CHAPTER ONE

Effect of Policy Convergence on the Trade Potential of South Asia

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Abstract

South Asia being a developing region several trade models were introduced to expand the intra-regional trade. However, the trade among these member countries hardly increased even though those trade agreements have the potential. Policy isolation might be a possible reason for this slow growth in intra-regional trade. Thus, this study investigates the effect of policy convergence on intra-regional trade in South Asia. In this regard, both the effects of internal policy convergence and external policy convergence on the trade policy were measured for the period from 2000 to 2021. The trade policy was proxied through intra-regional trade. Meanwhile, monetary policy and fiscal policy were represented through inflation, money supply, interest rate, government expenditure, and tax revenue accordingly. Internal policy convergence was measured through the Generalized Method of Moments (GMM) model while external policy convergence was measured through Vector Error Correction Model (VECM). Even though the internal policy convergences are statistically significant, they depicted a lower catch-up ratio resulting in a higher length of time for the full convergence. Meanwhile, external policy convergence also plays a significant role when deciding the level of intra-regional trade in South Asia, because, results depicted that the trade is higher for the country pairs whose external policy convergences are strong and vice versa. Thus, this study confirms that the lack of internal policy convergence and external policy convergence is a trickle of significant hindrances to intra-regional trade in South Asia. Therefore, policymakers need to concentrate more on policy convergence so as to reach the optimum outcome of the trade policies in South Asia.

Keywords: *External Policy Convergence, Internal Policy Convergence, Intra-regional Trade, South Asia.*

1. Introduction

Prior to the independence, South Asian nations were governed by the British for about 200 years. These nations adopted a Soviet-style model after gaining their independence, which revealed the characteristics of import-substituting policies, a dominant public sector, and the concomitant placing of numerous restraints on the private sector (Devarajan & Nabi, 2001). These nations started the process of reforming their trade policies in the late 1970s and early 1980s. For instance, in the late 1970s, Sri Lanka started the process of policy liberalization, which was then adopted by other countries in the area (Devarajan & Nabi, 2001). Several bilateral and multilateral trade agreements were started notably after the South Asian Association for Regional Corporation (SAARC) was established. The South Asian Preferential Trade Agreement (SAPTA), which was introduced in 1995, served as the catalyst for these nations' trade unification. By establishing the South Asian Free Trade Area in 2005, SAPTA was transformed into a free trade agreement. Improving intra-regional trade is one of the main goals of the SAFTA launch. The following graph illustrates how trade within South Asia has increased following the SAFTA.
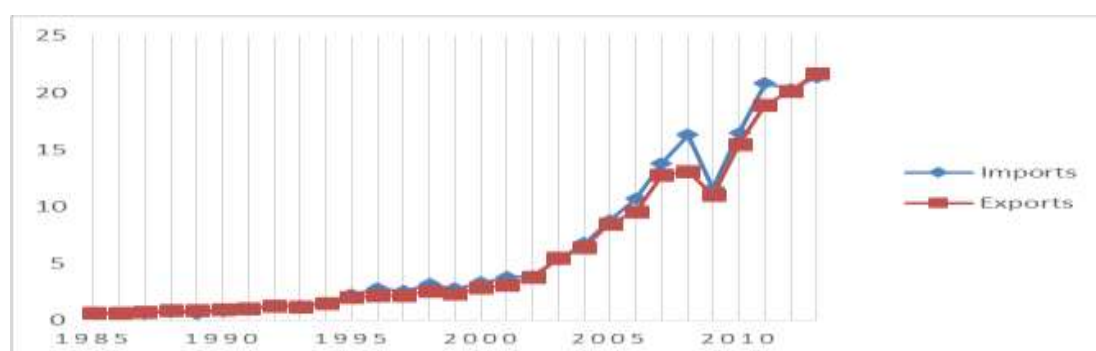

Figure 1.1: Intra-regional Imports and Exports (US $ billions)
Source: World Bank Database

The total intra-regional imports and exports from 1985 to 2013 are depicted in Figure 1.1. When SAARC was established in the middle of the 1980s, intra-regional imports and exports had a combined value of about 0.6 billion US dollars. Till the early 1990s, South Asia's intra-regional trade amounted to less than $1 billion USD. The total imports and exports between these nations were 2.84 and 2.20 billion US dollars, respectively, when SAPTA was established in 1995. Intra-regional imports and exports showed a noticeable rise in their volumes throughout this SAPTA era, 1996 to 2005, with imports rising from 2.84 billion US dollars to 8.79 billion US dollars and exports rising from 2.20 billion US dollars to 8.52 billion US dollars. Figure 1.1 demonstrates that, starting from 2003, intra-regional trade has been rapidly expanding. That is two years prior to SAFTA's implementation, and seven years after the implementation of SAPTA. This might be a result of the late response of SAPTA

(Moktan, 2009) or the "anticipation effect" of SAFTA. A trade agreement's anticipatory effect is expected because, according to Frankel (1997), businesses may position themselves in advance for the future markets now. Numerous other academics concur that the anticipatory effects of firms have had a major positive impact on trade flows even before the implementation of trade agreements (Magee, 2008; Freund & McLaren, 1999).

