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Regional Trade in a Changing World: The Case of SAFTA

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Regional Trade in a Changing World

The Case of SAFTA

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Abstract-There has been a surge of economic populism in recent times, leading towards more protectionist policies in UK and USA. One of the major factors behind this change in policy paradigm, from an economic perspective, is the low to negative impact of trade liberalization through regional integration and other agreements on economic welfare, as perceived by the people of the respective countries. Generally, trade gains translate into economic growth; so regional trading agreements would need to be beneficial in terms of trade gains for the respective countries in order to increase economic welfare. Through the application of the gravity model of international trade, this paper tries to find out whether the South Asian Free Trade Area (SAFTA) has been beneficial in terms of trade balance improvement in four of the biggest economies of South Asia – India, Pakistan, Bangladesh and Sri Lanka. The findings suggest that even after ten years of SAFTA, regional trade is low, and SAFTA has had a positive effect only on the trade balance of India. Hence, this situation needs to be improved through lowering of tariff and non-tariff barriers and increased investment in connectivity, otherwise, given the current rise in protectionism in the world, there is a probability of events such as Brexit occurring in this region.

Keywords- SAFTA, regional trade, Brexit, Impact of SAFTA, India, Pakistan, Bangladesh, Sri Lanka, South Asia

I. INTRODUCTION

Over the past year, the world has witnessed a rise in economic populism in two of the biggest economies in the world – the United Kingdom and the United States of America (USA). Both the countries are slowly moving towards a more protectionist stand, signified by Britain's exit from the European Union (EU) (popularly known as Brexit) and USA's pulling out from the Trans Pacific Partnership (TPP). Given that these countries, especially USA, have been the main proponents of free trade, this sudden change has significant implications not only on trade, but on the concept and perception of multilateral trade itself.

Many reasons for these radical changes in the two countries have been cited – from immigration to falsified information. From an economic point of view, one of the main

reasons behind this shift in policy paradigm in the two countries is the distrust in multilateral trade. The perceived benefit from multilateral trade has proved to be quite significant in this case, where the concern of losing jobs dominated any other economic consideration. So, these events indicate the inevitable – the trade benefits, especially in the sectors employing the most labor, are important in determining the sustainability and success of multilateral trade agreements, as trade benefits generally translate to economic growth and improvements in economic conditions. In this backdrop, there is a need to analyze the impact of the South Asian Free Trade Area (SAFTA) in order to find out its trade benefits, such that future mistrust in multilateral trade in this region can be prevented.

The South Asian Free Trade Area (SAFTA) was formed in 2004 to increase trade among the South Asian countries,. However, the South Asian countries have been careful in embracing free trade, as is evident from their sensitive lists, i.e. a list of products for which countries would not lift tariff barriers in order to protect their own industries. The South Asian countries have been revising the lists periodically, but true free trade among the South Asian countries is yet to be established.

To this end, this paper tries to find out the trade benefits of SAFTA in four biggest economies of South Asia, namely, India, Pakistan, Bangladesh and Sri Lanka. More precisely, this paper tries to find out just how SAFTA has benefited the four countries in terms of merchandise trade, which, in turn, would reveal whether any of the four countries would have an incentive to move towards protectionist policies and pull out of SAFTA. Trade gains are important because they constitute the first step towards economic welfare in the countries, which, in turn, shape public opinion towards regional trade. This paper focuses only on merchandise

trade, i.e. merchandise export and import flows, and tries to find out the impact of SAFTA on trade in the four countries under study.

II. LITERATURE REVIEW

Recently, there have been a lot of analyses regarding the factors that led to the recent moves towards protectionism in the UK and the USA recently. There have been many studies that have tried to explain the public attitude towards the EU in UK[1]. However, a concise explanation can be found in Clarke, Goodwin and Whiteley (2016), who, from their review of literature, identified the 'importance of cost-benefit calculations, feelings of attachment to a wider community and cues from political elites' as the reasons for Brexit. Here, cost benefits analysis refers to the benefits from remaining in EU and leaving the EU. In fact, they suggest that personal gains and costs were one of the primary factors behind the public's decision to leave the EU. Similar causes have been identified for movement towards protectionism in USA, where economic conditions were one of the major determinants (Schaffner, MacWilliams and Nteta, 2017). Hence, there is agreement among the body of literature that if there is no perceived improvement in economic conditions due to trade liberalization, then countries have moved towards protectionism; and the primary step towards economic condition improvement from trade liberalization is through improvements in trade balance. So, for SAFTA to sustain in future, a primary condition would be the improvement in trade balance of the member countries.

