

## **Nexus between Employment and FTAs: South Asian Perspective**

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### **Abstract**

The effects of trade liberalization on economic growth and welfare are well established, trade-employment relationship is multifaceted and complex. The effect of trade liberalization is not direct and can create or destroy jobs. Studies underline that an increase in exports leads to an increase in the output level, likely to increase employment, whereas an increase in imports reduces output and displaces labour. With this backdrop, this study tries to capture the effect of the South Asian free trade area (SAFTA) and two other bilateral free trade agreements (FTAs); India-Sri Lanka free trade agreement and India-Bhutan free trade agreement on employment in India and South Asia. The regression model with PPML (fixed effects) estimation has been applied to capture the impact of FTAs on employment. Results confirm the positive impact of trade liberalization on employment. The study has significant policy implications and can provide a strong case for other economies to increase employment through FTAs. This will ensure economic growth and welfare in the partner countries.

**Keywords:** Trade liberalization; economic growth; employment; FTAs; SAFTA; PPML

**JEL Codes:** E20, E24, J21, F15, F13, F16

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## **1. Introduction**

Trade is a tool for creating new prospects for different stakeholders like labourers, consumers and firms around the world all the way through an affirmative business environment, labour markets flexibility, higher education and research, and skill development (OECD 2012). However, trade is hampered by artificial trade barriers like tariffs, quotas, and subsidies. These barriers to free trade have been the major cause of disagreement among policy makers and economists all over the globe since the post World War II period. Nevertheless, many developing economies liberalized and opened their economies only in the 1990s. The World Trade Organization (WTO) has been committed to multilateral trade liberalization, nonetheless, it has not ruled out regionalism. Article 24 of the WTO allows countries for the creation of free trade areas and customs union. Trade liberalization and trade facilitation remains at the core of every WTO ministerial conference. Regional integration agreements (RIAs) have flourished throughout the globe for the last three decades. More recently, South Asia also witnessed increased significance in regional economic integration. Free trade agreements (FTAs) are flourishing since the 1990s in the Asian region. South Asia is also effortlessly trying to harvest the benefits from these trade policy instruments. Trade can be increased through reduction or elimination of tariffs as well as non-tariff barriers (Panagariya 2008). Most vibrant and prevalent trade policy to reduce/eliminate tariffs in recent times is the regional trade agreements (RTAs). Trade liberalization and trade facilitation has now taken the route through these RTAs. However, RTAs are functional through different degrees of liberalization ranging from preferential trading arrangements (PTAs) to economic and monetary unions. The first complete liberalization and almost free trade is seen in the operation of free trade agreements (FTAs). Free flow of goods and services is the primary objective of the FTAs. Moreover, these FTAs also include other areas like intellectual property rights, investments, public procurement, and competition policy among others. FTAs promote trade through reduction of the barriers to trade. FTAs have static as well as dynamic welfare gains for the economy. It not only brings more goods and services at cheaper prices for the domestic consumers through increased imports (static gains), but also ensures dynamic gains like foreign direct investments (FDIs), competition, technology transfer, and economies of scale. Economic integration through trade reforms, liberalized

trade policies and increased trade openness has important implications on employment. However, the effects of an FTA have two dimensions- market access for domestic products and the liberalization of trade by eliminating and/or removing trade barriers (Raihan2013). The former is the increased exports from the home country, while later are the imports coming to the home country. Whether FTAs will increase the overall trade depends on the relative strength of trade creation and trade diversion (Arnold 2003). Moreover, the effects of these two opposing forces on employment are also complex and depend on their relative strength.

It is argued by the economists that increase in exports can potentially create new jobs especially in export-oriented industries, while surge in imports may contract employment in those domestic industries which are not capable of competing with highly competitive cross border industries. The effect of trade is not obvious and can create or destroy employment (Scott 2003). Conventionally, it was believed that trade is not a determinant of employment. This can be cited through different trade models, whether classical or neo-classical trade models. Most of the models of international trade assume full employment in the economy (Dutt et al. 2008). However, recent literature has debunked this fallacy. A large volume of studies is now available which contour the frontiers of the relationship between trade and employment. Increased trade can create new job opportunities, especially in export-oriented industries. Trade effects can be separated from the effects of FTAs; nevertheless, the relationship between FTAs and employment is complex and attract lively debates among the economists, the policy makers, and other stakeholders. Studies have highlighted three significant impacts viz. the 'scale effect', the 'composition effect' and the 'process effect' of trade on employment (Chand and Sen, 2002; Raj and Sen, 2012). Increasing exports tends to increase the output level, leading to increased employment, while increasing imports reduces output and displaces labour. This is the scale effect of trade on employment. The outcome of international trade is the structural changes within the manufacturing sector that alters the shares of different industries in total manufacturing output, increases the output of export items and reduces the output of import-competing industries. This is the composition effect of trade on employment. Moreover, trade can influence employment by changing coefficients of labour within industries. This is the process effect of trade on employment.

