

The Composition Effect of Macroeconomic Factors on Foreign Direct Investment in Selected SAARC Countries

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ABSTRACT

The objective of the study is to investigate the most promising economic variables i.e., foreign direct investment (FDI), exports and financial development on economic growth in selected South Asian Association of Regional Co-operation (SAARC) countries. In addition, this study argued that whether FDI, Exports and financial development fosters or hinder economic growth in SAARC countries, for this purpose, panel data set of selected five SAARC countries namely, Bangladesh, India, Nepal, Pakistan and Srilanka considered for empirical consideration over a period of 1975 to 2011. By using two-stage least square (2SLS) technique, empirical evidence on the effects of FDI, exports and financial development on economic growth is mix in terms of apriori expectations. In case of Bangladesh, exports and broad money supply (M2) is the positive and significant contributor to increase economic growth, whereas, M2 increases India's GDP. FDI is the only significant contributor to increase Pakistan's economic growth. In case of Nepal and Srilanka, broad money supply increases economic growth, whereas, due to high dependency on imports, exports could not considerably increases economic growth in those regions.

KEYWORDS: *FDI; Exports; Broad money supply; Economic Growth; SAARC countries.*

JEL CLASSIFICATION *C33*

INTRODUCTION

South Asian Association for regional cooperation (SAARC) is an organization of south Asian nations. It was founded in December 1985 that aims to technical collaboration in the field of economic, technological, social and cultural development by emphasizing collective self-reliance. Pakistan, India, Bangladesh, Nepal, Bhutan, Maldives and Sri Lanka are its founding members. The South Asian countries with the exception of Afghanistan formed the South Asian Association for Regional Cooperation (SAARC) in 1985 as a political consultation entity. In December 1991, SAARC approved the establishment of an Inter-Governmental Group (IGG) at the Sixth Summit held in Colombo to formulate an agreement to establish a "SAARC Preferential Arrangement" (SAPTA) by

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1997. Given the consensus within SAARC, the Agreement of SAPTA was signed on April 11, 1993, (much ahead of the schedule) and entered into force on December 7, 1995. SAPTA envisaged primarily as the first step towards the transition to a South Asian Free Trade Area (SAFTA) leading subsequently towards a Customs Union, Common Market and Economic Union., The process of economic integration in South Asia gathered momentum with the implementation of the agreement (Ansari & Khan, 2011). SAARC region is the home of fifth humanity with vast natural and human resources. It has the potential of becoming a vibrant region in the world by its resources like manpower, technological, agricultural and mineral assets further it has an attractiveness for tourism and historical art and cultural civilization (Abbas et al., 2011).

The role of exports and FDI in promoting economic growth has much been recognized across the world. This has gradually established the importance of openness and of course disappearance of import substitution policy in the modern development economic literature and policy (Maneschiöld, 2008). Exports have already been considered as the most important source of foreign exchange, that are required most by developing countries to ease their balance of payments problem and reduce unemployment through generation of job opportunities. Exports help the country to integrate in the world economy. Exports and FDI also allow domestic production to achieve a high level of economies of scale (Babalola, 2012)

Foreign Direct Investment (FDI) is generally considered to be an instrument of cash and non-cash inflow into the host countries from overseas. It plays a vital role to make substantial contribution in the economic growth of the developing countries. The main role of FDI in the economic growth is that it creates more benefits for the host countries rather than just full filling the short-term capital deficiency problem (Borensztein et al., 1998). It is not only about investment, but also about transfer of technology, training, skills and other relevant materials. According to UNCTAD (2003), foreign direct investment has potentially involved to make employment, raise productivity, transfer technology and skills, enhance export and improve the economic conditions of developing countries. Moreover, the spillover effect of multinational companies (MNEs) provides high training and labor management that leads to economic benefits for recipient countries.

The training to host country's suppliers by foreigners may increase high standard production and management standards (ibid). As a result, FDI is included in the central economic policies of the developing countries. The significance of FDI is undeniable because of an inability to make internal savings for local investments. Moreover, it is one of the effective ways for developing countries to have a good relationship with the rest of the world (Hossain & Hossain, 2012). Current situation of foreign direct investment in Pakistan is not satisfactory. Reports of State Bank of Pakistan shows downfall in foreign direct investment in almost all sectors. This downfall has massive impact on economic growth and development of Pakistan's economy. The situation is moving from bad to worse with each passing year, as the FDI during the last fiscal year 2008-09 remained almost half as compared with the financial year 2007-08 (Habib and Sarwar, 2013). The foreign investors are reluctant to come to Pakistan mainly due to worse law and order situation and more important, lack of political stability. Ongoing global recession further worsened the situation. Moreover, some domestic issues like shortage of electricity, petroleum, gas, poor infrastructure and low saving ratio are creating impediments to attract foreign investment. Unfair business environment is also contributing to this downfall in foreign direct

investment, this involves not only foreign but also domestic investors as well because due to lack of favorable business environment, local investors also investing aboard to earn profits. This flight of capital on part of both domestic and foreign investors is alarming situation. In the absence of capital, economic growth is not possible and this would increase the reliance upon foreign borrowing thus starting a vicious circle of borrowing in fact this has led to phenomenon of debt trap. It is also important to highlight that the interaction between these variables is complex and each variable (i.e., GDP, exports and FDI) has a plausible theoretical foundation to affect the other variables. Without knowing the direction and pattern of mechanisms among these variables, it can hamper effective policy to promote economic growth. Therefore, it is important to investigate the relationship between these variables to correctly formulate policies in respective countries (Miankhel, 2009).