Except for 2009, this rising trend in boosting intra-regional trade that began in the pre-SAFTA era has persisted even after the formation of SAFTA. In 2009, regional exports decreased from 13.12 billion to 11.01 billion and intraregional imports decreased from 16.30 billion to 11.62 billion. This abrupt decline might be attributable to the global financial crisis occurred at the time. However, the region swiftly recovered as trade returned to its typical trend from the subsequent year. With the exception of this 2009 incident, trade between South Asian nations increased throughout the SAFTA era. This increase in intra-regional trade would undoubtedly point to a trade creation effect of SAFTA. One of the best instances in this regard is the sharp increase in the import of automobiles from India into Sri Lanka. However, the level of intra-regional trade is still quite low when compared to all trade in South Asia. In 1990, it was about 2.4 percent; by 2001, it had risen to 4.3 percent; and right now, it is about 4.8 percent. Figures 1.2 and 1.3 provide further elucidations that are more focused on imports and exports of the region.
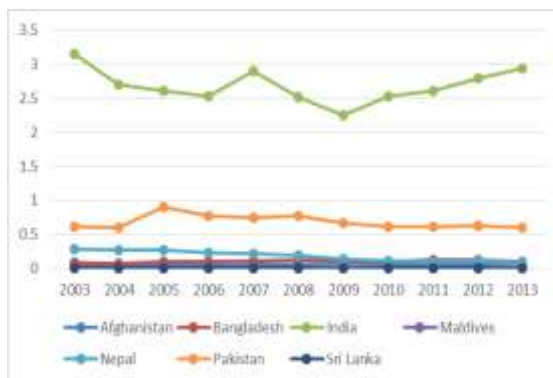

Figure 1.2: Intra- regional exports % in total
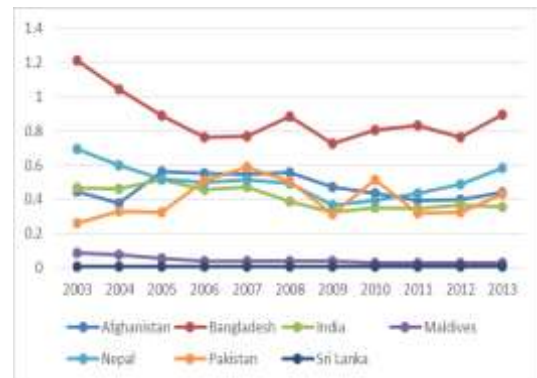**Source:** World Bank Database exports

Figure 1.3: Intra- regional imports % in total import
Source: World Bank Database

Figure 1.2 shows the intra-regional exports for each country as a share of the total exports for the region. Since India is the dominating nation in the region, it depicts the highest share of exports to the region. The region's total proportion of exports from all other countries is less than 1%, while India's export percentage has remained at roughly 3% over time. Despite the region's considerable intra-regional export increase, the share of intra-regional exports shows a falling tendency when compared to total exports. The trend of intra-regional import shares

in total imports is remarkably similar to their export shares. Figure 1.3 shows that during the era, fewer than 1% of the nation's total imports came from the region. Additionally, as with intra-regional exports, the trend is negatively skewed for the majority of the countries. This shows that intra-regional trade in the region, both in terms of imports and exports, has not increased along with the overall trade expansions. Thus, it clearly indicates that the policy attempts taken to expand the intra-regional trade have not provide the expected results. Even though, these countries depict a similarity in terms of their culture, business cycles, and political business cycles, the integration process in terms of trade has not depicted the expected result. It is apparent that the governments have been taking considerable attempts in terms of their fiscal and monetary policies to support the above phenomena, however the failure to have a proper harmonisation among the policies might be the issue. Because policy isolation is always hinders the potentials of the policy decisions, most of the governments tend to have a proper harmonisation in terms of their intra- regional and inter-regional policies. The present diplomatic issues prevailing in the region is there for could be the reason for the failure in the trade strategies taken so far to boost the intra-regional trade. Thus, this study examines the intra- regional and inter-regional policy convergence on trade potential of South Asia.

1.1. Barriers to Intra-Regional Trade Expansions in South Asia

Many different types of internal political conflicts and inner-state conflicts are said to be prevalent in South Asia. South Asia exhibits more intra-state political conflicts than other regional blocs, which is likely the biggest impediment to intra-regional trade. The most significant conflict in the region is the dispute over Kashmir between India and Pakistan. This conflict led to at least three conflicts between India and Pakistan, including the wars between the two countries in 1947, 1965, and 1999. As the Sri Lankan civil war against the LTTE came to an end, India's decision to vote against Sri Lanka on the issue of accountability and violations in the civil war at the United Nations Human Rights Council also contributed to some political incoherence between India and Sri Lanka. Next, Sri Lanka accuses the state government of Tamil Nadu of providing arms and providing training to the Liberation Tigers of Tamil Eelam (LTTE). Another notable intra-state political conflict was the territorial dispute between India and Nepal regarding the Kalapani region. In addition, after the India-China war in 1962, Nepal's decision to permit China to construct the Lhasa-Kathmandu-road encouraged India to focus more on security matters while dealing with Nepal. The disputes between the two parties over the boundaries of the fertile islands of Boraibari and Dekhta-Dumabato Falls, as well as the enclaves, partially destabilised politics in both India and Bangladesh (Bhatta, 2004). Finally, there have been some political disputes between

Afghanistan and Pakistan as a result of Afghanistan's obligations on Pakistan regarding federally managed tribal areas.