The studies on FTAs have mainly focused on the trade and welfare effects, its impact on labor and employment has largely been neglected. Thus, this study is different from the previous studies as it tries to analyze the effects of South Asian free trade area (SAFTA) and two other bilateral free trade agreements (FTAs); India-Sri Lanka free trade agreement and India-Bhutan free trade agreement on employment. The study examines the economy-wide effects on employment of bilateral FTAs (ISFTA and IBFTA) and plurilateral FTA-SAFTA and peeps into the trends of unemployment in India and South Asia. The broad objective of this paper is to investigate the links between trade liberalization and employment under the FTA framework in the South Asian region.

The paper is organised as follows. Section 2 examines the relevant literature related to effects of FTAs on employment. Methodology of this study is explained in Section 3. Section 4 deals with some of the macro-economic characteristics of South Asian economies. Results and analysis are presented in Section 5. Section 6 summarizes the study and concludes with highlighting relevant policy implications.

## **2. Review of Literature**

The literature on the effects of FTAs on employment is scanty. However, some economists and international organizations have more recently tried to examine this aspect. Brooks and Go (2012) in their study concluded that the relationship between trade and economic growth is well determined; the trade-employment relation is ambiguous. There is evidence that trade has mixed effects on the level of employment. In this regard, labor reallocation becomes essential to compensate for the job losses in any specific sector or industry. Trade liberalization and economic integration through RTAs need to be well structured and balanced. UNCTAD (2013) emphasized that trade has a significant role in employment creation and poverty reduction. However, trade liberalization does affect employment and wages at the sectoral and occupational level but does not affect the aggregate level of employment. Raihan (2013) in the context of Bangladesh argued that FTAs are important for real wages and employment including other areas like exports and consumer prices. There

might be losses in employment in some sectors, but in other sectors there is an increase in employment; the net effect is the addition to the employment. Thus, FTA policy will boost employment.

Nicoud (2015) found that in the commencement of the Transatlantic Trade and Investment Partnership (TTIP) and the Trans-Pacific Partnership (TPP), the effect of these mega-FTAs on income and employment is very less. Findings also confirm that the potential benefits of these agreements are not uniform. The study also argued that the welfare effects as well as unemployment effects related to the trade deficits will be much more visible. Jansen and Lee (2007) confirmed that job creation and job losses both are correlated with trade liberalization. In the short run, there are chances of job displacements and jobs losses, however, in the long run efficiency and competitiveness will eventually increase which lead to increase in the quality of employment, increase in the average wage rates and working conditions. According to the US Chamber of Commerce (2014), the benefits of the FTAs for the US are remarkable. Moreover, FTAs have opened new opportunities, improved economic growth, created new jobs, and increased employment. It is estimated that 5.4 million US jobs were sustained by these FTAs. The study claimed that, in the post- NAFTA period during 1994-2007, the unemployment rate in the US was 5.1%, which is lower than compared to the pre-NAFTA period during 1982-1993, close to 7.1%.

Schott (2016) pointed out that trade agreements can dislocate workers from their current employments, but at the same time create new and better employment opportunities. The rapid technical progress and shifts in the consumer demand pattern, the effect of free trade agreements is remarkably diminutive, but on balance, trade agreements generate improved and higher paying employment opportunities compared to the dislocated ones. In exporting manufacturing firms, workers usually receive higher wages, on average 12-18% more compared to their counterparts in those firms, which manufacture for the domestic market. Belenkiy & Riker (2015) also viewed that there is a complicated and frequently vague relationship between trade and unemployment. Additionally, the direction of unemployment is not uni-linear, but is more complex and depends on the composition of industry for a given output and on the frictions in the labor markets.

The review of literature confirms that there is no distinct relationship between trade liberalization and employment. The policy of trade liberalization in the form of regional trade agreements (RTAs) or bilateral FTAs in creating jobs in member countries is not apparent and needs research. Since South Asia is considered as one of the least integrated regions in the world and huge unemployment is prevalent in this region, it is imperative to find the relationship between trade liberalization (through FTAs) and employment in South Asia.

### 3. Methodology

The study is primarily based on quantitative methods. It includes regression model and computation of intra-regional trade share (IRTS) index. The details of the model and the index are described in the subsequent section.