FDI attracted great attention not only in developing countries but also in developed countries. The open FDI regime forced the host countries to adopt greater deregulation policies and reliance on market forces in their economies. Most developing countries such as Pakistan now considered FDI as the major external source of funding to meet obligations of resources gap and economic growth, however it is difficult to measure economic effects with precision (Yousaf, 2008). Nevertheless, various empirical studies showed a significant role of inward FDI in economic growth of the developing countries, through its contribution in human resources, capital formation, enhancing of organizational and managerial skills, and transfer of technology, promoting exports and imports and the network effect of marketing. The other positive spillover effect was that the presence of foreign firm helps expand infrastructure facilities, which makes it easier and profitable for local firms to crowd-in.

India's exports have grown much faster than GDP over the past few decades. For example, its exports have grown over 11% per annum while growth in GDP is about 5% during 1970-98 periods. Exports have grown even faster since 1945-95. Several factors appear to have contributed to this phenomenon including foreign direct investment (FDI) which has been rising consistently especially from the early 1990s. By 1997, India became the ninth largest recipient of such investment among the developing economies. However, despite increasing inflows of FDI there has not been any attempt to assess its contribution to India's export performance- one of the channels through which FDI affects growth. The success stories of East and South East Asian countries suggest that FDI is a powerful tool of export promotion because multinational companies (MNCs) through which most FDI is undertaken have the well-established contacts and up to date information about foreign markets. However, the experience of these countries cannot be generalized to. India given the lower level of infrastructure, and the rigidity in both the factor as well as commodity markets (Srinivasan, 1998). Hence, it is possible to argue that even with the policy liberalization India may have failed to attract a significant amount of export oriented FDI and the export growth may have been brought about by factors other than FDI namely the real depreciation of Indian currency, improvements in price competitiveness and provision of export subsidies etc (Sharma, 2000).

Countries engage in international trade for a variety of reasons. Exports, in particular, are a means to generate the foreign exchange required to finance the import of goods and services; to obtain economies of specialization, scale and scope in production; and to learn from the experience in export markets. In a globalizing world, furthermore, export success can serve as a measure for the competitiveness of a country's industries. It may be noticed

that export success among developing countries has been concentrated only in a few countries. But, the comparative advantage of most of the developing countries still lies traditionally in primary commodities and unskilled-labor-intensive manufactures. Over time, as they grow and accumulate capital and skills, and wages rise, their competitive base has to change. They have to upgrade their primary and labor intensive exports into higher value-added items, and they have to move into new, more advanced, export-oriented activities. Both require greater inputs of skill and technology. Countries can attain these objectives in several ways: by improving and deepening the capabilities of domestic enterprises or by attracting Foreign Direct Investment (FDI) into export activities and upgrading these activities over time. These strategies may be complementary or alternatives. In most cases, they are found together, but different countries deploy different combinations of domestic enterprise-led and FDI-led export development. Neither strategy is easy (Prasanna, 2010).

Since the economic reform of 1991 and joining the WTO in 1995, Pakistan's export and import volume increased many folds. While the increase in exports has been welcomed, concerns have been raised regarding the impact of the persistent and severe trade deficit. Recently, the War on terror, retarded industrial growth and the prolong energy crisis, along with weak global demand conditions further increased the trade deficit in Pakistan. It is interesting that the increase in exports, imports and their imbalance in Pakistan coincided with the rapid inflow of FDI (Foreign Direct Investment), particularly after joining the war on terror in 2001. It is also noteworthy that the major trading partners of Pakistan are also the main source of FDI inflows into Pakistan. (Hejazi *et al* 2001) confirmed that FDI dramatically increased trade flows, particularly parents to affiliate trade. It was also recognized that exports provide the economy with foreign exchange needed for imports that cannot be produced domestically. Thus, the relationship between exports and economic growth is theoretically rooted in the export-led growth (ELG) hypothesis. The hypothesis argues for government restriction of import trade and encouragement of strategies that support manufacturing sector with a view to promoting potential comparative advantage and growth (Elbeydi, 2010).

The objective of this study is to examine the role of FDI, financial development and exports on economic growth in SAARC countries by using 2 stage least square technique from 1975-2011. The more specific objectives are:

- i. To analyze change in economic growth due to changes in FDI, exports and financial development in SAARC region.
- ii. To empirically investigate the relationship between exports, financial development, economic growth and FDI by using two stage least square regression (2SLS) in selected SAARC countries.