There is a sizable literature on the potential of SAFTA. Ex-ante evaluations of SAFTA have not generated much optimism. Bandara and Yu (2003) surveyed early studies of the impact of a potential SAFTA and classified them into three views: optimistic, pessimistic, and moderate. The

[1] See Eichenberg and Dalton, 1993; Franklin, Marsh and McLaren, 1994; Gabel and Whitten, 1997; Gabel, 1998; Hooghe and Marks, 2005, Maier and Rittberger, 2008; Armingeon and Ceka, 2014), among others.

authors describe Pigato et al. (1997) as optimistic; their results from a global computable general equilibrium (CGE) model predict that SAFTA would benefit significantly small economies in the region and have a positive effect on South Asian regional integration. Panagariya (1999), of the pessimistic view, considers SAFTA undesirable because it would be largely trade diverting and, consequently, efficiency reducing given that it is doubtful that SAFTA members are the most efficient suppliers for SAFTA countries. The pessimistic argument is developed further in a more recent study by Baysan, Panagariya, and Pitigala (2006), where the authors identify three features of SAFTA economies that make the free trade area economically unattractive: the economies are relatively small in relation to the world in terms of gross domestic product (GDP) and trade flows; the high levels of protection among SAFTA members, with the exception of Sri Lanka, mean that the countries will suffer from trade diversion given that member countries currently trade outside the SAFTA region; and, finally, excluded sectors in the sensitive lists and strict rules of origin lead to sectoral biases that could be exploited by powerful domestic lobbies to resist outside competition. Srinivansan and Canonero (1995) hold a more moderate view; they believe that a South Asian agreement would hold potential gains for the region although less than those from unilateral liberalization. Also in this group, DeRosa and Govindan (1996), focusing on the impact of trade liberalization in South Asia on food and agriculture, use the Armington system of bilateral trade demands in a partial equilibrium framework and examine alternative approaches to trade liberalization within the SAARC region. Their results show that although SAPTA leads to expansion of intraregional food trade, broader trade liberalization with other parts of the world may increase welfare gains significantly.

Raihan and Razzaque (2007) used the global general equilibrium model (GTAP model) in explaining the welfare effects of any regional trading arrangements. The authors ran two simulations for two scenarios: SAFTA1 and SAFTA2. Under SAFTA1 scenario, all member

countries eliminate their intraregional tariffs and keep their tariffs with the rest of the world unaffected. In the scenario SAFTA2, in addition to SAFTA1, Bangladesh eliminates her tariffs for the rest of the world by 50 percent. They conclude that Bangladesh would incur a net welfare loss from the SAFTA1 scenario. However, all other South Asian countries would gain from SAFTA1. The gain for India would be the largest as far as any individual country is concerned. In contrast to SAFTA1 under SAFTA2, the negative trade diversion effect of SAFTA1 for Bangladesh would be eliminated to a large extent, and the trade creation effect would be large enough to offset the trade diversion effect. As a result, there would be a net welfare gain for Bangladesh. However, World Bank (2016) suggests that the level of integration in South Asia is still very low, and there is a lot of room for improvement.

This paper actually aims at finding out whether there are any positive effects of SAFTA membership in the four largest economics of South Asia, namely, India, Pakistan, Bangladesh and Sri Lanka, which would be its own contribution in the literature. This is important because if there are no positive effects, there is low possibility of economic welfare gains, and in that case, countries may pull out of it like UK and USA. Given the current rise in protectionism in the world, this possibility is probably not farfetched.

III. METHODOLOGY

This paper would analyze the effect of SAFTA on mainly four variables – total imports, total exports, apparel and textiles exports and imports. This analysis would be carried out on data from India, Pakistan, Bangladesh and Sri Lanka separately. These economies have been chosen because they are the biggest economies in South Asia. The main target here is to find out any indication of gains in exports or imports due to SAFTA membership, and whether there is any imbalance in these gains which would cause countries to lose trust in regional trading.

