20	41079900: Other, including sides other than full grains, or grain splits leather	1,879,366	0.90
	Others	32,974,691	15.72
Total (278 items)		209,707,288	100.00

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[12] *Ibid.*

Unlike export combination, import items are more diversified as top ten items (HS-2 level) contribute about 76 per cent. Here, the raw materials, intermediate goods and capital machineries are most of the items of imports, which include iron and steel (25.1 per cent), followed by ships, boats and floating structures (14.7 per cent), paper and plastic items (13.7 per cent), boilers and machinery (5.7 per cent), and other minerals in the top items. It is important to note that the imported items play crucial role in Bangladesh's manufacturing sector, domestic value addition and export to the critical export destinations.

| SI	Items	Million US$	%
Table 6: Imports Items: HS-2 Code (2011-12)[13]			
1	Iron and steel	389.00	25.1
2	Ships, boats and floating structures	227.33	14.7
3	Paper and paperboard, articles of paper	115.98	7.5
4	Plastics and articles thereof	96.57	6.2
5	Salt, sulpher, earths and stone, plastering materials, lime & cement	91.86	5.9
6	Boilers, machinery and mechanical appliances	88.09	5.7
7	Zinc and articles thereof	87.30	5.6
8	Electrical machinery and equipment	36.41	2.3
9	Cotton (all types), cotton yarn / thread and cotton fabrics	28.48	1.8
10	Organic chemicals	22.02	1.4
	Others	367.66	23.7
Total (50 items)		1,550.70	100.00

3.2   *Investment from South Korea*

South Korea already invested considerably in the Export Processing Zones (EPZs), energy, RMG industry and infrastructure development sectors in Bangladesh. Now it is interested to increase its volume of investment in infrastructure, energy, RMG, textile and Information and Communication Technology (ICT). However, the new areas of investment include jute, leather, ICT and textiles.

Very recently, telecommunications and electronics giant Samsung group has expressed high interest to invest in Bangladesh for manufacturing Smart Phone in the country through setting up a factory. This investment is likely to generate employment for 50,000 people, which would also enhance consumers' welfare through bringing opportunity to export cell phone handsets and other accessories worth around US$ 1billion per annum.[14]

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[13] *Bangladesh Bank, 2012a, op.cit.*

South Korean Trade-Investment Promotion Agency (KOTRA) opened its office in Dhaka in 1978 since there was a strong demand for the promotion of trade and investment. South Korean entrepreneurs came to the country to set up garment factories in the late-1970s under Multi-Fibre Agreement (MFA) which provided unique opportunity to Bangladesh to establish RMG industry in order to export to the critical Western market. The boom of Bangladesh's RMG industry that mostly drives its economy is due to initial training from Korean Daewoo Corporation back in 1979.

Bangladesh is Korea's priority partner country when it comes to the development cooperation as it is the fourth largest recipient of Economic Development Cooperation Fund (EDCF) loan from Korea. Karnaphuli EPZ (KEPZ) in Chittagong, the first private EPZ in Bangladesh, expects to attract investment of US$1.3 billion from South Korea when it becomes fully operational.


Figure 4: FDI Inflows by Major Country during July-December, 2011 (million US$)[15]
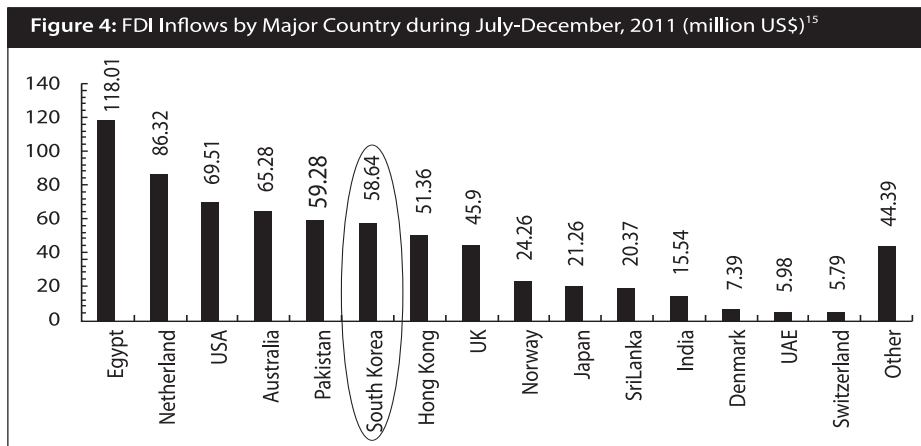
The stock of FDI from South Korea has been increasing steadily since early 2000s. From US$162.23 million in end-2000, it increased to US$390.24 million in end-2011. Thus, it grew at around 140 per cent and annually on average by 12.78 per cent. At end-December 2011, FDI inflow from South Korea was US$58.64 million, which was the 6th among the top investing countries. FDI flow remains one of the highest, 6.32 per cent of total in end-2011. However, the share of South Korean FDI is slightly on the decline, from 7.5 per cent in 2000 to 6.32 per cent in 2011.