A two stage least square (2SLS) technique is used for analysis. It is used to account for the problems of endogeneity bias in the data.

The study is divided in to the following sections: after introduction, which is presented in Section 1 above, Section 2 shows the review of literature. Data source and methodological framework is shown in Section 3. Results are discussed in Section 4. Final section concludes the study.

1. LITERATURE REVIEW

It is recognizable fact that FDI tends to increase the host country's imports, because Multi-National Corporations (MNCs) often have a high tendency to import intermediate inputs, capital goods and services that are not readily available in the recipient countries as well as it affect exports from the export supply side.

Mullick (2004) emphasized upon GDP growth of Pakistan using economic and socio-economic indicators after the terrorist attacks of September 11, 2001. The sample consists of time series data from the years 1980 to 2003. The results suggest that the GDP is positively affected by economic factors. Falki (2009) analyzed the impact of foreign direct investment on economic growth in Pakistan over a period of 1980-2006. The results indicate negative relation between GDP and foreign direct investment inflows in Pakistan. Miankhel *et al.* (2009) examines the versatile relationship between GDP, foreign direct investment, export for 6 countries, which include India, Chile, Pakistan, Mexico, Malaysia and Thailand. The data consist of 36 years i.e., from 1970-2005. The results indicate that in South Asia, there exists an evidence of an export led growth. However, in the long run, the study identify GDP growth as the common factor that influence growth in exports in the case of Pakistan and FDI in the case of India but Mexico and Chile show a different relationship in the short run but in the long run, exports affect the growth of FDI and output. The study also indicate bi-directional long run relationship among exports, FDI and GDP in Malaysia, while there is a long run uni-directional relationship from GDP to export in case of Thailand.

Malik and Saima (2013) analyzed the impact of foreign exchange inflows in Pakistan in the form of Foreign Direct Investment and workers' remittances on equilibrium real exchange rate of Pakistan for the period 1993 M7 to 2009 M3. The study concluded that massive foreign direct investment inflows and workers' remittances have significantly appreciated equilibrium real exchange rate of Pakistan. Foreign investment effect poor nations negatively. While focusing the coefficient of foreign capital stock, controlling for new investment, it has been inferred that a negative coefficient for stock reflects "dependency effects" that has hindered economic growth. Since capital stock is the denominator for investment rate, the greater the stock, the lower the investment rate, for a given level of new investment. The analysis of the data used in dependency studies shown that the negative coefficient for capital stock indicates a beneficial investment effect, not a harmful effect.

Chami *et al.*, (2003) found negative effects of remittances on economic growth in the cross-sectional study of 101 developing countries. They argued that remittances resulted in incentives leading to moral hazard problems, which severed economic growth. The study also stated that remittances move counter cyclically in a majority of countries causing negative effects in individual economies. Law and Habibullah (2009) provided some evidence by empirically determining the influence of institutional quality and financial liberalization on financial market development using data from 27 economies (the G-7, Europe, East Asia and Latin America) during 1980-2001. Based on empirical results, they suggested that effects of financial liberalization programs are more pronounced in developed economies. Habibullah and Eng (2006) by taking panel data and using the two variables: liquidity ratio and credit to private ratio found that financial development allow the poor to take benefit from financial services that increase their income through interest earned and enable them to undertake profitable investments and other activities and also concluded that there is income inequality, financial development benefit the poor not the

poorest. Dawson (2003) found that there is insignificant impact on economic growth when financial development is measured by liquid liabilities as a proportion of gross domestic product. Apergis et al. (2009) examined relationship between financial development and economic growth and found positive relation. Hossain (2012) investigated the relationship between FDI and economic growth of five ASEAN over the period of 1970-2007 using co-integration and causality test in both individual and panel data level. Their result suggested that foreign direct investment and economic growth is co-integrated. They also find Granger causality with bi-directional causality between two series and explored there was a bi-directional Granger causality between GDP and economic growth for all countries except Malaysia. Shimul et al. (2009) examined the long run relationship between FDI and GDP of Bangladesh based on the time series data over the period of 1973-2007. The results suggested that FDI could only be considered to be a contributing factor to the economic development.

Khan and Nawaz (2010) argue that export demand that is shown by the bulk of exports is major determinant of FDI in Pakistan. The national trade policy should focus on exports by increasing export processing zones, global market orientation and adjusting fiscal policies. A co-efficient of import tariff suggested an important role of the government in promoting the foreign investment in the country. It needs effective and encouraging import policies from the public sector to restore the confidence of the investors. Miankhel et al. (2009) analyzed the impact of FDI and export on economic growth at different stages of growth in different countries. The results suggest that in South Asia, there is evidence of an export led growth hypothesis. However, in the long run, GDP growth as the common factor that drives growth in other variables such as exports in the case of Pakistan and FDI in the case of India. The Latin American countries of Mexico and Chile show a different relationship in the short run but in the long run, exports affect the growth of FDI and output. In the case of East Asian countries, we find bi-directional long run relationship among exports, FDI and GDP in Malaysia, while we find a long run unidirectional relationship from GDP to export in case of Thailand.