Now, a simple way of measuring the effect of SAFTA on total exports, as well as imports, is to compare the data before and after the formation of SAFTA. However, a problem with this approach is that if only the total trade is compared, then that can give misleading results. However, a much more precise way to find out the effect of a regional trading agreement like SAFTA is to estimate a gravity model. Generally, gravity models are estimated on a cross section of 150 to 200 countries, or are sometimes estimated using panel data of several years for at least a hundred countries. In case of estimating the impact of free trade areas (FTAs), countries other than those included in that FTA are included in the sample just to find out whether inclusion of countries in that FTA has caused any significant change or not. So, a large sample of other countries is included for comparison purposes.

In its general formulation, the gravity equation has the following multiplicative form:

$$X_{ij} = GS_i M_j \phi_{ij} \quad \ldots\ldots\ldots\ldots\ldots\ldots (1)$$

where X_{ij} is the monetary value of exports from i to j, M_j denotes all importer-specific factors that make up the total importer's demand (such as the importing country's GDP) and S_i comprises exporter-specific factors (such as the exporter's GDP) that represent the total amount exporters are willing to supply.

Given the multiplicative nature of the gravity equation (as shown in equation 1), the standard procedure for estimating a gravity equation is simply to take the natural logarithms of all variables and obtain a log-linear equation that can be estimated by ordinary least squares regression (clearly easier than non-linear estimation methods). Early applications of the gravity equation – Tinbergen (1962), Linnemann (1966), Aitken (1973), and Sapir (1981) – assumed a specification similar to that used in McCallum (1995):

$$\ln \mathbf{X}_{ij} = \beta_0 + \beta_1 \ln \mathbf{GDP}_i + \beta_2 \ln \mathbf{GDP}_j + \beta_3 \ln \mathbf{DIS}_{ij} + \beta_4 \mathbf{EIA}_{ij} + \varepsilon_{ij}$$

where X_{ij} is the monetary value of exports from country i to country j, *GDPi* denotes the GDP of country *i*, *GDPj* denotes the GDP of country *j*, EIA_{ij} is a dummy variable which is equal to 1 if both the importing and exporting countries are members of an economic integration agreement or not, and DIS_{ij} represents the bilateral distance between the countries.

Hence, for analyzing the effect of SAFTA, the following equation would be estimated –

$$\ln \mathbf{X}_{ij} = \beta_0 + \beta_1 \ln(\mathbf{GDP}_i * \mathbf{GDP}_j) + \beta_2 \ln \mathbf{DIS}_{ij} + \beta_3 \mathbf{SAFTA}_{ij} + \varepsilon_{ij} \ldots\ldots (2)$$

Here, $\mathbf{SAFTA}_{ij}$ is a dummy variable equal to 1 if both the importing and exporting countries are in SAFTA. On the other hand, according to rules of logarithm, $\ln(\mathbf{GDP}_i * \mathbf{GDP}_j)$ is equal to $\ln \mathbf{GDP}_i + \ln \mathbf{GDP}_j$.

IV. DATA

The methods described in the previous section would be applied to data on the following categories of products, as categorized by the Standard International Trade Classification (SITC) defined by the United Nations:

- Exports and Imports, All Commodities
- Textile fibres, yarn, fabrics and clothing (SITC 26 + 65 + 84)

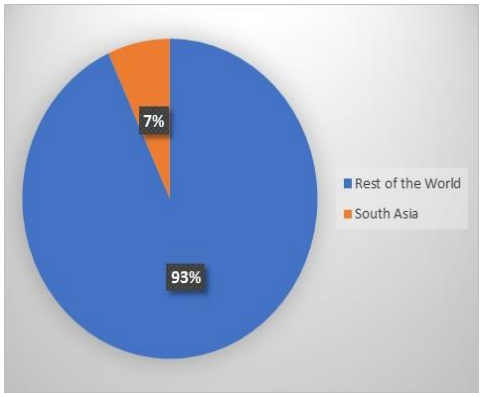
The data on exports and imports of these products has been collected from the UNCTAD (United Nations Conference on Trade and Development) database. Data on bilateral distance and GDP has been collected from the CEPII database. Data on a total of 196 countries have been used in this study.