#### The Model

This paper applies regression model to assess the effects of FTAs on employment in South Asia. Moreover, two bilateral FTAs (India-Sri Lanka FTA and India-Bhutan FTA) and one regional agreement (South Asian Free Trade Area) have been included in the study. Other important determinants of employment, viz. exports, imports, GDP, and tariffs are also included. In the model, number of unemployed persons has been taken as dependent variable and export, import, GDP, and tariff have been used as independent variables. Dummy variables for two bilateral FTAs (ISFTA and IBFTA) and one regional FTA (SAFTA) have also been included to see the impact of these FTAs on employment. All the variables are expressed in natural logarithmic form. The baseline model is presented as:

$$\ln U_{it} = \beta_0 + \beta_1 \ln \text{Export}_{it} + \beta_2 \ln \text{Import}_{it} + \beta_3 \ln \text{GDP}_{it} + \beta_4 \ln \text{Tariff}_{it} + \beta_5 \text{ISFTA}_{it} + \beta_6 \text{IBFTA}_{it} + \beta_7 \text{SAFTA}_{it} + e_{it} \quad \dots (1)$$

where,  $U_{it}$  is the total no. of unemployed people,  $\text{Export}_{it}$  is the total value of export of country  $i$  in time  $t$ (year),  $\text{Import}_{it}$  is the total value of import of country  $i$  in time  $t$ (year),

GDP<sub>it</sub> is the gross domestic product of country *i* in time *t* (year), Tariff<sub>it</sub> is the simple average applied tariff rate of country *i* in time *t*(year), ISFTA<sub>it</sub> is a categorical variable which denotes whether country *i* is the member of India-Sri Lanka FTA in time *t* or not (takes the value of 1 or 0 otherwise), IBFTA<sub>it</sub> is another categorical variable which denotes whether country *i* is the member of India-Bhutan FTA in time *t* or not (1 or 0), SAFTA<sub>it</sub> is a categorical variable which denotes whether country *i* is the member of South Asian free trade area in time *t* or not (1 or 0), and  $e_{it}$  is the error term

### **Intra-Regional Trade Share (IRTS)**

Apart from the regression model, intra-regional trade share has also been used in this study. Intra-regional trade share is the percentage of intra-regional trade to the total trade of any region; and it is calculated using the data on total trade. The expression for computation of the intra-regional trade share is:

$$IRTS = [(X_{ii} + I_{ii}) \times 100] / (X_{iw} + I_{iw}) \quad \dots(2)$$

Here,  $X_{ii}$  is exports of region *i* to region *i*,  $I_{ii}$  is imports of region *i* from region *i*, and  $X_{iw}$  is exports of region *i* to the world, and  $I_{iw}$  is imports of region *i* from the world. A higher value of IRTS specifies a higher degree of dependence on regional trade.

### **Data and Sample**

This study is proposed to capture the impact of FTAs on unemployment in South Asia from the period 2001-2013. The period chosen is based on the data availability and the relevance of this study. The study included all the 8 countries that are the members of SAFTA-India, Sri Lanka, Bhutan, Nepal, Bangladesh, Pakistan, Afghanistan, and Maldives. Data for exports, imports, GDP, and tariffs have been sourced from World Bank's World Development Indicators. Data for the total number of unemployed persons has been taken

from the International Labour Organization (ILO) Statistics and Database. Other statistics have been taken from the Asian Development Bank, International Monetary Fund, and Central Bureau of Statistics.

#### 4. Macroeconomic Characteristics of South Asia

South Asia comprises of eight countries, India, Sri Lanka, Bhutan, Bangladesh, Nepal, Pakistan, Afghanistan, and Maldives, is one of the least developed and least integrated regions in the world. Most of the social and economic parameters of growth and development are abysmally low. Table 1 indicates some of the socio-economic indicators of South Asia.

Table 1: Key Socio-Economic Indicators of South Asia

Countries	Poverty Headcount Ratio (% of Population)	Literacy Rate, Total (% of People Ages 15-24) *	Health Expenditure, Total (% of GDP) (2014) *	Govt. Expenditure on Education (% of GDP)	Population (Million) (2015) *	GDP (US \$ Million) (2014) *	Trade in Goods Balance (% of GDP) ***	Trade in Services Balance (% of GDP) ***	Real GDP Growth (%) (2014) **
India	21.23 (2011)	89.66	4.69	3.84 (2013)	1311	2073542.98	NA	14.94 (2012)	7.3
Sri Lanka	1.92 (2012)	98.77	3.5	2.18	21	82316.1724	-10.3 (2015)	2.8 (2015)	4.5
Bhutan	2.17 (2012)	92.04	3.57	7.36	0.77	1962.2217	-21.8 (2014-15)	-3.1 (2014-15)	6.4
Bangladesh	18.52 (2010)	83.2	2.82	1.96 (2013)	161	195078.666	-5.4 (2015)	-2.01 (2015)	6.3
Nepal	14.99 (2010)	89.95	5.8	3.71	28.5	20880.5459	-31.3 (2014-15)	1.3 (2014-15)	5.4
Pakistan	6.07 (2013)	73.71	2.61	2.65	189	269971.498	-5.9 (2014-15)	-0.72 (2014-15)	4
Afghanistan	NA	58.15	8.18	3.32	32.5	19199.438	-58.2 (2009)	-2.6 (2009)	1.3
Maldives	7.26 (2009)	99.76	13.7	5.22	0.41	3142.812	-69 (2012)	68 (2012)	6.1