Hsiao and Hsiao (2006) argue that it is not clear whether FDI causes exports or exports cause FDI. The observations on the FDI-growth nexus and the exports-growth nexus lead us to examine the third side of triangular relations: the FDI-exports nexus. Perhaps, because the FDI-exports relation affects economic growth indirectly, the FDI-exports nexus has received less attention in academic discussion, and a comprehensive survey of the topic does not seem to exist. Like the previous nexuses, the direction whether FDI causes exports or exports cause FDI is also a matter of dispute.

The above discussion confirms the strong correlation between the variables. In the subsequent sections, an analysis has been made on the empirical relationship between FDI, exports, broad money supply on GDP of selected SAARC countries.

2. DATA SOURCE AND METHODOLOGICAL FRAMEWORK

The data set for SAARC countries is collected from SAARC Human Resource Development Centre (SHRDC, 2011), and GoP (2013). A two stage least square (2SLS) test is used for analysis. There is lack of relationship to explain the relationship between FDI and economic growth in the SAARC context, so this study uses two stage least square (2SLS) to test this relationship in Bangladesh, India, Nepal, Pakistan and Sri Lanka during 1975-2011. The equation to be estimated is a basic growth model including the main

variables suggested by the Solow (1956) model. This study estimates the nexus of inter-relationship among exports, economic growth and FDI within a simultaneous equation system i.e.,

$$GDP_t = \alpha_0 + \alpha_1 FDI_{t-1} + \alpha_2 EXP_{t-1} + \alpha_3 M2_{t-1} + \alpha_4 EXP_{t-2} + \alpha_5 FDI_{t-2} + \alpha_6 M2_{t-2} + \alpha_7 EXP_{t-3} + \alpha_8 FDI_{t-3} + \alpha_9 M2_{t-3} + \varepsilon_{it} \quad (1)$$

$$FDI_t = \beta_0 + \beta_1 GDP_{t-1} + \beta_2 EXP_{t-1} + \beta_3 M2_{t-1} + \beta_4 EXP_{t-2} + \beta_5 FDI_{t-2} + \beta_6 M2_{t-2} + \beta_7 EXP_{t-3} + \beta_8 FDI_{t-3} + \beta_9 M2_{t-3} + \varepsilon_{it} \quad (2)$$

$$EXP_t = \gamma_0 + \gamma_1 GDP_{t-1} + \gamma_2 FDI_{t-1} + \gamma_3 M2_{t-1} + \gamma_4 EXP_{t-2} + \gamma_5 FDI_{t-2} + \gamma_6 M2_{t-2} + \gamma_7 EXP_{t-3} + \gamma_8 FDI_{t-3} + \gamma_9 M2_{t-3} + \varepsilon_{it} \quad (3)$$

$$M2_t = \delta_0 + \delta_1 GDP_{t-1} + \delta_2 FDI_{t-1} + \delta_3 EXP_{t-1} + \delta_4 EXP_{t-2} + \delta_5 FDI_{t-2} + \delta_6 M2_{t-2} + \delta_7 EXP_{t-3} + \delta_8 FDI_{t-3} + \delta_9 M2_{t-3} + \varepsilon_{it} \quad (4)$$

Where,

GDP represents Economic growth;

FDI represents Foreign Direct Investment (net inflows percentage of GDP) in US\$ million;

M2 represents broad money supply as percentage of GDP;

EXP represents total exports (percentage of GDP) in million US \$,

t = 1, 2...32 periods;

i = 1, 2...5 countries and

ε represents error term.

This study follow the 2SLS approach of Bewley (1979) by using the first lags of the variables as instruments for the current differenced terms to account for the problems of endogeneity bias. The long-run model for economic growth (and FDI) can be obtained from the reduced form solution when all dynamic terms of the regressors are set to zero.

The advantages of using 2SLS over the more conventional maximum likelihood (ML) method for structural equation model (SEM) include:

1. It does not require any distributional assumptions for right hand side independent variables, they can be non-normal, binary, etc.
2. In the context of a multi-equation non-recursive SEM it isolates specification errors to single equations.
3. It is computationally simple and does not require the use of numerical optimization algorithms.
4. It easily caters for non-linear and interactions effects.
5. It permits the routine use of often ignored diagnostic testing procedures for problems such as heteroscedasticity and specification error.
6. Simulation evidence from econometrics suggests that 2SLS may perform better in small samples than ML (Oczkowski, 2003).