V. RESULTS

A. Trade Trends in South Asia:

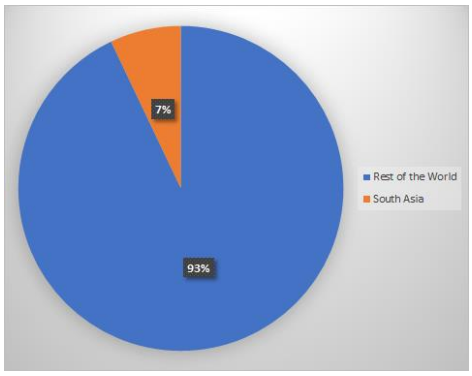
South Asia remains one of the least integrated regions in the world. As per the estimates of World Bank (2016), the intra-regional trade is only 5 percent of total trade of South Asia, as compared to East Asia's 35% and Europe's 60%. A disaggregated look would reveal that the intra-regional exports in South Asia was around 7 percent in the year 2005, when SAFTA was starting its journey. Yet, after ten years, in 2015, the share remains at around 7 percent of total exports of South Asia.

Figure 6.1 Export Share of South Asia in 2005 (Total Exports)



Source: UNCTAD (2017)

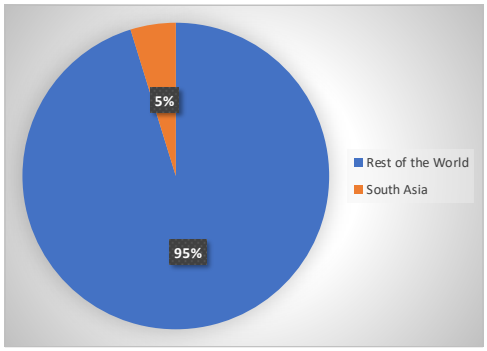
Figure 6.2 Export Share of South Asia in 2015 (Total Exports)



Source: UNCTAD (2017)

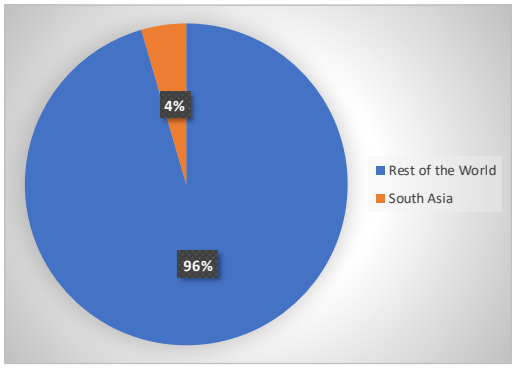
A look at the total imports actually shows a decrease in the share of intra-regional imports of South Asia in total imports of the region. While it was 5% in 2005, after ten years, this share has decreased to around 4%. There can be two explanations behind this: one, the imports from the rest of the world has increased compared to intra-regional imports in South Asia; and two, after the formation of SAFTA, the intra-regional imports have decreased in absolute terms. Whichever the explanation, it is clear that trade in South Asia has not proliferated in this region.

Figure 6.3 Import Share of South Asia in 2005 (Total Imports)



Source: UNCTAD (2017)

Figure 6.4 Import Share of South Asia in 2015 (Total Imports)

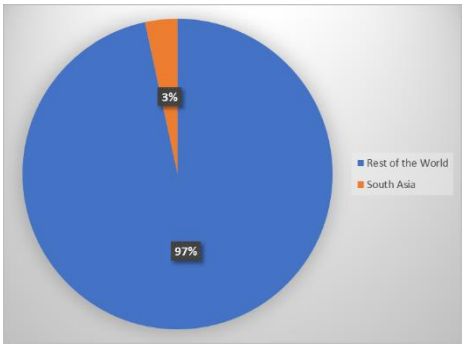


Source: UNCTAD (2017)

A disaggregated look at all the industries of the four South Asian countries under study is out of the scope of this paper, but a brief analysis of the trends in apparel and textile exports and imports within the region is imperative, since this is a sector that employs most of the labor in

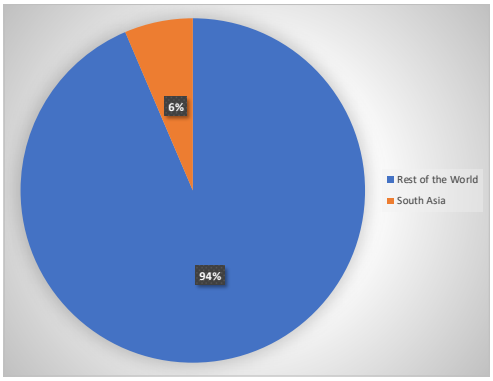
the region. The share of intra-regional exports of these products was around 3 percent at the start of SAFTA; however, it has increased to about 6 percent within ten years, in 2015.