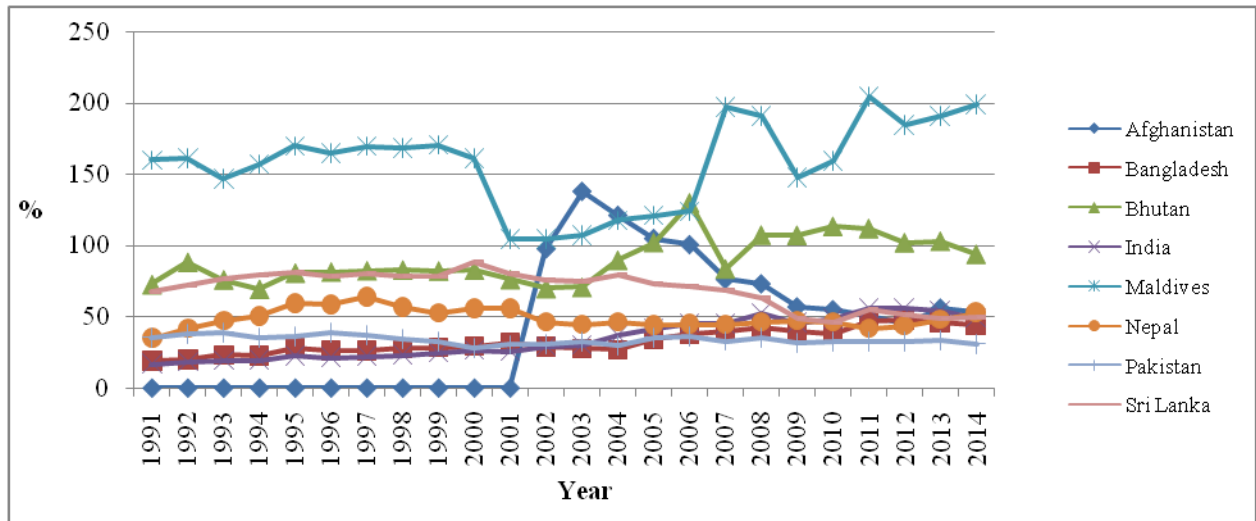
Source: \*World Bank (2020), \*\* International Monetary Fund (2015), \*\*\*Central Bureau of Statistics (2022)

Previously, South Asian economies have adopted import-substitution strategies. Sri Lanka was the first country in South Asia, which opened its economy in 1977. Most of the countries in South Asia liberalized only in the 1990s. Trade openness measured as trade to GDP ratios,



is one of the measures frequently used to estimate the degree of liberalization of the economies. Trade Openness of all the economies in South Asia is shown in Figure 1. Maldives is the most open economy in this region measured by trade openness. Bhutan, Sri Lanka, and Nepal follow the suit. Sri Lanka's trade openness declined in 2014 compared to its value in 1991, while it fluctuated moderately during this period. It remained as high as more than 88% in 2000, and as low as 46% in 2010. India and Bangladesh continuously improved their openness with variations in some years, while Pakistan's trade openness remained between 30%-40% range. Afghanistan's openness is most unpredictable. It remained as high as 138% in 2003, and as low as 44.6 % in 2012.

Figure 1: Trade Openness in South Asia



Source: World Bank (2020)

**Labor Force and Unemployment in South Asia**

South Asia is characterized by huge population, prevalence of large-scale unemployment and low per capita income coupled with low levels of education and labour-intensive manufacturing. Poor technological base and lack of capital are the hindrance for growth and development. Due to huge unemployment and lack of capital-intensive production, wages are very low in this region. The labour force growth is faster than the employment rate in almost

all the South Asian countries observed over most of the period (Bhalla 2006). This is really an alarming situation. Asia is the home of the world's nearly 60% population. Population growth rate in South Asia can be visualized from Table 2. The simple average of population growth in this region is 2 % in 1990, which decreased to 1.8% in 2014. The highest population growth was witnessed in Maldives (2.5%) and Pakistan (2.3%) during the given period. However, Sri Lanka observed the lowest population growth during the same period. The simple average of India's growth of population during this period was 1.7%.