3. RESULTS AND DISCUSSION

This section shows the estimates of 2SLS for individual SAARC countries. The results in Table 1 show that GDP and FDI have a positive and significant relationship with exports in case of Bangladesh. The results are consistent with the findings of Mofrad (2012). Several empirical studies reveal that exports contribute to GDP growth more than just the change in the volume of exports. Many studies, highlighting many beneficial aspects of exports, such as greater capacity utilization, economies of scale, incentives for technological improvements and efficient management due to competitive pressures abroad (Balassa, 1978; Al-Youssif, 1997). Voivodas (1973) conclude that trade, particularly exports, may encourage competition. According to Salvatore and Hatcher (1991); exports is a key

explanatory variable contributing in the process of economic growth. Thus, an increase in exports expected to promote economic growth and expand market for the domestic producers and forces them to be more efficient in the wake of increased competition. The variable i.e., broad money (M2) as a percent of GDP taken as a measure of financial development has a positive effect on economic growth. As increase in money supply as a percent of GDP also indicates the financial efficiency of the system that causes increase in economic growth in SAARC countries. The results are consistent with the previous studies of Hameed and Amen (2011). Growth in Financial development greatly affects the GDP of an economy, obviously various unknown factors also affects the GDP. Growth in financial development has a significant impact on GDP, as one percent increase in M2, economic growth increases by 0.729 percent. The empirical results, given in Table 1, appear to be very good in terms of the usual diagnostic statistics. The value of R square adjusted indicates the ranges between 70.8 to 94.6 variations in dependent variable have been explained by variations in independent variables. F-value is higher than its critical value suggesting a good overall significance of the estimated model. Therefore, fitness of the model is acceptable empirically. The positive significant results of exports on economic growth also have been found by numerous studies (i.e., Khan & Saqib, 1993; Gopinath & Vasavada, 1999; Abou-Stait, 2005; Chiara & Subash, 2009).

Table 1. Results of 2SLS for Bangladesh

| Variables | Dependent variable: ln(GDP) | Dependent variable: ln(FDI) | Dependent variable: ln(EXP) | Dependent variable: ln(M2) |
|--------------------|------------------------------------|------------------------------------|------------------------------------|-----------------------------------|
| Constant | 21.058*** (75.047) | -32.608 (-0.762) | -17.918* (-4.321) | -14.230* (-3.919) |
| Log(GDP) | – | 0.953 (0.477) | 0.832* (4.321) | 0.708* (4.342) |
| Log(FDI) | -0.011 (-0.562) | – | 0.052* (2.805) | -0.002 (-0.099) |
| Log(EXP) | 0.357** (2.640) | 2.538*** (1.912) | – | 0.206 (1.153) |
| Log(M2) | 0.729*** (2.640) | 0.304 (0.180) | 0.032 (0.175) | – |
| R-squared | 0.951687 | 0.738065 | 0.944766 | 0.920593 |
| Adjusted R-squared | 0.946318 | 0.708961 | 0.938629 | 0.911770 |
| F-statistic | 177.2834 | 25.35965 | 153.9444 | 104.3402 |
| Prob (F-Statistic) | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| Durbin-Watson stat | 0.617172 | 1.525061 | 1.265403 | 0.452276 |

Source: authors' calculation

Notes: Bracket shows t-statistics.

Methodology 2SLS: Instrumental variable i.e; variables at their first lag.

* represents P<0.010

** represents p<0.050

*** represents p<0.090

The results of 2SLS for Srilanka are shown in Table 2.

Table 2. Results of 2SLS for Srilanka

| Variables | Dependent variable: ln(GDP) | Dependent variable: ln(FDI) | Dependent variable: ln(EXP) | Dependent variable: ln(M2) |
|--------------------|-----------------------------|-----------------------------|-----------------------------|----------------------------|
| Constant | 11.882* (4.710) | -11.701* (-3.552) | 3.492* (3.430) | -0.601 (-1.269) |
| Log(GDP) | – | 0.306 (1.436) | -0.181* (-3.065) | 0.129* (7.882) |
| Log(FDI) | 0.240 (1.500) | – | 0.035 (0.597) | 0.016 (0.699) |
| Log(EXP) | -1.923* (-3.868) | 0.845 (1.280) | – | 0.336* (5.028) |
| Log(M2) | 5.083* (7.184) | 0.473 (0.351) | 1.162* (3.389) | – |
| R-squared | 0.732996 | 0.345179 | 0.336449 | 0.817004 |
| Adjusted R-squared | 0.703329 | 0.272421 | 0.262721 | 0.796671 |
| F-statistic | 24.70737 | 4.744221 | 4.563385 | 40.18136 |
| Prob (F-Statistic) | 0.000000 | 0.008753 | 0.010357 | 0.000000 |
| Durbin-Watson stat | 1.659475 | 1.529739 | 0.352609 | 1.159289 |

Source: authors' calculation

Notes: Bracket shows t-statistics.

Methodology 2SLS: Instrumental variable i.e ; variables at their first lag.