Figure 6.5 Export Share of South Asia in 2005 (Apparel and Textile Exports)



Source: UNCTAD (2017)

Figure 6.6 Export Share of South Asia in 2015 (Apparel and Textile Exports)

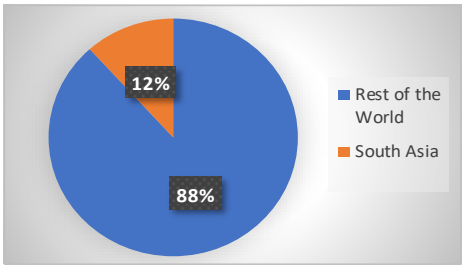


Source: UNCTAD (2017)

The import share has also increased, and the margin of increase has been quite large compared to total exports and imports. At the beginning of SAFTA, the intra-regional import share was 12 percent of total imports of apparel and textile products, which rose to around 20 percent within ten years in 2015. This has vast implications for future sustainability of SAFTA. The primary reason behind this is that one of the dominant perceptions behind people voting for Brexit in Britain was the fear of losing more jobs in future due to the deep economic integration influenced by European Union. Hence, if SAFTA can actually proliferate trade within the region in the sector which employs more of the workers in the region, then events like Brexit may be avoidable. However, perceptions are more important

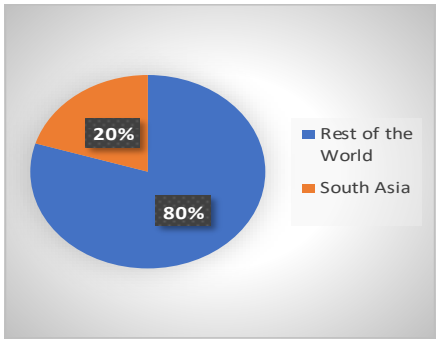
than hard data in these sorts of situations. Still, this should be considered as a positive side of SAFTA, given the low level of intra-regional trade.

Figure 6.7 Import Share of South Asia in 2005 (Apparel and Textile Exports)



Source: UNCTAD (2017)

Figure 6.8 Import Share of South Asia in 2015 (Apparel and Textile Exports)



Source: UNCTAD (2017)

B. Gravity Model Estimates:

Comparisons of initial periods of SAFTA and ten years after the formation do not reveal whether SAFTA has had a significant effect or not, as the changes in volumes of exports and imports could have been caused by other factors. To account for the main factors that could cause the changes so that the sole effects of SAFTA could be isolated, the gravity equations have been estimated for exports and imports data of the four countries under study.

India: India is by far the largest economy in the region. In fact, it is the seventh largest economy in the world by nominal GDP and the third largest by purchasing power parity (IMF, 2016). Naturally, the membership of a large economy like India in a regional trading arrangement brings with it the perception of smaller economies getting dominated by larger

economies. The popular perception in Britain was that other countries were reaping more benefits from EU than Britain, which has been a factor behind Brexit; hence, a perception that India is reaping all the benefits of SAFTA while other countries are lagging behind doesn't carry good implications for regional trade.

Table 6.1: Import Regressions for India

	Log of Total Imports	**Log of Total Textile and Apparel Imports**
$\ln(GDP_i * GDP_j)$	1.163***	1.374***
	(-0.07)	(-0.12)
$SAFTA_{ij}$	-0.633*	-0.644
	(-0.26)	(-0.98)
$\ln DIS_{ij}$	-0.700**	-1.153*
	(-0.24)	(-0.46)
Constant	-43.523***	-56.553***
	(-4.23)	(-7.37)
R- Squared	0.702	0.477

* p<0.05, **p<0.01, ***p<0.001

Figures in the parentheses denote t-values

Tables 6.1 and 6.2 show the results of estimating equation (2) (as specified in the methodology section) on imports and exports data of India for the year 2015. The equation has been estimated for total exports and imports and the exports and imports of textile and apparel products. For total imports, the model explains almost 70 percent of the total variation in total imports of India, and SAFTA has been found to be statistically significant. However, the coefficient of the SAFTA dummy variable is negative, which indicates that SAFTA has actually caused a decrease in Indian imports. However, in the case of apparel and textile product imports, the effect of SAFTA has been found to be statistically insignificant. This indicates that SAFTA has had literally no effect on apparel and textile product imports of India.