Religious diversity and its impact on politics are also important in the area. According to Bhatta (2004), the opposite intentions of different religious groups, such as Pakistan's strong commitment to converting India into an Islamic state and the Bharatiya Janata Party's commitment to converting it into a purely Hindu state, have also harmed relations between India and Pakistan on the political front. Additionally, he says that whereas religion has a relatively minor impact in other states, it has a high impact in Pakistan and Bangladesh. Political system adoption disparities have contributed to the region's disintegration as well. Both Pakistan and Bangladesh, according to Bhatta (2004), "have yet to institutionalise democracy and confirm the capabilities of the political system to keep the military out of politics." Following the Maoist movement, Nepal's journey to democracy is at a turning point. While the Maldives recently had a multiparty political system, Bhutan still maintains the monarchy as the primary institution. However, compared to other nations, Sri Lanka and India are well-established democracies (Bhatta, 2004). The governance and statecraft of each nation are likely influenced by these divergent political systems to adhere to distinct values and principles, making it more difficult for the region to adopt a standard trade policy.

Numerous arguments regarding the expected impact of RTAs in promoting peace among politically disintegrated countries are presented in RTA-specific literature. First, because RTAs have the potential to boost bilateral trade and have corresponding welfare impacts, they may increase the opportunity cost of continuing these political disagreements (Martin, Mayer, and Thoenig, 2008; Oneal and Russett, 1997, 1999; Barbieri, 2002). Additionally, the creation of supranational institutions in accordance with RTAs would result in the resolution of these interstate issues (Bearce, 2003; Bearce and Omori, 2005; Haftel, 2007). The RTA's pressure on politically fractured nations may also have a considerable impact on the peaceful solutions adopted by these nations.

Political complications inside individual nations, in addition to these intra-state conflicts, are important in the region. For instance, the Kashmir issue has sparked an internal struggle in India as certain insurgent groups support the region's accession to Pakistan while others advocate for total independence. Despite this, India still faces issues with communalism, religion, terrorism, separatist demands, subversive activities, etc. Numerous democratically elected administrations in Nepal failed due to widespread corruption, a crisis in governance, threats from the Maoists, and pressures from mainstream political parties. Thirty years of civil war in Sri Lanka with the LTTE led to serious problems with democracy, the economy, and social issues. In Pakistan, the conflict between the ethnic Sindish and those who immigrated

from India generated serious issues in addition to military rule. Additionally, the Taliban terrorist groups' activity in Afghanistan led to a number of problems with democracy and security. Similar to the Maldives, the country's unity was impacted by the 1987 coup attempt. Bhutan is also experiencing some serious internal political problems, leading to an unpredictable political environment.

These political considerations all point to serious institutional and governance problems in the area. Therefore, for a variety of reasons, these issues may impede international trade. First, they could make the situation more unpredictable due to higher transaction costs. By decreasing the security of properties and degree of trust in the transaction process, this is accomplished. Second, the complexity of understanding legal frameworks and tax policies as well as the establishment of new connections between communication, financial, and shipping activities make the transaction process more challenging under these circumstances. Price mark-ups are yet another substantial trade barrier that manifests as a result of poor governance procedures, according to Anderson and Marcouiller (2002). Price mark-ups could make traded goods more expensive than domestic ones, leading to more insecurity. Additionally, they show that the proportional mark-up of insecurity of traded products is also higher as a result of a lack of legal procedures to defend property rights in countries with weaker governance (Groot, Linders, Rievtveld, & Subramanian, 2004). Presence of both inner-country and inter-country policy incongruities within the South Asian countries motivated the researchers to investigate the effect of internal policy convergence and external policy convergence on the intra-regional trade of South Asia.

2. Previous Literature

Convergence is the tendency for policies to develop more uniformly, in the form of increasing similarity in structures, processes and performances (Drezner, 2001). The definition of Policy convergence as the growing similarity of policies over time still leaves a broad range of options as to how to empirically assess and evaluate similarity changes (Holzinger & Knill, 2007). The Organization for Economic Cooperation and Development, (2008) defines policy coherence as the systematic promotion of mutually reinforcing policy processes through collaborations between government departments and agencies to achieve the set goals.