If we closely observe the sectoral configuration, there is huge concentration of FDI in very few sectors. For example, majority of FDI in July-December 2011 came to Textiles and Apparel (47 per cent) and Bank (43 per cent). A small proportion of FDI also came in leather and leather products (7 per cent) and power (3 per cent).

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[14] Author's interview with an official of Samsung Group.
[15] Bangladesh Bank, *Foreign Direct Investment (FDI) in Bangladesh: Survey Report July-December, 2011,* Dhaka, 2012b.

Figure 5: Stock of FDI from South Korea[16]
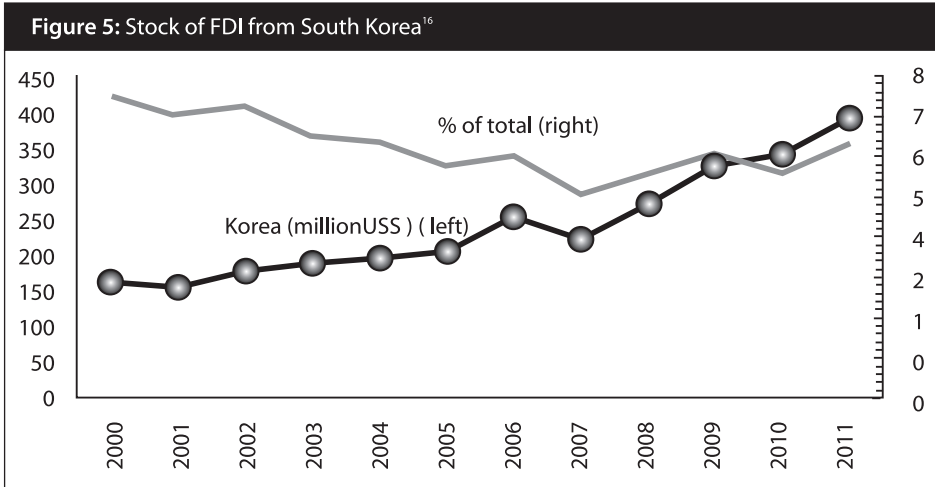
One of the major objectives of 'Vision 2021' and, therefore, the Sixth Five -Year Plan (2011-2015) of Bangladesh is to achieve inclusive or employment generating growth. And for that matter, the government is giving priority and facilities to Small and Medium Enterprises (SMEs) which are employment-intensive. Textiles and apparel sector is also labour-intensive in nature. We see that the largest FDI came in the latter sector, which is in line with the national vision.

Figure 6: FDI inflow by sector (July-December 2011) [17]
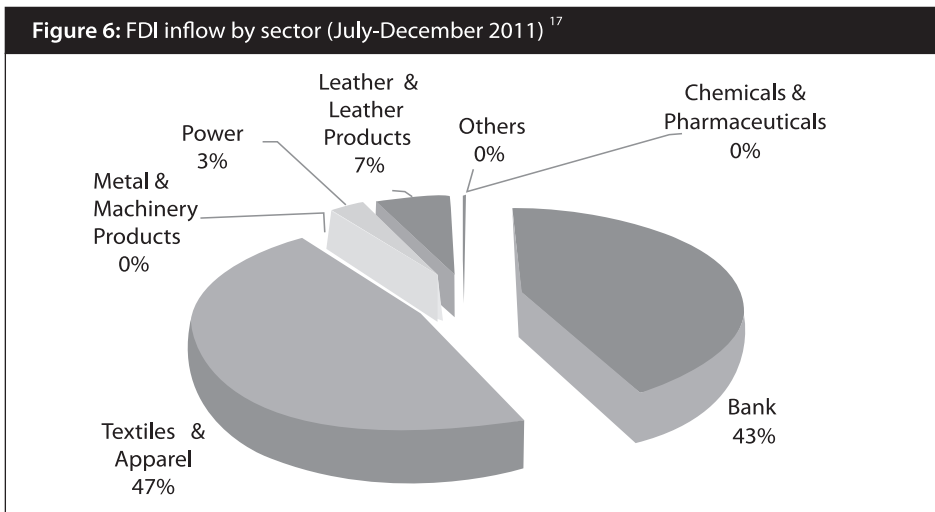
If the FDI inflow during 1977-2010 is considered, the 100 per cent FDI from South Korea was the 8th and joint venture was the 14th top in terms