* represents $P < 0.010$

The results in Table 2 show that the probability values are insignificant for GDP, exports and as well as the financial development. However, previous studies show the positive relationship between GDP and exports in different countries contexts. In case of Srilanka, we can see that the probability value of GDP is showing the significant results with exports at $p < 0.010$ percent level of significance. The impact of exports found significant but negative as the coefficient size of this variable found -1.923. GDP and exports are positively related with financial development, as if there is one percent increase in GDP, financial development increases by 0.129 percent. Growth in GDP greatly effects the financial development of an economy. The results are in line with the general findings of the literature i.e., Magazzino (2011) which have found a positive role of financial development with economic growth. The empirical results show that R-squared adjusted ranges from 0.26 to 0.79 percent. The value of F-Statistics is greater than the critical values, which show that all of the independent variables in the model have significant effect on the dependent variable. Hence, overall significance of the model is good. Table 3 shows the 2SLS estimates for India.

Table 3. Results of TSLS for India

| Variables | Dependent variable: log(GDP) | Dependent variable: log(FDI) | Dependent variable: log(EXP) | Dependent variable: log(M2) |
|--------------------|------------------------------|------------------------------|------------------------------|-----------------------------|
| Constant | 18.235* (19.911) | 7.308 (0.327) | -7.609** (-2.210) | -3.890* (-3.039) |
| Log(GDP) | – | -0.884 (-0.763) | 0.243 (1.305) | 0.279* (5.292) |
| Log(FDI) | -0.002 (-0.085) | – | 0.065** (2.354) | 0.006 (0.460) |
| Log(EXP) | 0.261 (1.467) | 3.546* (3.414) | – | 0.146*** (1.884) |
| Log(M2) | 2.058* (6.739) | 1.752 (0.591) | 0.909*** (1.931) | – |
| R-squared | 0.963148 | 0.810164 | 0.930467 | 0.953256 |
| Adjusted R-squared | 0.959053 | 0.789071 | 0.922742 | 0.948062 |
| F-statistic | 235.2201 | 38.40941 | 120.4356 | 183.5371 |
| Prob (F-Statistic) | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| Durbin-Watson stat | 1.513740 | 1.735778 | 1.817793 | 1.483069 |

Source: authors' calculation

Notes: Bracket shows t-statistics.

Methodology 2SLS: Instrumental variable i.e; variables at their first lag.

* represents $P < 0.010$

** represents $p < 0.050$

*** represents $p < 0.090$

The results in Table 3 show that GDP has a positive relationship with financial development and Exports. The probability value shows the significant results for India, as one percent increase in exports would lead to change in GDP by 20.5 percent. FDI is also positively related with Exports in case of India. The results support the findings of Sharma (2000), find a positive effect of FDI and GDP on exports for other similar developing economies. This is not surprising as increases in exports tend to be correlated with other factors such as improved terms of trade and an improved regulatory and tax environment, which tends to attract even more FDI. In contrast, the influence of FDI on exports is mostly realized only after spill-over effects have become entrenched Akoto (2009). The empirical results show that the Adjusted R-squared ranges from 78.9 to 95.9 percent. The value of F-stats is greater than the critical value so which shows the overall significance of the model. Table 4 shows 2SLS results for Pakistan.

Table 4. Results of 2SLS for Pakistan

| Variables | Dependent variable: ln(GDP) | Dependent variable: ln(FDI) | Dependent variable: ln(EXP) | Dependent variable: ln(M2) |
|--------------------|-----------------------------|-----------------------------|-----------------------------|----------------------------|
| Constant | 26.356* (7.104) | -33.194* (-7.692) | 4.101 (1.504) | 4.3815* (3.794) |
| Log(GDP) | – | 0.745* (4.655) | -0.041 (-0.492) | -0.038 (-0.896) |
| Log(FDI) | 0.627* (6.451) | – | 0.105 (1.657) | 0.055 (1.730) |
| Log(EXP) | -0.255 (-0.530) | 1.735* (2.905) | – | 0.137 (1.331) |
| Log(M2) | -0.159 (-0.163) | 2.601** (2.176) | -0.101 (-0.248) | – |
| R-squared | 0.712847 | 0.745220 | 0.189836 | 0.300995 |
| Adjusted R-squared | 0.680941 | 0.716911 | 0.099818 | 0.223328 |
| F-statistic | 22.34220 | 26.32454 | 2.108861 | 3.875442 |
| Prob (F-Statistic) | 0.000000 | 0.000000 | 0.122508 | 0.019980 |
| Durbin-Watson stat | 1.745306 | 1.852324 | 1.543173 | 1.883221 |

Source: authors' calculation

Notes: Bracket shows t-statistics.

Methodology 2SLS: Instrumental variable i.e; variables at their first lag.