According to Holzinger & Knill (2007) imposition, international harmonization, regulatory competition, and independent problem-solving are the key causal mechanisms for policy convergence. Policy convergence through imposition occurs by external political factors force a government to adopt a certain policy. Harmonization is the adoption of similar policies and programs according to the legal requirements of government as key factors of their

obligations as members of international institutions and it is a specific outcome of international cooperation (Holzinger & Knill, 2007). When countries merge with uniform legal obligations defined in international or supranational law, the mechanism of international harmonization heads to cross-national convergence. International harmonization assumes the existence of interdependencies or externalities that push governments to solve common problems across cooperation through international institutions, hence sacrificing some independence for the good of the community at large (Hoberg, 2001). After being established, institutional arrangements will constrain and shape domestic policy choices, even as they are constantly challenged and reformed by their member states. The mechanism of regulatory competition leads to cross-national convergence through countries facing competitive pressure to mutually adjust their policies while assuming economic integration among countries (Holzinger & Knill, 2007). For instance, when increasing the integration of European and global markets and the abolition of national trade barriers, the international mobility of goods, workers, and capital competitive pressure were imposed on the nation-states to rebuild domestic market regulations in order to neglect regulatory burdens restricting the competitiveness of domestic industries. The pressure is raised from potential threats of economic factors to move their activities elsewhere, inducing governments to lower their regulatory standards (Hoberg, 2001). Many authors observed that as a result of similar but independent responses of political factors to parallel problem pressures head to policy convergence between several countries. It is called an independent problem-solving mechanism (Holzinger & Knill, 2007). It works, as individuals open their umbrellas simultaneously during a rainstorm, because governments may decide to change their policies in the presence of tax evasion, environmental pressures, such as air pollution, or an ageing population (Holzinger & Knill, 2007).

Policy convergence on foreign trade policies is among the most important concept in developing countries (Rodrigue & Rodri, 2000). Therefore, policy convergence on trade is quite important. However, the overall volume of trade in the South Asian region has remained significantly below par (Shah, 2021). Intra-regional trade in South Asia in 2015 accounted for approximately 5% of the total international trade in South Asia (Kaushik, 2015). In addition to that, the ineffectiveness of the South Asian Association for Regional Cooperation (SAARC) agreement has further irrigated intra-regional trade across South Asia (Ashraf, Nasrudin, & Akhir, 2017). These depressing trends can occur due to multifaceted factors such as inappropriate tariff measures, high costs of intra-regional connectivity, and, most importantly, geopolitical tensions among the South Asian economies which have impeded trade corporations among the South Asian region (Kathuria, 2018). As mentioned above, tariffs lead to a less efficient allocation of resources and promote economic inefficiencies that

generate greater overall losses to consumers than gains to producers regardless of retaliation and other collateral effects (Martín, 2021). The main channel through which import tariffs reduce welfare is by introducing a gap between the marginal social costs and marginal social benefits of imported goods (Martín, 2021). Tariffs, in the modern economy, have proven to have economy-wide effects, making trade policy a macroeconomic and geopolitical policy tool to be used by governments. In the 1930s, protectionist policies, such as the Smoot-Hawley tariff, were one of the main factors contributing to the collapse of international trade (Martín, 2021). Thus, tariffs contribute significantly to ruining the trade policy convergence among countries. However, the diseconomies of tariffs can be minimized through policy coherence approaches like trade agreements. Even if SAARC fails to do so as mentioned above, the South Asian Free Trade Area should succeed. Because, one of the main objectives and principles of SAFTA is removing barriers to trade and facilitating the movement of goods across borders between the territories of contracting states (Ministry of Commerce, Sri Lanka, 2020).

East Asian (Indonesia, Korea Rep., Malaysia, Philippines, and Thailand) economic crisis from 1993 to 1997 was a great incident for the dearth of internal policy convergence (Bora & Neufeld, 2001). During pre-crisis trade environment, as a result of external policy convergence practises, tariff rates in East Asia rose to 19.4% (World Bank, 2000). Because of the crisis, the five economies experienced negative growth rates, inflationary pressures, reductions in export volumes, export prices, and tax revenues fell down (Bora & Neufeld, 2001). Government revenues also have fallen significantly due to low revenue generation despite domestic pressures to spend on social programs and falling domestic demand (Bora & Neufeld, 2001). Indonesia was strengthening of legal framework for banking operations, tightening capital adequacy requirements, strengthening auditing requirements, and strengthening bankruptcy law to face economic crisis (Bora & Neufeld, 2001). The Republic of Korea did structural reforms in response to the Asian crisis. Some of those are the merger or recapitalization of weak financial institutions, the introduction of more stringent conditions for official liquidity support, and the strengthening of bankruptcy laws (Bora & Neufeld, 2001). Malaysia mergers or recapitalization of weak financial institutions, tightening of guidelines on loan exposure, and softening of foreign investment restrictions as responses (Bora & Neufeld, 2001). The Philippines did structural reforms by strengthening of supervisory framework, tightening of guidelines on loan exposure, and softening of quantitative import restrictions (Bora & Neufeld, 2001). Thailand responded by strengthening of supervisory framework, and liberalization of procedures for mergers and acquisitions (Bora & Neufeld, 2001). However, commonly five economies reduced tariffs policy as response to the crisis (Bora & Neufeld, 2001). Through these structural reforms, the five economies tried

to maintain the internal policy convergence in a strong position to control the impact of the crisis. After the crisis, tariffs rates also fell down and those shifts increased competition for East Asian producers in certain industries and sectors while creating new opportunities. Thus, it is evident that internal policy convergence helps to mitigate some of the possible threats of external policy convergence.