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[16] Calculation from Bangladesh Bank data, *ibid*.

of volume of investment. However, both 100 per cent and joint venture investments show that the investment-labour ratio is the lowest among the top investing countries, which clearly indicates that the investment from South Korea is the most employment-generating among the top investing countries.

| Table 7: FDI and Employment by Top Countries (1977-2010)[18]				
Country	No of units	Investment (I) (US$ million)	Employment (L)	I/L
FDI (100%)				
UAE	6	2,229.9	6,513	0.342
Saudi Arabia	4	1850.4	2,154	0.859
UK	45	952.0	26,194	0.036
USA	23	735.4	3,881	0.189
Netherlands	7	351.2	595	0.590
Egypt	2	177.2	243	0.729
Malaysia	7	162.0	833	0.194
South Korea	88	123.7	46,089	0.003
India	43	93.8	7,982	0.012
China	54	55.6	7,071	0.008
Top	10 279	6,731.20	101,555	0.066
Total	418	7,012.77	141,957	0.049
JOINT VENTURE				
Saudi Arabia	10	2275.7	2,373	0.959
Norway	5	1651.7	2,525	0.654
USA	95	1045.7	18,857	0.055
Japan	98	911.4	14,108	0.065
UK	111	687.7	32,967	0.021
Malaysia	37	569.5	7,998	0.071
Hong Kong	58	309.3	13,329	0.023
Singapore	57	294.2	7,848	0.037
France	19	274.4	4,174	0.066
Netherlands	37	228.5	11,012	0.021
UAE	22	223.9	4,616	0.049
Germany	44	200.3	11,642	0.017
China	93	188.2	21,271	0.009
South Korea	98	175.4	21,222	0.008

[17] Based on Bangladesh Bank, 2012b, *op. cit.*
[18] Board of Investment, Foreign Direct Investment in Bangladesh (1971-2010), Dhaka, 2011.

| Top 14 | 784 | 9,035.8 | 173,942 | 0.052 |
| Total | 1,179 | 10,172.47 | 259,207 | 0.039 |

3.3   *Manpower Export*

There is a growing trend of manpower export to South Korea. The country, however, requires more skilled and semi-skilled workers than low-skilled ones, which has resulted in comparatively low manpower export although the workers send considerable amount of foreign currency. Since Bangladesh already has government to government (G-2-G) agreement with the South Korean government, workers can be exported at low migration cost.

Figure 7: Manpower Export to (top) and Remittance (million US$) (bottom) from South Korea[19]
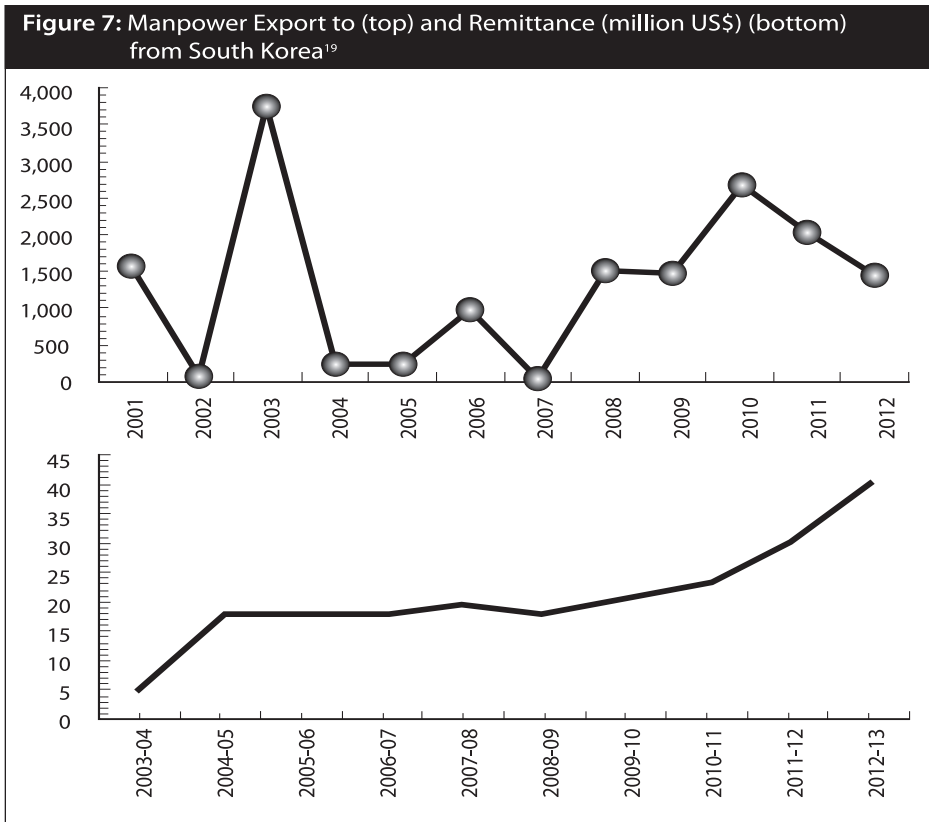
  Between 1994 and 2012, a total of 27,581 workers have been exported to South Korea, which was 0.35 per cent of total manpower export. We can observe fluctuations in the yearly manpower export to this country. Nevertheless, the trend of