Table 2: Population Growth (%) in South Asia

Country	1990	1995	2000	2005	2010	2014
Bhutan	1.3	1.3	1.3	1.3	1.8	1.7
India	2.1	2.1	1.8	1.5	1.4	1.2
Afghanistan	1.9	1.6	1.4	1.5	2	2.2
Bangladesh	2.2	1.9	1.4	1.5	1.4	1.4
Pakistan	2.7	2.5	2.3	1.9	2.1	2
Sri Lanka	1.5	1.1	1.3	0.9	1	0.9
Maldives	2.5	2	1.5	3.3	2.3	3.6
Nepal	2.1	2.5	2.5	1.4	1.4	1.4

Source: Asian Development Bank (2015)

Table 3 gives a comparative picture of labor force and labour force participation rate (LFPR) in India, Bhutan, Sri Lanka, and total of South Asia. Table shows that about three-fourth of the total labour force in South Asia is contributed by India. The simple average annual growth of labour force in India is 1.6%, for Bhutan it comes out to 4.5%, for Sri Lanka it is 0.6%, and for the whole South Asia it is 1.9% during 2000-2017. Additionally, the simple average of LFPR in India is 57%, in Bhutan it is 68%, in Sri Lanka the LFPR is 55 %, and it is 57% for the South Asia. It is clear that the labour force participation rate for South Asia reflects the trends of that of India during 2000-2017.

Huge unemployment can be traced through Figure 3. Sri Lanka, Afghanistan, and Maldives are the worst in terms of unemployment. Sri Lanka was able to reduce unemployment substantially during 1991-2014; Afghanistan and Maldives are still facing huge

unemployment. Bhutan and Nepal have low levels of unemployment rate and by and large remained at the same levels during this period. Moreover, India and Pakistan are witnessing the same level of unemployment rate during 1991 to 2014. The unemployment rate in Bangladesh has increased during this period. Only Sri Lanka has managed to reduce unemployment rate from as high as more than 14% in 1991 to 4.6% in 2014. Trends of unemployment rate in Sri Lanka show that, it has continuously decreased during this period with minor fluctuations. The lowest unemployment rate in Sri Lanka was reported as 4% in 2012.

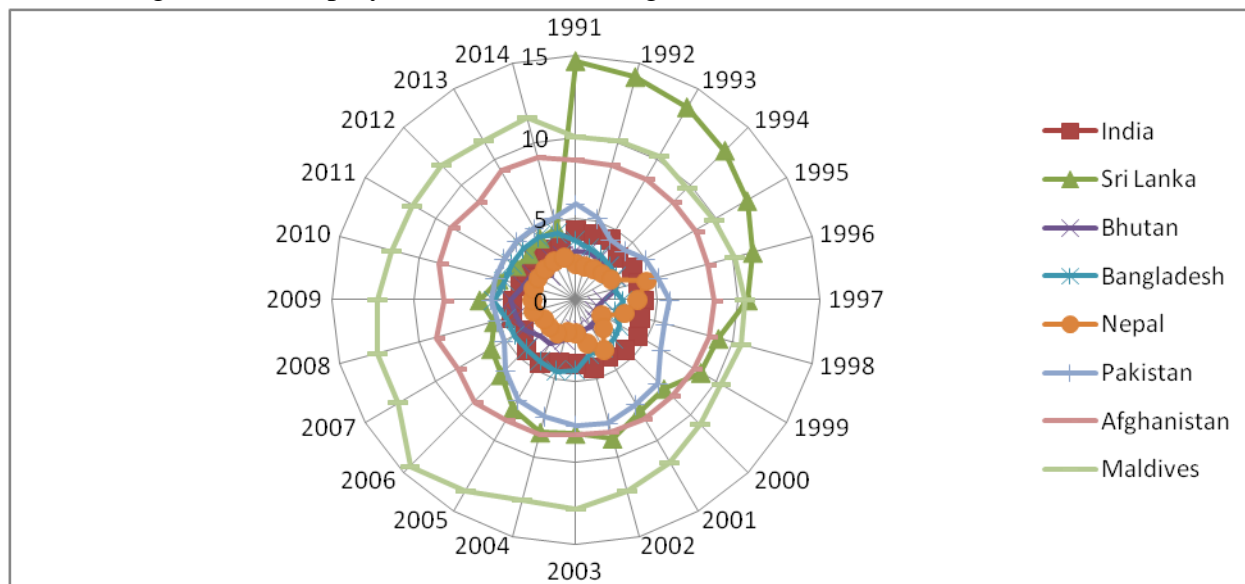
Table 3: Labor Force and Labour Force Participation Rate (LFPR)