3. Methodology

The objective of this study is to investigate the effect of internal and external policy convergence on the intra-regional trade of South Asia. Beta convergence was used to measure the effect of internal policy convergence while an error correction model was employed to measure the effect of external policy convergence on intra-regional trade. In this regard, data were collected for only six countries (Bangladesh, Bhutan, Pakistan, India, Maldives, and Sri Lanka) out of eight South Asian countries due to the lack of data. The required data were collected from the World Bank Data Bank and Central Bank annual reports for the period of 2000 to 2021.

South Asian countries initiated several strategies in order to magnify intra-regional trade. The introduction of SAARC, SAPTA, and SAFTA are some of those cooperative strategies. However, statistics indicate that intra-regional trade has not expanded as expected. Lack of internal policy convergence may be a reason in this regard. For instance, these trade policies need to be supported by other policies like investment policy, macroeconomic policy credibility, policies to stabilize democracy, etc. Therefore, the researchers hypothesize:

H_1: Lack of Internal policy convergence significantly hinders the expansion of intra-regional trade in South Asia

A high level of political tension in the South Asian countries hinders the potential of the region to expand intra-regional trade. Political tensions like the Indo-Pakistan war over Kashmir, India's decision to vote against Sri Lanka on the issue of accountability and violations in the civil war at the United Nations Human Rights Council.

Therefore, the researchers hypothesize:

H_2: Lack of external policy convergence significantly hinders the expansion of intra-regional trade in South Asia

The above hypotheses were tested through the monetary policy instruments and fiscal policy instruments of inflation, money supply, interest rate, government expenditure, and tax revenue.

3.1 Measuring the Internal Convergence

Beta convergence was used to measure the effect of internal policy convergence on trade flows of South Asia. Equation (1) represents the beta convergence models that are created separately for monetary policy instruments and fiscal policy instruments. The beta convergence approach is required to assess catch-up in inflation, interest rate, money supply, government expenditure, and tax revenue (Asongu et al., 2017).

$$\text{In } (TE_{ijt}) - \text{In } (TE_{ijt-\tau}) = \beta \text{ In } (TE_{ijt-\tau}) + \eth CV_{it} + \eta_i + \xi_t + \varepsilon_{ijt} \qquad (1)$$

$$\text{In } (TE_{ijt}) = a \text{ In } (TE_{ijt-\tau}) + \eth CV_{it-\tau} + \eta_i + \xi_t + \varepsilon_{ijt} \qquad (2)$$

Where, $a = 1+\beta$, TE_{ijt} is the intra-regional trade between country i and the rest of the countries in the region at period t. τ is tau. The CV_{it} represents the convergence variable in country i at period t, η_i is a country-specific effect, ξ_t is a time- specific constant and ε_{ijt} is an error term. If $0 < |a| < 1$ in the equation, then $TE_{ijt-\tau}$ is dynamically stable around the way with a trend growth rate similar to that of CV and with a height relative to the level of *CV*.

Providing insights for the computation of catch-up rates and time to full catch-up is not a big deal. The equation for cat-up rate is $(a/6)*100$. Here 6 equals non-overlapping intervals and the equation for the length of time needed for full catch-up is (600% the cat-up rate) (Asongu, Tchamyou, Minkoua N, Asongu, & Tchamyou, 2017). Since the above models are dynamic models with a lag-dependent variable, system GMM modelling technique is used to analyse the models. Validity of the over-identified instruments in GMM is tested using the Sargan test.

3.2 Measuring External Convergence

The researchers tested the long-run cointegration among policies by using the Johansen cointegration test. If it is insignificant, there is no long-run steady state among the policy variables. But, if it is significant, there is a long-run steady state among the variables. Therefore, the external convergence between intra-regional trade and monetary and fiscal policy variables are tested by using the speed of adjustment coefficient in the vector error correction model. Thus, the error correction model can be specified as follows.

$$\Delta TE_{ijt} = \beta_0 + \beta_1 \Delta CV_i + \beta_2 \Delta CV_j - \lambda (TE_{t-1} - a_0 - a_1 CV_{t-1} - a_2 CV_{t-2}) + v^t_t \qquad (3)$$

In the model, TE_{ijt} denotes intra-regional trade. CV_i and CV_j indicate the convergence variable in country i and j. Accordingly, the convergence variable denotes all the variables in the model (inflation, interest rate, money supply, government expenditure, and tax revenue). The equation represents the short-run and long-run relationship between trade expansion and

convergence variables in country *i* and *j*. Eventually, the coefficient λ is the convergence measure of this period (t-1) and disequilibrium which happens in period t, and v^t_t is the error term. λ is the speed of adjustment and it is used to measure convergence in this section. If the λ coefficient depicts a negative value and if it is in the range of 0<| λ|>1, then, that variable reaches the position of convergence, otherwise it will deviate from the steady state.