[19] Bangladesh Bank, *Economic Trends,* Dhaka, March 2013. In 2012-13, data are up to January 2013.

remittance from Korea is becoming significant and is on the rise. It was more than US$ 40 million in July 2012 to January 2013. The growth of remittance flow has marked steady increase since 2009-10 and it significantly surpassed the annual inflow of 2011-12 in just first seven months of the current fiscal year.

4.   Development Partnership

As mentioned earlier, South Korea has long been Bangladesh's one of the key development partners. Bangladesh receives mostly credit in soft terms. Even though there is annual gap between commitment and disbursement, it is evident that in many years considerable loans have been received which were not committed.

Table 8: Commitment and Disbursement of Foreign Aid from South Korea (Million US$)[20]										
	COMMITMENT					DISBURSEMENT				
	Food	Comm-odity	Project		Total	Food	Comm-odity	Project		Total
			Grant	Loan				Grant	Loan	
1996/97	-	-	-	31.274	31.274	-	-	0.640		0.640
1997/98	-	-	-	-	-	-	-	0.360	0.158	0.518
1998/99	-	-	-	-	-	-	-	-	19.042	19.042
1999/00	-	-	-	-	-	-	-	-	8.555	8.555
2000/01	-	-	-	-	-	-	-	-	0.443	0.443
2001/02	-	-	-	-	-	-	-	-	-	-
2002/03	-	-	-	58.000	58.000	-	-	-	-	-
2003/04	-	-	1.000	20.000	21.000	-	-	-	9.441	9.441
2004/05	-	-	-	-	-	-	-	-	-	-
2005/06	-	-	-	51.000	51.000	-	-	-	4.465	4.465
2006/07	-	-	-	-	-	-	-	-	14.896	14.896
2007/08	-	-	7.860	28.000	35.860	-	-	-	9.707	9.707
2008/09	-	-	-	-	-	-	-	-	4.530	4.530
2009/10	-	-	-	-	-	-	-	-	20.069	20.069
2010/11	-	-	-	-	-	-	-	3.605	70.990	74.595
2011/12	0.000	0.000	9.500	73.530	83.030	0.000	0.000	0.000	60.136	60.136

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[20] Economic Relations Division, *Flow of External Resources into Bangladesh,* Ministry of Finance, Government of Bangladesh, Dhaka, 2013.

Bangladesh has been receiving financial and technical assistance from EDCF at soft interest rate since 1987. The interest rate is 0.01 per cent per annum which has to be paid in 40 years with 15 years of grace period. The government generally signs Framework Agreement of US$200-300 million for assistance of 2-3 years. However, further agreements are signed under this agreement later on. So far, 14 loan agreements have been signed for 15 projects.