Table 6.2: Export Regressions for India

	Log of Total Exports	Log of Total Textile and Apparel Exports
$\ln(GDP_i * GDP_j)$	0.843***	0.959***
	(-0.05)	(-0.05)
$SAFTA_{ij}$	1.334**	1.750**
	(-0.44)	(-0.61)
$\ln DIS_{ij}$	-0.581***	-0.213
	(-0.17)	(-0.22)
Constant	-27.197***	-38.872***
	(-3.13)	(-3.48)
R- Squared	0.755	0.716

* p<0.05, **p<0.01, ***p<0.001

Figures in the parentheses denote t-values

If the total exports of India are taken into account, the model explains around 75 percent of the variation in total exports, while SAFTA is highly statistically significant. Moreover, the coefficient of the SAFTA dummy has a positive sign. This indicates that SAFTA membership has actually increased the total exports of India. In the case of exports of apparel and textile products also, SAFTA has had a positive effect according to the results of Table 6.2. Even if other bilateral free trade agreements of India with other countries both inside and outside South Asia are taken into account, still the SAFTA dummy is found to the statistically significant.

Table 6.3: Export Regressions for India with other FTAs

	Log of Total Exports	Log of Total Textile and Apparel Exports
$\ln(GDP_i * GDP_j)$	0.838***	0.963***
	(-0.05)	(-0.05)
$SAFTA_{ij}$	1.145**	1.916**
	(-0.43)	(-0.59)
$\ln DIS_{ij}$	-0.538**	-0.251
	(-0.18)	(-0.24)
Other FTA_{ij}	0.321	-0.281
	(-0.3)	(-0.36)
Constant	-27.330***	-38.766***
	(-3.16)	(-3.51)
R- Squared	0.756	0.717

* p<0.05, **p<0.01, ***p<0.001
Figures in the parentheses denote t-values

Therefore, it is clear that as SAFTA is having a negative effect on imports and positive effect on exports of India, it has an overall positive effect on the trade balance of India. Moreover, the positive effect of SAFTA on India's exports of textiles and apparel would mean more jobs in one of the largest sectors of the nation. Hence, this may lead to a positive perception about SAFTA in India. Its implications on the future of SAFTA is, however, unclear before an analysis of the other three economies under study.

Pakistan: Pakistan is the 24th largest economy in the world in terms of purchasing power parity (PPP), and 42nd largest in terms of nominal gross domestic product (IMF, 2016). Tables 6.4 and 6.5 show the results of estimating equation (2) for both total exports and imports and also for total textile and apparel exports and imports. Although the models explain around 60 percent of the variation in the dependent variable in most cases, the SAFTA dummy has been found insignificant in all the specifications.

Table 6.4: Import Regressions for Pakistan

	Log of Total Imports	**Log of Total Textile and Apparel Imports**
$\ln(GDP_i * GDP_j)$	1.193*** (-0.07)	1.074*** (-0.14)
$SAFTA_{ij}$	0.856 (-0.86)	1.335 (-1.28)
$\ln DIS_{ij}$	-0.710* (-0.34)	-0.673 (-0.54)
Constant	-45.782*** (-5.13)	-43.690*** (-8.28)
R- Squared	0.643	0.387

* p<0.05, **p<0.01, ***p<0.001
Figures in the parentheses denote t-values

More precisely, if total imports of Pakistan are taken into account, then the SAFTA dummy variable is found to be statistically insignificant, which means that SAFTA has had virtually

no effect on the movement of total bilateral imports of Pakistan. The same is true for the apparel and textile imports of Pakistan, although the model can explain only around 40 percent of the variation. On the other side, SAFTA is found to be having no effect on the total exports as well as exports of textile and apparel products of Pakistan. In sum, SAFTA has no effect on the movements in trade balance of the country.

Table 6.5: Export Regressions for Pakistan

	Log of Total Exports	**Log of Total Textile and Apparel Exports**
$\ln(GDP_i * GDP_j)$	0.968*** (-0.07)	1.176*** (-0.08)
$SAFTA_{ij}$	1.323 (-0.91)	1.478 (-0.83)
$\ln DIS_{ij}$	-0.628** (-0.21)	0.255 (-0.25)
Constant	-34.564*** (-4.27)	-53.887*** (-4.88)
R- Squared	0.624	0.623

* p<0.05, **p<0.01, ***p<0.001

Figures in the parentheses denote t-values

Bangladesh: Bangladesh is the 46th largest economy in the world in nominal terms, and 33rd largest by purchasing power parity. Tables 6.6 and 6.7 show the results of estimating equation (2) for both total exports and imports and also for total textile and apparel exports and imports. The regression models explain almost 50 percent of movements in total imports of Bangladesh and around 30 percent of movement in textile and apparel imports of Bangladesh. In both cases, the SAFTA dummy variable is found to be statistically insignificant.