Year	India		Bhutan		Sri Lanka		South Asia	
	Labour Force (Million)	LFPR*	Labour Force (Million)	LFPR*	Labour Force (Million)	LFPR*	Labour Force (Million)	LFPR*
2000	405.52	59	0.22	65.16	7.78	56.92	520.17	58.43
2001	417	59.31	0.23	66.36	7.86	56.78	534.7	58.64
2002	428.87	59.62	0.25	67.63	7.93	56.68	549.83	58.87
2003	441.05	59.94	0.27	68.84	8	56.58	565.84	59.15
2004	453.49	60.27	0.29	69.9	8.06	56.46	582.1	59.44
2005	466.15	60.62	0.3	70.73	8.12	56.33	598.97	59.78
2006	467.17	59.5	0.32	71.18	8.17	56.24	603.88	58.99
2007	468.12	58.41	0.33	71.48	8.21	56.12	607.27	58.1
2008	469	57.36	0.34	71.64	8.26	55.96	610.66	57.25
2009	469.83	56.33	0.35	71.7	8.3	55.76	614.93	56.5
2010	470.61	55.32	0.35	69.83	8.21	54.72	616.26	55.48
2011	473.68	54.64	0.35	67.98	8.23	54.37	622.57	54.96
2012	476.8	53.96	0.35	65.56	8.17	53.46	629.45	54.46
2013	485.9	53.97	0.36	66.1	8.5	55.04	642.88	54.53
2014	494.96	53.96	0.36	64.38	8.45	54.09	655.33	54.5
2015	503.83	53.95	0.38	66.61	8.52	53.87	669.03	54.59
2016	512.77	53.93	0.39	66.53	8.63	53.76	683.02	54.7
2017	520.2	53.79	0.4	66.79	8.67	53.54	694.07	54.6

Source: World Bank (2020)

Note: \*Total (% of total population ages 15+) (modeled ILO estimate)

Figure 3: Unemployment Rate (Percentage of Total Labour) in South Asia



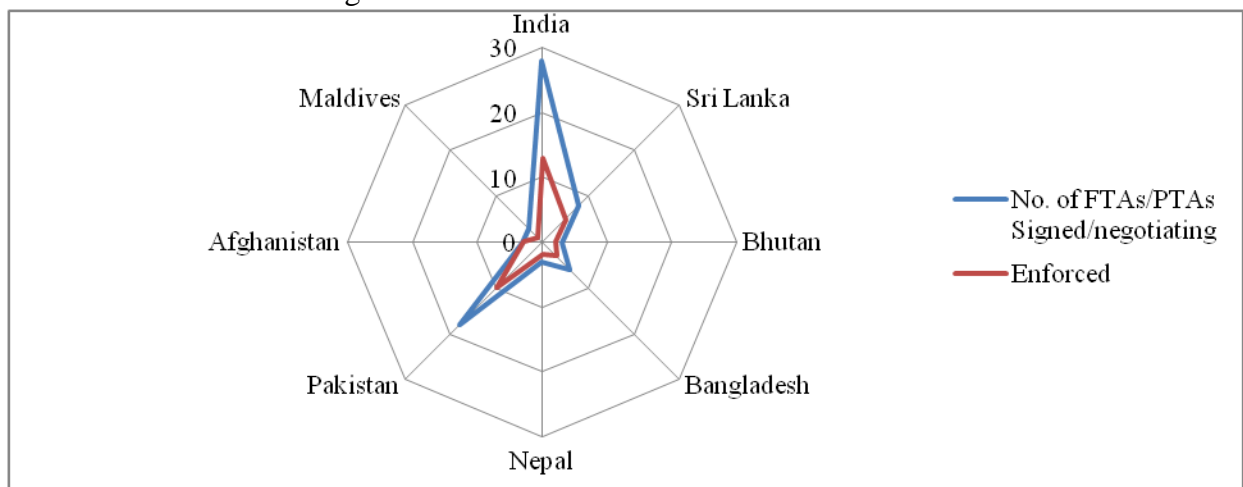
Source: World Bank (2020)