Table 9: Terms of EDCF Loan[21]		
Terms		Description
Interest rate	:	0.01% (simple)
Repayment period	:	40 years (15 years grace period)
Service charge	:	0.1%
Overdue charge (penal)	:	Additional 2% with interest
Interest payment	:	Every 6 months
Service & supply	:	Limited competitive bidding among Korean companies
Loan repayment	:	Semi-annual equal installment after 15 years grace period
Currency	:	Through South Korean won equivalent to US dollar

The government of Bangladesh has signed three important agreements with South Korea under EDCF in the just concluded fiscal year 2011-12. These included modernisation of railway signaling and interlocking system, well field construction and salvage vessels. These are likely to contribute significantly in improving public transportation in enhancing welfare of relevant passengers and people moving through rivers and seas.

Table 10: Three Agreements in 2011-12[22]	
Project Title	Cost (Million US$)
Replacement & Modernisation of Railway Signaling & Interlocking System at 11 Stations of Bangladesh Railway	22.00
Well Field Construction Project at Tetulzhora-Bhakurta area of Savar Upazila (Part-1)	45.00
Salvage Vessel Procurement by Supplementary Loan	6.533
Total	73.533

There were four important projects that have already been completed so far under EDCF. These include increasing water security in the drought-prone zone like Chittagong, and maritime security through distress and safety system as well as introducing integrated maritime navigation system. A very important contribution was made towards introducing digital land management system, which is a long discussed and expected system in the Ministry of Land for eliminating land related disputes and conflicts.

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[21] *Ibid.*

Table 11: Four Committed Projects[23]		
Sl.	Project Title	Cost (Million US$)
1	Global Maritime Distress and Safety System (GMDSS) and Integrated Maritime Navigation System (IMNS)	37.50
2	Installation of Wireless Broadband Network for Digital Bangladesh	77.50
3	Bhandar Juri Water Supply Project of Chittagong WASA	58.50
4	Digital Land Management System/Ministry of Land	15.50
	Total	218.00

The areas of cooperation in Country Partnership Strategy 2013-2014 of South Korea are:

- Promoting economic development and social welfare through the expansion of energy, water supply and drainage infrastructure.

- Improving accessibility and quality of maternal and child health services.

- Enhancing national competitiveness through human resource development.

- Enhancing productivity and transparency of the public administration through e-Government and capacity building.

Table 12: Agreement with KOICA on draft contracts for 5 Projects[24]	
Project Title	Cost (Million USD)
Establishment of National Institute of Advance Practice Nurses in Bangladesh	12.84
Establishment of IT Labs in Secondary Schools in Dhaka District	3.53
Enhancing Cyber Crime Investigation Capability of Bangladesh	3.00
Establishing Data Center & Web-Portal System for Digital BRTA	2.00
Total	**21.37**

Under the aegis of Korean International Cooperation Agency (KOICA), bilateral Memorandum of Understanding (MoU) was signed on 16 June 1993. Under this MoU, a total of US$31.44 million was granted for 16 projects up to 30 June 2012. Ten projects worth US$17.14 million have already been completed. These projects are expected to contribute in enhancing capacity of Bangladesh Rice Research Institute (BRRI), introducing ICT-based education system and spreading technical education in Bangladesh.

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[22] *Ibid.*
[23] *Ibid.*

South Korea is also offering generous support to Bangladesh in voluntary service and training for long. Korean volunteers and physicians come and stay for around two years under World Friends Korea. It covers health, rural development, ICT development and training of Korean language. Now nearly 70 physicians are serving Bangladesh voluntarily. KOICA invites many Bangladeshis from various sectors every year and around 100 officers are being trained. It contributes significantly in human resource development (HRD).

5. Examining the Trade Potential

5.1 *Export Potential in South Korea*

It is believed that Bangladesh has huge untapped export potential to South Korea, which should be realised through removing behind and beyond the border constraints. To understand this particular aspect, stochastic frontier gravity model has been adopted that captures trade resistances beyond and behind the border by bifurcating the error term of an augmented gravity model. The inclusion of a non-negative unobservable term in this model helps capture unobservable and manmade resistances to trade and barriers.