Table 6.6: Import Regression for Bangladesh

	Log of Total Imports	Log of Total Textile and Apparel Imports
$\ln(GDP_i * GDP_j)$	1.123***	0.935***
	(-0.11)	(-0.14)
$SAFTA_{ij}$	-0.032	0.698
	(-0.82)	(-1.59)
$\ln DIS_{ij}$	-1.299**	-1.636**
	(-0.39)	(-0.61)
Constant	-36.749***	-27.838**
	(-6.98)	(-9.31)
R- Squared	0.491	0.273

* p<0.05, **p<0.01, ***p<0.001
Figures in the parentheses denote t-values

In the case of exports, the explanatory power of the models is better; almost 80 percent of the total variation in total exports of Bangladesh has been explained by the independent variables and almost 76 percent of total variation in total textile and apparel exports has been explained by the model. Here also, the SAFTA dummy variable is statistically insignificant. So, it is clear that the data does not bear any indication as to the positive or negative effect of SAFTA membership on the balance of trade of Bangladesh.

Table 6.7: Export Regression for Bangladesh

	Log of Total Exports	Log of Total Textile and Apparel Exports
$\ln(GDP_i * GDP_j)$	1.177***	1.354***
	(-0.05)	(-0.07)
$SAFTA_{ij}$	0.738	-0.112
	(-0.51)	(-0.57)
$\ln DIS_{ij}$	-0.401*	-0.221
	(-0.19)	(-0.23)
Constant	-47.260***	-58.448***
	(-3.27)	(-4.17)
R- Squared	0.791	0.758

* p<0.05, **p<0.01, ***p<0.001
Figures in the parentheses denote t-values

Sri Lanka: Sri Lanka is ranked 67th according to nominal GDP and 61st according to purchasing power parity (IMF, 2016). The results of estimating equation (2) for both total exports and imports and also for total textile and apparel exports and imports have been shown in tables 6.8 and 6.9. The regression models explain almost 65 percent of movements in total imports of Sri Lanka and around 53 percent of movement in textile and apparel imports of Sri Lanka. In both cases, the SAFTA dummy variable is found to be statistically insignificant.

Table 6.8: Import Regression for Sri Lanka

	Log of Total Imports	**Log of Total Textile and Apparel Imports**
$\ln(GDP_i * GDP_j)$	1.292***	1.299***
	(-0.1)	(-0.12)
$SAFTA_{ij}$	-1.25	0.152
	(-1.32)	(-1.7)
$\ln DIS_{ij}$	-1.923***	-1.767**
	(-0.38)	(-0.57)
Constant	-39.943***	-45.282***
	(-6.11)	(-6.96)
R- Squared	0.648	0.528

* p<0.05, **p<0.01, ***p<0.001

Figures in the parentheses denote t-values

In the case of exports, the explanatory power of the models is better; almost 70 percent of the total variation in total exports of Sri Lanka has been explained by the independent variables and almost 66 percent of total variation in total textile and apparel exports has been explained by the model. Like Bangladesh, the SAFTA dummy variable is statistically insignificant. So, it is clear that the data does not bear any indication as to the positive or negative effect of SAFTA membership on the balance of trade of Sri Lanka.

Table 6.9: Export Regression for Sri Lanka

	Log of Total Exports	Log of Total Textile and Apparel Exports
$\ln(GDP_i * GDP_j)$	1.021***	1.404***
	(-0.06)	(-0.09)
$SAFTA_{ij}$	0.04	0.502
	(-0.81)	(-1.35)
$\ln DIS_{ij}$	-0.803**	0.101
	(-0.27)	(-0.41)
Constant	-35.358***	-65.050***
	(-3.7)	(-6.09)
R- Squared	0.697	0.658

* p<0.05, **p<0.01, ***p<0.001

Figures in the parentheses denote t-values

VI. CONCLUSION

The analysis presented in the previous sections leads to two main conjectures: one, regional trade in South Asia has not proliferated significantly even after more than ten years of South Asian Free Trade Area (SAFTA); and two, the estimated gravity models suggest that SAFTA has a significant positive effect on the trade balance of only India, with no observable effect on the trade balance of the other three major South Asian economies under study, namely, Pakistan, Bangladesh and Sri Lanka.