* represents $P < 0.010$

** represents $p < 0.050$

Table 4 shows that Pakistan's GDP has a positive results with FDI. The results are consistent with the studies of Pandhi (2007). The results further supports the finding of Khattak et al. (2012) which indicates that there is a short as well as long run relationship found between foreign direct investment and gross domestic product growth rate in Pakistan. In above Table, the results further show the positive relationship of FDI with the financial development and exports. The results are consistent with the findings of Azam (2010) and Nawaz and Khan (2010). Exports lead to an improvement in economic efficiency by increasing the degree of competition and contribute to productivity gains through diffusion of technical knowledge and learning by doing. Finally, export development tends to concentrate investment in the most efficient sectors of the economy fostering a pattern of production consistent with the country's comparative advantages. Specialization in these sectors improves productivity in the economy leading to higher output growth Kemal et al. (2002).

FDI greatly effects the financial development in case of Pakistan. The estimated coefficients suggest that a 1 per cent increase in the financial development and export attract FDI inflows into the country by approximately 2.60 per cent and 1.73 percent, respectively. The signs of the coefficient financial development and Exports are consistent with prior expectation and statistically significant So that financial development and growth rate are the key variables affecting FDI.

The positive significant relationship between financial development and growth demonstrate that financial development and GDP growth rate are important in attracting more FDI inflow in Pakistan. The presence of a positive relationship between FDI and financial development suggests advancement in financial market instrument and a more advanced banking system are an important factor driving more foreign investor into Pakistan (Shahrudin et al., 2010).

In case of Pakistan Adjusted R-squared ranges from 0.09 to 0.71 percent and the value of F-statistics is showing the overall significance of the model. As it is greater than the critical values so the model is fit. The result of Nepal is shown in Table 5.

Table 5. Results of 2SLS for Nepal

| Variables | Dependent variable: ln(GDP) | Dependent variable: ln(FDI) | Dependent variable: ln(EXP) | Dependent variable: ln(M2) |
|--------------------|-----------------------------|-----------------------------|-----------------------------|----------------------------|
| Constant | 17.160* (57.650) | -55.436 (-1.041) | 25.355* (3.752) | -10.761* (-22.410) |
| Log(GDP) | – | 2.561 (0.824) | -1.369* (-3.385) | 0.621* (29.551) |
| Log(FDI) | 0.022 (1.426) | – | 0.058 (1.703) | -0.014** (-1.812) |
| Log(EXP) | -0.373* (4.782) | 1.585 (1.299) | – | 0.225* (5.702) |
| Log(M2) | 1.690* (25.963) | -2.375 (-0.476) | 2.157* (3.399) | – |
| R-squared | 0.972609 | 0.251910 | 0.411185 | 0.980151 |
| Adjusted R-squared | 0.968874 | 0.149898 | 0.330892 | 0.977445 |
| F-statistic | 260.3922 | 2.469409 | 5.121054 | 362.1264 |
| Prob (F-Statistic) | 0.000000 | 0.088720 | 0.007732 | 0.000000 |
| Durbin-Watson stat | 1.347245 | 1.683562 | 1.164480 | 1.725179 |

Source: authors' calculation

Notes: Bracket shows t-statistics.

Methodology 2SLS: Instrumental variable i.e ; variables at their first lag.

* represents P<0.010

** represents p<0.050

Table 5 shows that exports have significant but negative impact on GDP of Nepal, as one percent increase in exports lead to decrease GDP by -0.37 percent. As we can see that in case of Nepal there exists no relationship between exports and economic growth. But on the other hand, exports are positively related with financial development. Exports lead to economic growth and sustainability of the financial sector .Therefore, long run policies should be follow up to make the financial sectors strong. While FDI is negatively related to financial development because financial liberalization causes FDI to decrease because interest rate would decrease due to financial liberalization that discourage the foreign direct investment.

The obtained results from this study shows that the Adjusted R-squared ranges from 0.14 to 0.97 percent. F-statistics shows the overall significance of the model. Therefore, overall significance of the model is satisfactory. Table 6 shows the quick overview of all the results shown in different SAARC countries.

Table 6. Overview of the Results in SAARC countries

| Variables | Dependent variable: ln(GDP) | Dependent variable: ln(FDI) | Dependent variable: ln(Export) | Dependent variable: ln(M2) |
|------------------|--|--|--|--|
| Log GDP | N/A | Pakistan(+) | Bangladesh(+) Srilanka(-) Nepal(-) | Bangladesh(+) Srilanka(+) India(+) Nepal(+) |
| Log FDI | Pakistan(+) | N/A | Bangladesh(+) India(+) | Nepal(-) |
| Log Exp | Bangladesh(+) Srilanka(-) Nepal(-) | Bangladesh(+) India(+) Pakistan(+) | N/A | Srilanka(+) India(+) Nepal(-) |
| Log M2 | Bangladesh(+) Srilanka(+) India(+) Nepal(+) | Pakistan(+) | Srilanka(+) India(+) Nepal(+) | N/A |

Source: authors' calculation

Note: (+) represents positive while (-) represents negative.