Drawing on Kabir[25] and Salim *et al.*[26], the nature of the stochastic frontier problem of Bangladesh's exports has been explained as follows. Suppose that the export function is $f(x_{ij,t}, \beta)$, where $x_{ij,t}$ is the vector of economic, geographic, social and institutional factors that influence exporters i and importers j at time t, and β is the vector of unknown parameters. Now the following gravity equation has been adopted to examine the potential of Bangladesh's exports in line with the functional form of the exports frontier:

$$\ln \text{EXP}_{ij,t} = a_0 + a_1 \ln \text{TGDP}_{ij,t} + a_2 \ln \text{RFE}_{ij,t} + a_3 \text{SIM}_{ij,t} + a_4 \ln \text{DIST}_{ij} + a_5 \ln \text{RER}_{ij,t}$$

$$+ a_6 \text{BOR}_{ij} + a_7 \text{SAARC}_{ij,t} + v_{ij,t} - u_{ij,t} \qquad (1)$$

where $EXP_{ij,t}$ is the scalar of observed exports from Bangladesh i to destination (including South Korea) j at time t (in US dollars). In Equation (1) $DIST_{ij}$ indicates the distance between i and j, and BOR_{ij} and $SAARC_{ij,t}$ imply common border (1 = if Bangladesh and j share border; 0 = otherwise) and membership in SAARC's preferential trading arrangement or free trade area (1 = if a country is a member; 0 = otherwise), respectively. The stochastic error term, $v_{ij,t}$, a two-sided normally distributed variable, represents the random exogenous shocks to the exports processes. $u_{ij,t}$ is a stochastic variable that follows a non-negative distribution. The technical efficiency term $u_{ij,t}$ is time-varying. In the simplest specification, $u_{ij,t}$ is a time-invariant truncated normal random variable, and $u_{ij,t}$ and $v_{ij,t}$ are distributed independently. Moreover,

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[24] *Ibid.*

$$TGDP_{ij,t} = TGDP_{i,t} + TGDP_{j,t}$$

$$RFE_{ij,t} = |\ln PGDP_{i,t} - \ln PGDP_{j,t}|$$

$$SIM_{ij,t} = 1 - \left(\frac{\ln(GDP_i)}{\ln(GDP_i + GDP_j)}\right)^2 - \left(\frac{\ln(GDP_j)}{\ln(GDP_i + GDP_j)}\right)^2$$

RFE_{ij} takes a minimum of zero if both countries exhibit equal GDP or production. The range of *SIM* is given by, $0 \leq SIM_{ij} \leq 0.5$; where 0.5 means 'equal' and zero implies 'absolute divergence' in country size. In a 'factor box representation' of trade model[27], *TGDP* can be related to the length of the diagonal of the box, *SIM* with the location of the consumption point along the diagonal, and *RFE* to indicate the distance between production and consumption points along the relative price line.[28]

$$RER_{ij,t} = ER_{ij,t} (P_{j,t} / P_{i,t})$$

where $P_{i,t}$ and $P_{j,t}$ are price levels of Bangladesh and destination countries respectively. $ER_{ij,t}$ is the bilateral nominal exchange rate between the currencies of foreign country *j* and Bangladesh *i*. An increase in the bilateral real exchange rate reflects depreciation of the importer's currency against that of the exporters. Thus, the coefficient of *RER* is expected to be positive in the exports panel.

In order to construct the panel data of Bangladesh's exports for the period of 1980-2010, the sample countries are drawn from all the destination countries of Bangladesh's exports by posing a quantitative criterion — the countries should have 0.2 per cent of its total world exports to the individual partner country. This criterion has helped identify the major export destination.

The Maximum Likelihood estimates of gravity equation (1) have been presented in Table 13 for Bangladesh's exports. *TGDP* turns out to be positive as expected. The positive but insignificant *RFE* indicates absence of *Linder* effect in exports of Bangladesh. However, positive and significant *SIM* indicates that the pattern of exports follows New Trade Theory if it performs at the frontier.

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[25] M. Kabir, 2010, *op. cit.*

[26] R. Salim, M. Kabir and N. al Mawali, "Does More Trade Potential Remain in Arab States of the Gulf", *Journal of Economic Integration,* Vol. 26, No. 2, 2011, pp. 217-243.

[27] The 2×2×2 trade model is comprised of two goods (differentiated and homogenous), two factors (capital and labour), and two countries (importer and exporter).