### Economic Integration in South Asia

The move towards integrating this region started in the 1985, when South Asian Association for Regional Cooperation (SAARC) was signed. Later, SAARC Preferential Trading Arrangement (SAPTA) was signed on April 11, 1993. The first significant move towards free trade in South Asian region was materialized in the form of South Asian Free Trade Area (SAFTA). At the 16<sup>th</sup> meeting of the Council of Ministers, held during 18-19 December 1995 in New Delhi, it was recognized that there is need for a regional free trade agreement in South Asia. To materialize the intended free trade area within SAARC region, an Inter-Governmental Expert Group (IGEG) was formed in 1996. Further, at the 10<sup>th</sup> SAARC Summit, held in Colombo during 29-31 July 1998, it was consented to establish Committee of Experts (CoE) to delineate a comprehensive framework program for commencement of free trade area. After further negotiations and a comprehensive dialogue process, the agreement for establishing the FTA in South Asia (i.e., SAFTA) was signed on January 6, 2004, at the 12<sup>th</sup> Summit of SAARC at Islamabad. SAFTA came into force on January 1, 2006. However, the trade liberalization program was initiated on July 1, 2006. With a greater motivation for free trade in goods, members are convinced that SAFTA will boost bilateral as

well as regional trade and development. One of the significant inclusions under the SAFTA framework is the Special and Differential Treatment (SDT) for the Least Developed Countries (LDCs). The wider scope of SAFTA includes elimination of trade barriers including tariffs, para-tariffs and non-tariff and facilitation of free movement of goods, fair competition, and disputes settlement, etc. Article 4 of the SAFTA includes instruments for the execution of the agreement like, trade liberalization program, rules of origin, institutional arrangements, dispute settlement, safeguard measures and others. The comprehensive framework for tariff reduction and elimination is included under the trade liberalization programme (TLP). One of the major concerns under the SAFTA framework is the Sensitive Lists, which include those products which are not part of the TLP. However, the progress of SAFTA is dismal. The intra-regional trade of the South Asian countries hovers around 5% of the total trade of South Asia. The persistent low volume of trade through the SAFTA framework induced the bilateral agreements in this region. More recently, South Asia witnessed a surge in regional trade agreements (RTAs). These mainly include preferential trading arrangements (PTAs) and free trade agreements (FTAs). Figure 4 highlights the number of PTAs/FTAs signed and enforced in this region. India has signed and enforced the highest number of these agreements, followed by Pakistan.

Figure 4: South Asian Involvement in FTAs



Source: Asian Development Bank (2022)

The economic effect of SAFTA on the South Asian countries has been modest. This can be visualized by Table 4, which shows the intra-regional trade share of the South Asian countries. The simple average of intra-regional trade share in the pre-SAFTA period during 2001-2006 was 5.3% and in the post-SAFTA period during 2007-2014 it was around 4.7%. This is quite low compared to other regional blocs' intra-regional trade share.

Table 4: Intra-regional Trade Share of South Asia

2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
4.91	4.96	5.77	5.53	5.46	5.16	5.34	5.01	4.31	4.55	4.24	4.28	4.52	5.21

Source: Asian Development Bank (2022)

## 5. Results and Analysis

The impact of FTAs on employment merits cautious empirical analysis. This study takes a close look at the employment effects of trade within the South Asian countries at both regional as well as the bilateral level. Prior to elucidating the results from the regression model, expected signs of the variables used in this study (as is found in the literature) along with their explanation need to be examined. This is shown in Table 5.

Results of the regression model have been reported in Table 6. Results in Column 1 have been estimated using pooled OLS. The table shows that all the variables are significant, except the import (*lnImport*). The regression result explains that the country's exports affect its unemployment significantly and has expected negative sign. This indicates that if export increases, unemployment will decrease and vice versa. Similarly, tariff has also significant impact on unemployment. One unexpected observation is the sign of coefficient for GDP; the expected sign for GDP coefficient is negative, but our result shows positive sign for GDP. Signs of FTAs (ISFTA, IBFTA, and SAFTA) are negative. The results are quite interesting,

all the FTAs included in this study, whether bilateral or plurilateral, have significantly contributed to declining unemployment.

Table 5: Expected signs of the coefficients and their explanation

Explanatory Variables	Expected Sign of the coefficients	Explanation
Exports	-	increase in exports can create new jobs particularly in export-oriented industries
Imports	+	increasing imports may contract employment in those domestic industries that are not capable of competing with highly competitive global industries
GDP	-	increase in GDP can create employment opportunities
Tariff	-	as the tariff on imports will decline, imports will likely increase, which may increase the unemployment in the home country
RTAs	+/-	commencement of RTAs will increase exports as well as imports, exports will likely increase employment, while imports can destroy employment