Table 6 shows that FDI has a positive and significant impact on GDP of Pakistan. While it has no impact on GDP of Bangladesh, Srilanka, India and Nepal. So Recommendations include development of infrastructure, human resource and stable investment environment as suggested by Falki (2009). Exports are of great importance in improving GDP of any country. In case of Bangladesh, they have significant and positive impact on GDP. But for the rest of the two countries i.e., Srilanka and Nepal, both countries have a negative relationship with the GDP. Due to the increased exports, efficiency enhanced because exporters are able to compete in foreign markets, which results in technological advances and grooming of local entrepreneurs. Therefore these countries should focus on export-led growth hypothesis. Financial development is showing significant and positive relationship with GDP except Pakistan, therefore, policies should be made that leads to financial development. GDP has a positive impact on FDI in Pakistan. While Exports of these three SAARC countries i.e., Bangladesh, India and Pakistan are showing significant and positive impact on FDI. Financial development is showing positive and significant impact on Pakistan's FDI. But rest of the four countries don't have any impact on FDI. So these countries should take some measures to enhance FDI as FDI promotes growth through financial sector development (Yasin, 2013). Financial development is also showing significant and positive relationship with exports except Pakistan and Bangladesh. Therefore, these two countries should focus on the policies for financial development growth to enhance exports. FDI of Nepal is showing significant but negative impact on financial development. Exports of Srilanka and India are showing positive and significant impact on financial development, as export growth increases factor productivity due to gains obtained from increasing returns to scale, by catering to the larger foreign market (Miankhel et al., 2009).

CONCLUSIONS AND POLICY IMPLICATIONS

The objective of the study is to identify major macroeconomic factors that enhance GDP for SAARC countries through the two stage least square technique (2SLS) over a 37-year time period, i.e. between 1975-2011. The results conclude that exports and money supply increases Bangladesh's GDP, while FDI of Pakistan, money supply of Srilanka, India and Nepal increases economic growth in respective countries. FDI and GDP have a significant impact on each other, therefore; policies of host countries have an important influence on foreign investment decisions because attracting FDI may not be enough to ensure that a host country derives its full economic benefits. Free markets may not lead foreign investors to transfer enough new technology or to transfer it effectively and at the depth desired by a host country. But policies can induce investors to act in ways that enhance the development impact by building local capabilities, using local suppliers and upgrading local skills, technological capabilities and infrastructure.

Exports are showing mix results. Bangladesh's exports and GDP are significantly showing the importance therefore, it should focus on export- led growth hypothesis but Nepal and Srilanka showing significant negative results. Therefore, for Srilanka and Nepal, the suggestions are to increase Exports. Obvious increase in exports represent improvement in economic development of a country and expansions in exports improve social welfare of the people. The rapid growth in economies is usually characterized by speedy expansion in exports. Therefore, for these two countries findings of the present study suggest that the policy makers of each country need to expand volume of exports in order to boost socio-economic development.

Broad money in each country increases overall financial efficiency of the system due to liberalization of trade fostering financial development which causes GDP growth in SAARC country. Financial liberalization does not only cause net-exports to rise but it reduces unemployment rate through foreign direct investment. So financial development through financial liberalization does not only have single impact on South Asian economies (e.g. Bangladesh, India, Nepal and Srilanka) but it has a trickledown effect.

The coefficients for all the three SAARC countries i.e., Bangladesh, India and Pakistan have shown positive and significant impact of FDI and Exports. This study provides a significant complementary relationship between FDI and exports. The effect of increased FDI has been found significantly positive, whereas, in the reverse direction, the positive impact from increased exports on FDI is confirmed. It is of critical importance to maintain a high and sustainable economic growth rate. The study shows that a sustainable growth patterns attract FDI and promote exports. The developing countries can attract FDI inflows by removing the artificial barriers and control on exports and imports. An open and export-oriented policy can be promoted by lowering tariffs and allowing free mobility of capital. Widening of the net of communication facilities is also instrumental in attracting FDI inflows and exports growth. To this end subsidies may be provided to the communication sector.

Obtained results in this study illustrate that foreign direct investment in the proposed developing countries is led to development of financial markets. Results are positive and significant in case of Pakistan, however, for Nepal, FDI have significant but negative impact on financial development. Financial markets are too limited in developing countries

and are severely controlled by the government. Hence, privatization of the government is a suitable strategy to create the ground for growth of financial markets. Economic agents must provide appropriate grounds in order to attract foreign capitals and execute supporting policies for foreign investors in various economic sectors. Market freedom policy, making it competitive, and then creating more financial stability should be performed with special attention and focus.

Exports have significant impact on financial development in case of Srilanka, India and Nepal. Financial development is also showing significant impact on exports of these listed SAARC countries but for Nepal it is showing significant negative results. Therefore, the need to develop exports for long-term sustainability of the economy, and finding innovative ways to make financial sector more integrated to economic activities are suggested for development policy discourse.

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