[28] P. Egger, "A Note on the Proper Econometric Specification of the Gravity Equation", *Economics Letters,* Vol. 66, No. 1, 2000, pp. 25-31

Table 13: Results of the Stochastic Frontier Gravity Model[29]			
	Coefficient	Standard Error (Robust)	P > |z|
lnTGDP$_{ij,t}$	2.643	0.167	0.000
lnRFE$_{ij,t}$	0.150	0.157	0.340
SIM$_{ij,t}$	13.009	1.365	0.000
lnDIST$_{ij}$	-1.691	0.724	0.020
lnRFR$_{ij,t}$	0.156	0.046	0.001
BOR$_{ij}$	-2.169	1.009	0.032
SAARC$_{ij,t}$	0.032	1.798	0.986
Constant	-41.418	7.140	0.000
Country: 35			
Time Period: 1980-2010			
Wald χ^2	445.25		
Prob> χ^2	0.000		
μ	-3.535	9.295	0.704
ln(σ^2)	2.721	1.140	0.017
ilgt(γ)	1.746	1.339	0.192
Log likelihood	-1,608.55		

The sign of DIST is negative and significant, which indicates that distance elasticity of exports is negative, i.e., greater distance of destination country discourages exports from Bangladesh. It is negative and significant at 5 per cent level in the exports panel. RER takes the desirable sign, which indicates that a real depreciation increases exports. The variable BOR takes the unexpected sign indicating that common border with India decreases Bangladesh's exports in the long run.

To calculate Bangladesh's export potential, suppose that β_k^* are the estimates of parameters of the potential gravity function that yields the highest possible export from Bangladesh to destination countries in the following way:

$$\beta_{k,t}^* = \max_j \left(\hat{\beta}_{kj,t} \right) , \qquad j = 1, 2, \ldots, n; t = 1, 2, \ldots, T; k = 1, 2, \ldots, K \qquad (2)$$

Based on the regression estimates, export potential between countries, i and j, can be worked out by the following ratio:

$$PE_{ij,t} = \frac{EXP_{ij,t}}{\exp(\ln EXP_{ij,t}^*)} \qquad\qquad (3)$$

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[29] Author's estimation.

where EXP$_{ij,t}$ is the realised exports and   is the export predicted from the significant coefficients of Equation (1) that yields the maximum possible export following 'fewer' behind the border constraints. $PE_{ij,t}$ denotes the index of potential export that varies between 0 and 1.

Sl.	Country	% Unrealised	Sl.	Country	% Unrealised
	Table 14: Country Ranking in Realisation of Export Potential[30]				
1.	Greece	72	19.	Germany	16
2.	Bhutan	56	20.	Australia	16
3.	Singapore	49	21.	France	16
4.	South Korea	46	22.	India	15
5.	Japan	46	23.	Spain	14
6.	Saudi Arabia	45	24.	Hong Kong	14
7.	Ireland	31	25.	UK	13
8.	Austria	31	26.	Sweden	12
9.	Russia	30	27.	USA	12
10.	Nepal	28	28.	Italy	11
11.	Finland	28	29.	Netherlands	9
12.	Poland	26	30.	Pakistan	9
13.	South Africa	26	31.	Belgium	7
14.	Norway	25	32.	Mexico	6
15.	Denmark	25	33.	Sri Lanka	4
16.	Iran	24	34.	Brazil	1
17.	Turkey	22	35.	Canada	1
18.	Switzerland	18			

The trend of realisation of Bangladesh's export potential over time has been displayed in Table 14. However, 43 per cent export potential is unrealised in the first ten countries where export potential is highly unutilised. Amongst these countries Greece, Singapore, South Korea, Japan, Saudi Arabia, Ireland, Austria and Russia are big markets where Bangladesh can significantly expand its exports, varying from 30 to 72 per cent. In South Korea, the long-term untapped export potential is as high as 46 per cent. It means that Bangladesh can increase export to South Korea significantly by removing behind the border constraints such as infrastructural and institutional barriers.

5.2   Benefits of Free Trade Area (FTA)

In order to understand the possible benefits of free trade with South Korea, Global Trade Analysis Project (GTAP) model has been applied. The GTAP model is a popular simulation tool, which is based on multi-region computable general equilibrium (CGE) model.[31] In the standard model, all markets are assumed to be perfectly competitive. The regional government can drive wedges between prices of the producers and consumers by imposing taxes and subsidies on commodities and

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[30] Author's estimation.

factors. Buyers differentiate between home-grown and imported goods, and also different sources of imports by region of origin. Investment in each region comes from a global pool of savings wherein each region contributes a fixed proportion of its income. Investment allocation is made according to the existing relative rates of return.[32]

Table 15: Commodity Decomposition of Change in Trade Balance due to a Potential FTA[33]		
Commodity Group	South Korea	Bangladesh
Grains Crops	4.37	7.27
Animal and Meat	4.11	0.13
Extraction	-24.9	-3.32
Processed Food	3.89	0.86
Textiles & Apparel	-244.3	-61.16
Light Manufacturing	-33.19	59.94
Heavy Manufacturing	227.44	43.68
Construction Services	0.51	0.03
Transport & Communication	25.78	0.99
Other Services	36.27	3.38
Total	-0.02	51.8
Excluding Textiles & Apparel	244.28	112.96