4. Results and Discussion

Table 4.1 represents the results obtained for the system GMM model developed to measure the policy convergence between intra-regional trade and monetary and fiscal policy variables. The lagged dependent variable in all the models is statistically significant at a 95% confidence level as the p-values are less than 0.05. In addition to that, the Sargan test confirms the validity of over-identified instruments in the GMM model. Thus, the results are valid. Therefore, results indicate a significant convergence between trade policy and the other variables considered in this study.

Table 4.1: Internal Policy Convergence Measures

	Inflation	Money supply	Interest rate	Govn. exp.	Tax revenue
GMM coefficient	0.716	0.667	0.694	0.71	0.718
p. value	0.000	0.000	0.000	0.000	0.000
catch-up ratio	11.95%	11.12%	11.57%	11.84%	11.97%
length of time	50.21 Years	53.95 Years	51.85 Years	50.67 Years	50.12 Years
sargan p. value	0.761	0.751	0.745	0.72	0.767

Source: STATA Output

Given an estimated coefficient for an initial lagged intra-regional trade value of 0.716, which is significant with no autocorrelation in the residuals and has valid instruments, the catch-up rate is 11.95% ([0.716/6] ×100) and the length of time needed for full catch-up is 50.21 years (600%/11.95%). Therefore, the trade policy demands 50 years and approximately 77 days to achieve 100% catch-up with the inflation policy. The catch-up ratio for money supply is 11.12%. Therefore, the length of time needed for a full catch-up is 53.95 years. That means, trade policy demands 53 years and approximately 347 days to achieve 100% catch-up with the money supply. The catch-up ratio for interest rate is 11.57%. Therefore, the length of time needed for a full catch-up is 51.85 years. That means trade policy demands 51 years and approximately 310 days to achieve 100% catch-up with the interest rate. The catch-up ratio of government expenditure is 11.85%. The length of time needed for a full catch-up is 50.67 years. It denotes trade policy demands of 50 years and approximately 245 days to achieve

100% catch-up with the government expenditure. Eventually, the catch-up ratio of tax revenue is 11.97% and the length of time required for full catch-up is 50.67 years. It indicates trade policy demands of 50 years and approximately 245 days to achieve 100% catch-up with the tax revenue strategy. The above analysis indicates the need for a very long time for internal policy convergence in the region. Thus, the low intra-regional trade may have occurred mainly because of the lack of internal policy convergence. Therefore, accept the hypothesis of Lack of Internal policy convergence significantly hinders the expansion of intra-regional trade in South Asia (H_1).

The above analysis on policy convergence between the trade policy of Sri Lanka and the monitory and fiscal policy do no depict a good picture as the full convergence occurs in about 50 years' time. The trade policy of the country had to change time to time as it could not provide the expected result. For instance, soon after 1997 Sri Lanka adopted imports substitution policy later it was changed to import substitution with protection. Sri Lanka could not use this policy for the betterment of the country mainly because of policy isolation. That means if the rest of the policies like monitory policy and the educational policy did not support the entrepreneurs to substitute what the country import then the country will continue to import leading to a significantly negative trade balance. Subsequently the trade policy was changed to export promotion model. Still the model has failed to deliver the expected results due to lack of convergence with the monitory and fiscal policy instruments.

4.1 Johansen Cointegration Test

Table 4.2 shows the results obtained for the Johansen cointegration test for each of the monetary policy and fiscal policy variables with trade between country pairs. For instance, BP stands for trade between Bangladesh and Pakistan. Since this study concentrates only on six South Asian countries 15 such combinations are possible. But, due to the unavailability of trade data between some of the country pairs (eg. Afghanistan and Bangladesh) only 10 country pairs were considered.

Table 4.1: Johansen Cointegration Test Results

Variable		BP	BS	BI	BM	IP	IM	IS	PM	PS	SM
IN	None	0.12	0.09	0.02	0.17	0.01	0.01	0.00	0.17	0.16	0.10
	At m1	0.21	0.11	0.09	0.17	0.14	0.18	0.01	0.39	0.24	0.34
	At m2	0.08	0.09	0.07	0.17	0.02	0.20	0.07	0.08	0.07	0.09
MS	None	0.16	0.01	0.07	0.01	0.00	0.12	0.01	0.33	0.21	0.28
	At m1	0.05	0.21	0.17	0.84	0.01	0.11	0.03	0.25	0.40	0.37
	At m2	0.01	0.08	0.06	0.63	0.01	0.03	0.06	0.04	0.87	0.21
INR	None	0.20	0.05	0.35	0.67	0.10	0.00	0.01	0.07	0.00	0.01

	At m1	0.48	0.94	0.70	0.73	0.18	0.01	0.03	0.25	0.11	0.21
	At m2	0.11	0.40	0.12	0.74	0.09	0.00	0.02	0.18	0.04	0.90
GE	None	0.16	0.23	0.16	0.00	0.03	0.35	35.65	0.61	0.07	0.17
	At m1	0.05	0.18	0.31	0.00	0.33	0.69	20.04	0.91	0.11	0.44
	At m2	0.01	0.03	0.12	0.00	0.26	0.82	6.65	0.50	0.15	0.88
TAX	None	0.01	0.67	0.10	0.48	0.32	0.05	0.22	0.01	0.05	0.51
	At m1	0.01	0.50	0.11	0.39	0.34	0.03	0.45	0.21	0.03	0.61
	At m2	0.02	0.13	0.11	0.04	0.30	0.01	0.15	0.21	0.03	0.74