Source: Author

India-Sri Lanka FTA (ISFTA) has contributed to declining the unemployment in India and Sri Lanka as well as India-Bhutan FTA (IBFTA) has helped in decreasing the unemployment in India and Bhutan, while SAFTA has contributed to declining unemployment in the South Asia. Overall, the model is significant, based on the *F*-test. The results in Column 2, Column 3 and Column 4 are estimated using Random Effects, Fixed Effects (year) and PPML with Fixed Effects (year) respectively to comprehend if there is variation in results using alternative estimation techniques. Based on the Hausman Test, Fixed Effects estimation is consistent and appropriate over the Random Effects. However, given the missing values in the dataset and the issue of heteroscedasticity, Poisson-pseudo maximum likelihood (PPML) is applied as proposed by Santos Silva and Tenreyro (2006). The coefficient estimates under PPML with Fixed Effects (Column 4) show expected signs for all the explanatory variables except the GDP and tariff. However, only the coefficient for GDP is significant apart from FTAs. The coefficient estimates for variables of interest like ISFTA, IBFTA and SAFTA have negative sign like the results under pooled OLS. This confirms that trade liberalization policy via FTA route has contributed to decreasing unemployment in South Asian countries.

Table 6: Regression Results

Variables	Pooled-OLS	Random Effects	Fixed Effects	PPML with Fixed Effects
	1	2	3	4
Constant	-18.20252*** (1.263177)	-18.20251*** (1.25625)	33.21676** (12.81851)	161.3894*** (41.13189)
<i>lnExport</i>	-.2653812** (.113747)	-.2653814 (.2217784)	-.1110765 (.3103635)	-.1997238 (.1506217)
<i>lnImport</i>	.1594955 (.201509)	.1594926 (.1844089)	-.0757644 (.3962761)	.3815095 (.2341242)
<i>lnGDP</i>	1.215038*** (.1220834)	1.21504*** (.1678889)	-.9116139 (.5864969)	.818478*** (.1781133)
<i>lnTariff</i>	-.641885*** (.1927223)	-.6418849** (.3165082)	-.1606388 (.1550956)	.0094545 (.1272235)
<i>ISFTA</i>	-.595542*** (.1710824)	-.5955405** (.244222)	omitted	-.331192** (.1426994)
<i>IBFTA</i>	-.3376055* (.1864441)	-.3376029 (.2084682)	.0882726 (.2391512)	-.1801178* (.1127224)
<i>SAFTA</i>	-.8835093*** (.1138421)	-.8835087*** (.1891137)	-.0999034 (.1395711)	-.1985047* (.1279236)
<i>R-squared</i>	0.9691	0.9691	0.8980	.98075614
<i>F (7, 69)</i>	365.57			
<i>P-value(F)</i>	0.0000			
<i>Fixed Effects</i>	No	No	Yes	Yes
<i>No. of Observations</i>	77	77	77	77

Source: Author

Note: Standard errors are in parenthesis; \*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

## 6. Conclusion and Policy Implications

The studies on free trade agreements have mainly focused on the trade and welfare effects, its impact on labor and employment has largely been undermined. Economic integration through trade reforms, liberalized trade policies and increased trade openness has important implications on employment. However, the effects of FTA have two dimensions-exports and imports. Moreover, the effects of these two variables on employment are also complex and depend on their relative strength. It is argued that increase in exports can potentially create



new jobs especially in export-oriented industries, while surge in imports may contract employment in those domestic industries that are not capable of competing with highly competitive cross border industries. Since FTA aims at increasing volume of trade through liberalizing trade, FTA may have impact on poverty, inequality, unemployment, and other economic outcomes through trade. It is very difficult to find out the impact of FTAs on unemployment directly. Because between FTAs and unemployment, several channels work; the positive or negative impact of FTAs on unemployment depends on the country's specific structure.

The broad objective of this study is to investigate the links between trade liberalization and employment under the FTA framework in South Asia. The results show that export, import, and GDP have significant impact on unemployment in India and South Asia. While observing the impact of FTAs on unemployment, it is found that all the FTAs impacted unemployment significantly. Coefficients estimate of FTA dummies describes negative relation between FTAs and unemployment. This validates that India's FTAs with Sri Lanka, Bangladesh, and other South Asian countries are conducive for decreasing unemployment in India as well as in other South Asian economies. The study suggests that for improving unemployment condition, India needs to investigate its FTA policy and increase utilization of FTAs. However, it is imperative to remember that if an FTA played vital role in decreasing unemployment in one country, it is not necessary to happen in every country. The impact of FTAs on employment also depends on how trade (export and import), and other important factors like GDP, tariffs, etc. affect employment in that economy.

The result presented in this study will help countries to boost the level of employment in the economy through signing free trade agreements. FTAs not only bring more goods and services at cheaper prices for the domestic consumers through increasing imports, but also ensure dynamic welfare gains like FDI, competition, technology transfer, economies of scale and joint ventures that help in creating jobs. Thus, the outcome of this study will significantly act as a driver of economic growth and welfare for the economies.

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