The simulation analysis suggests that welfare effect of a Bangladesh-South Korea FTA has been found to be negative, for Bangladesh it would be US$32.64 million and for South Korea it would be US$106.51 million. It would be mainly because of loss of allocative efficiency in both the countries due to the existing government support at production level. GDP growth effect would also be slightly negative—for Bangladesh it would be 0.02 per cent and for South Korea it would be 0.06 per cent.

On the contrary, the trade balance or net exports, defined to be the difference between the monetary value of exports and imports in an economy over a period of time, has been found to be positive for Bangladesh but unchanged for South Korea in the case of Bangladesh-South Korea FTA. However, if the sensitive textiles and wearing apparel sector is taken aside, the trade balance effect would be positive and significant; for South Korea and Bangladesh it would be US$244.28 and 112.96 million, respectively. Thus, there is an avenue for bilateral FTA taking aside adversely affecting sectors.

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[31] T. W. Hertel (ed.), *Global Trade Analysis: Modeling and Applications,* Cambridge: Cambridge University Press, 1997.
[32] M. Siriwardana and J. Yang, "GTAP Model Analysis of the Economic Effects of an Australia-China FTA: Welfare and Sectoral Aspects", *Global Economic Review,* Vol. 37, No. 3, 2008, pp. 341-362.
[33] Author's simulation.

6.   Way Forward

Trade and investment would be the most important areas that should be harnessed in the near future and build on successes so far in the last four decades of economic partnership. There should be reforms in the trade regimes so that tariff barriers are minimised to enhance consumer welfare of both the countries. In doing so, there is a need for preferential market access of Bangladeshi products in South Korea through further liberalisation, which would help in reducing the mounting trade deficit disfavouring Bangladesh.

Informal communications and discussions with South Korean investors and officials reveal that Korean giant corporate like Samsung want one more private EPZ, which would be in addition to KEPZ in Chittagong. The Bangladesh government should assess Korea's demand for required infrastructure. In removing infrastructural barriers and energy deficiency Bangladesh can learn from Korean good practices.

Bangladesh will need significant expansion of physical infrastructure as per 'Vision 2021' to graduate to a middle income country from a least developed one. Here, opportunities of huge Korean interest in construction sector (*e.g.*, Samsung construction) may be utilised. The other key recommendations for further strengthening bilateral relations and building on past successes would be as follows:

- Increase KOICA's grant.

- Attract investment in research and development (R&D).

- Utilise opportunities in Korea in education and HRD. Further training facilities should be explored in agricultural R&D, bio-technology, ICT, light and heavy manufacturing, and extraction sectors.

- Strengthen cooperation in science and technology.

- Establish heavy manufacturing plants with support from Korean technology and big manufacturing industries.

- Address institutional, *e.g.*, entry and institutional barriers.

- Strengthen G-2-G cooperation in manpower export for exploring further opportunities.

- Reduce risks and uncertainties as well as confrontations to reap maximum benefits to facilitate attaining double-digit growth and developmental targets.

7.   Concluding Remarks

The paper tries to assess the forty years of diplomatic relations between Bangladesh and South Korea from economic perspectives. It reveals that South Korea, one of Asian Tigers and OECD members, has turned out to be a critical trading partner of Bangladesh. It has become the third largest import source and twentieth top export destination of Bangladesh. Since Bangladesh is importing raw materials, intermediate goods and capital machineries from South Korea, it is regarded as manufacturing friendly trade outcome but the mounting trade deficit has become of critical concern for Bangladesh. Given this context, it is important for the country to look for preferential market access in South Korea through pursuing further liberalisation. The FDI from South Korea has also been significant over the years. Both the full FDI and joint ventures have been found to be the most employment intensive, which is in line with the government's inclusive growth strategy. Therefore, further investment potential should be tapped through institutional reforms and reducing infrastructural rigidities among others. South Korea has also been one of the top development partners for long but the assistance is coming mainly as loan. The Bangladesh government can pursue KOICA for attracting more grants. Finally, there is a need for attracting investment and assistance in R&D, science and technology, industrial development and HRD for developing knowledge-based economy in Bangladesh.