Source: EViews Output

Bangladesh and Pakistan (BP) trade combination show that, there is a statistically significant cointegration with money supply, government expenditure and tax revenue. Which indicates that, BP trade combination shows a long run relationship with money supply, government expenditure, and tax revenue of the respective countries. Similarly, Bangladesh and Sri Lanka (BS) trade combination depict a statistically significant cointegration with government expenditure. It means, BS trade combination has a long run relationship only with government expenditure of the respective countries. However, Bangladesh and India (BI) trade combination elaborate that, there is no statistically significant cointegration with the variables of the respective countries. Meanwhile, the Bangladesh and Maldives (BM) trade combination shows a statistically significant cointegration with the variables of government expenditure, and tax revenue. This indicates that the BM trade combination has a long-run relationship with government expenditure and tax revenue of the respective countries. India and Pakistan (IP) trade combination show that there is a statistically significant cointegration with variables of money supply, and inflation. Therefore, money supply and inflation have a long-run relationship with the IP trade combination. Meantime, none of the fiscal policy variables show a cointegration with the IP trade.

India and Maldives (IM) trade combination denote that, there is a statistically significant cointegration with money supply, interest rate, and tax revenue. It means, IM trade combination has a long run relationship with the money supply, interest rate, and tax revenue of India and Maldives. Similarly, the India and Sri Lanka (IS) trade combination denotes that, there is a statistically significant cointegration between money supply and interest rate. It indicates that the IS trade combination has a long-run relationship with the variables of money supply, and interest rate of the respective countries. Pakistan and Maldives (PM) trade combination show statistically significant cointegration only with money supply. Pakistan and Sri Lanka (PS) trade combination show that there is a statistically significant cointegration between interest rate and tax revenue. It indicates that the PS trade combination has a long-run relationship with the variables of interest rate, and tax revenue of the respective countries.

However, the Sri Lanka and Maldives (SM) trade combination does not show any statistically significant cointegration with the monetary policy and fiscal policy variables of Sri Lanka and Maldives.

Table 4.2: Speed of adjustment Coefficient

Speed of Adjust.	BP	IS	BI	IP	PM	SM	BS	BM	IM	PS
IN	-0.13	-0.40	-0.08	-0.10	-0.01	-0.17	-0.01	-0.01	-0.02	0.06
	[-3.27]	[-3.03]	[-2.02]	[-0.77]	[-0.3]	[-1.0]	[-0.66]	[-0.15]	[-1.03]	[1.0]
MS	0.19	-0.93	-0.39	-1.06	-0.60	-0.82	0.60	-0.53	-0.01	-0.36
	[-2.46]	[-3.85]	[-3.9]	[-2.23]	[-2.1]	[-1.2]	[1.61]	[-2.06]	[-0.96]	[-3.0]
IR	-0.16	-0.25	-0.012	-0.04	-2.07	-0.41	-0.01	-0.56	-0.21	0.03
	[-2.10]	[-3.13]	[-0.13]	[-2.04]	[-3.7]	[-3.1]	[-0.31]	[-1.01]	[-2.8]	[0.7]
GE	-0.98	-0.13	-0.26	-0.09	-0.06	-0.23	-0.14	-0.09	-0.076	-0.46
	[-4.01]	[-1.70]	[-3.64]	[-1.05]	[-0.2]	[-3.2]	[-2.43]	[-0.22]	[-1.0]	[-1.8]
Tax	0.21	0.07	-0.09	-0.15	-0.13	-0.05	-0.11	-0.14	-0.06	-0.18
	[1.37]	[3.6]	[-0.89]	[-2.19]	[-0.8]	[-0.6]	[-1.90]	[-1.61]	[-0.67]	[-1.4]

Source: EViews Output

External policy convergence is measured with the help of the speed of adjustment coefficient in the VECM model. The abstracted test results for the equation (3) is reported in table 4.3. According to the reported results in table 4.3, speed of adjustment coefficients of inflation, money supply, interest rate, and government expenditure on the BP trade combination model are statistically significant. Inflation depicts a 13% adjustment to the steady state of BP trade flows in the previous period. The adjustment of the money supply is 19%. The interest rate shows an adjustment of 16%. Meanwhile, government expenditure depicts the highest adjustment, which is 98%. However, the IS trade combination was statistically significant for the speed of adjustment coefficient of inflation, money supply, interest rate, and tax revenue while it shows the adjustment of 40%, 93%, 25%, and 7% respectively. Meantime, the BI trade combination significantly converges with inflation, government expenditure, and money supply. The adjustment of inflation is 8%, adjustment of government expenditure is 26%. Meanwhile, the highest adjustment of 39% is shown by the money supply. The speed of adjustment of money supply, interest rate, and tax revenue on the IP trade combination model is statistically significant. The money supply depicts an adjustment of 106%, which seems unrealistic. The interest rate shows an adjustment of 6%, and tax revenue shows a 15% adjustment. The speed of adjustment of money supply, and interest rate on the PM trade