Now, the fact that there is some positive effect of SAFTA on the trade balance of India (as suggested by the evidence) should not come as a surprise, as India enjoys a positive trade balance with all the South Asian countries (UNCTAD, 2017). In fact, given the recent economic growth of India and the size of the Indian economy, any sort of free trading arrangement with India and the South Asian countries is theoretically bound to favor India, since according to the gravity model, GDP of the destination country is one determinant of trade flows. This does not mean that other member countries of SAFTA will not be able to benefit from it. In fact, World Bank (2016) suggests that increased intra-regional trade would bring about shared economic benefits in South Asia; however, in order for that to happen,

tariffs should be eliminated, non-tariff barriers (NTBs) should be reduced, private and intra-regional investment should be increased, regional connectivity should be increased and services should be liberalized.

However, this analysis reveals one important fact: India is benefiting more than the other countries under study, while trade gains of Bangladesh, Pakistan and Sri Lanka from SAFTA are still not evident. Moreover, intra-regional trade in South Asia still remains very low. As trade benefits generally translate into economic growth, which shapes public opinion and perception on regional trade, the situation in South Asia needs to be improved. Otherwise, in a world where UK can opt for leaving a deeply integrated economic union like European Union, there is a probability of something like that happening in South Asia which is already plagued by very low economic integration.

REFERENCES

1. Anderson, J. E. and van Wincoop, E., 2003. Gravity with gravitas: a solution to the border puzzle. *American Economic Review, 93(1),* pp. 170–92.
2. Anderson, J. E. and van Wincoop, E., 2004. Trade costs. *Journal of Economic Literature, 42(3),* pp. 691–751.
3. Baier, S. L. and Bergstrand, J. H., 2004. Economic determinants of free trade agreements. *Journal of International Economics, 64(1),* pp. 29–63.
4. Baier, S. L. and Bergstrand, J. H., 2006. Estimating the effects of free trade agreements on trade flows using matching econometrics. *Journal of International Economics, 77(1),* pp. 63–76.
5. Baier, S. L. and Bergstrand, J. H., 2007. Do free trade agreements actually increase members' international trade?. *Journal of International Economics, 71(1),* pp. 72–95.
6. Baier, S. L. and Bergstrand, J. H., 2009. Bonus vetus OLS: a simple method for approximating international trade-cost effects using the gravity equation. *Journal of International Economics, 77(1),* pp. 77–85.
7. Baysan, T., Panagariya, A and Pitigala, N., 2006. Preferential Trading In South Asia. *World Bank Policy Research Working Paper 3813*.
8. Baldwin, R. and Taglioni, D., 2006. Gravity for dummies and dummies for gravity equations. *National Bureau of Economic Research Working Paper 12516,* NBER.

9. Bergstrand, J. H., 1985. The gravity equation in international trade: some microeconomic foundations and empirical evidence. *The Review of Economics and Statistics, 67(3),* pp. 474–81.
10. Bergstrand, J. H., 1989. The generalized gravity equation, monopolistic competition and the factor-proportions theory in international trade. *The Review of Economics and Statistics, 71(1),* pp. 143–53.
11. Head, K., Mayer, T. and Ries, J., 2010. The erosion of colonial trade linkages after independence. Journal of International Economics, 81(1), pp 1-14.
12. Head, K. and Mayer, T., 2013. *Gravity Equations: Toolkit, Cookbook, Workhorse*. Handbook of International Economics, Vol. 4, eds. Gopinath, Helpman, and Rogoff, Elsevier.
13. Armingeon, K. and Basir, C., 2014. The Loss of Trust in the European Union During the Great Recession since 2007: The Role of Heuristics from the National Political System. *European Union Politics, 15(1),* pp. 82-107.
14. Eichenberg, R. C. and Dalton, R.J. 1993. Europeans and the European Community: The Dynamics of Public Support for European Integration. *International Organization, 47(2),* pp. 507-34.
15. Franklin, M., Marsh, M. and McLaren, L., 1994. Uncorking the Bottle: Popular Opposition to European Unification in the Wake of Maastricht. *Journal of Common Market Studies, 32(1),* pp. 455–73.
16. Gabel, M. and Whitten, G.D., 1997. Economic Conditions, Economic Perceptions, and Public Support for European Integration. *Political Behavior, 19(3),* pp. 81-96.