combination model are statistically significant. Money supply shows an adjustment of 60% while the interest rate depicts an adjustment of 207%, which seems unrealistic. The interest rate and government expenditure depict 41%, and 23% adjustments respectively to the steady state of SM trade flows in the previous period. In the BS trade combination models, the speed of adjustment coefficient is statistically significant only for the government expenditure model. It shows an adjustment of 14% to the steady state of BS trade flows in the previous period. The speed of adjustment of the money supply is a monetary policy variable that is statistically significant on the BM trade combination. It shows an adjustment of 53%. IM trade combination was statistically significant only for the monetary policy variable of interest rate and it depicts an adjustment of 21%. Finally, PS trade combination significantly converges with the money supply and the adjustment of the money supply is 36%. As explained in the above section, external policy convergence is not satisfactory for the individual country pairs except for Bangladesh and Pakistan, and India and Sri Lanka. During the last 26 years, the exports of Pakistan to Bangladesh have increased at an annualized rate of 5.4%, from $207M in 1995 to $813M in 2021. However, in 2021, Pakistan did not export any services to Bangladesh. India was Sri Lanka's largest trading partner with an overall bilateral merchandise trade of US$ 5.45 billion in 2021. Merchandise trade between India and Sri Lanka stood at US$ 3.6 billion in 2020. The significant increase (about 48 %) in bilateral trade in 2021 as compared to 2020 reflects the deepening of the comprehensive commercial engagement between India and Sri Lanka. However, the trade between the rest of the country pairs has not significantly increased recently which might have resulted due to the lack of external policy convergence among those country pairs. Therefore, accept the hypothesis of Lack of External policy convergence significantly hinders the expansion of intra-regional trade in South Asia (H2).

5. Conclusion

This study was conducted to examine the impact of policy convergence on intra-regional trade in South Asia. Policy convergence in terms of both internal and external was investigated in this regard. When measuring the impact of internal policy convergence on intra-regional trade, a GMM model was developed for intra-regional trade, and three monetary policy variables and two fiscal policy variables were employed. Inflation, money supply, and interest rates are the three monetary policy variables. Meanwhile, government expenditure and tax revenue are the two fiscal policy variables considered in this study. Five GMM models were fitted for intra-regional trade taking each of the above variables as regressors separately. All the models depicted a statistically significant lagged dependent variable indicating possible convergence. However, all these parameters showed somewhat

lower values ranging from 0.667 to 0.718 resulting in lower catch-up ratios. Policy convergence between intra-regional trade and tax revenue is the fastest because it depicts the highest catch-up ratio, which is 11.97%. However, as the catch-up ratio is not relatively high the length of time for the full convergence is 50.12 years. Similarly, the convergence with all the other variables showed a longer length of time for the full convergence. Thus, the results indicate that internal policy convergence in terms of both monetary policy and fiscal policy needs to be strengthened further in order to expand intra-regional trade in South Asia.

The study further extended to examine the effect of external policy convergence on intra-regional trade. In this regard, the nature of co-integration in between bilateral trade and the above mentioned monetary and fiscal policy variables were analysed separately for some selected country pairs. Country pairs were selected based on the availability of data. Herein, Bangladesh-Pakistan, Bangladesh-Sri Lanka, Bangladesh-India, Bangladesh-Maldives, India-Pakistan, India-Maldives, India-Sri Lanka, Pakistan-Maldives, Pakistan-Sri Lanka, and Sri Lanka-Maldives were considered. The major findings for the external convergence reveal that inflation policies in BP, BI, and IS country pairs are statistically significant with their trade policies. Meanwhile, policies on money supply significantly converge with the trade policies of BP, BI, BM, IP, IS, PM, and PS. Significant external convergence between the trade policies and the interest rate policies was observed in the country pairs of BP, IP, IM, IS, PM, and SM. The government expenditure policies in BP, BS, BI, and SM country pairs are statistically significant with their trade policies. However, tax policies depicted the lowest potential in terms of external convergence because a significant convergence is observed only with IP and IS country pairs. During the period of analyses India and Sri Lanka were recorded as the maximum trading pair among the country pairs considered in the study. This may be due to the extremely high policy convergence depicted among the pair. Out of the policy variables considered only the government expenditure did not converge with the trade policy. Similarly, the Bangladesh and Pakistan pair showed a significant policy convergence resulting in a significant trade between the pair. Meanwhile, the Bangladesh and Maldives pair depicted the lowest trade during the period. This might have resulted due to the low level of external policy convergence between the pair. Within the pair, only the money supply significantly converged with the trade policy showing a weaker policy-level integration between the two countries. India and Maldives trade combination, Pakistan and Sri Lanka trade combination and Bangladesh and Sri Lanka trade combination also depicted weaker convergences with very low trade in between the pairs. All in all, it is evident that as and when the external convergence is poor the trade between the country pairs is also very low. Thus, it is recommended to concentrate more on policy convergence in order to reach the optimum outcome of the trade policy.

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