

Impact of Trade Openness in Industrial Productivity and Growth Competition in South Asia

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Abstract

This paper investigates the impact of trade openness on the industrial productivity and growth in South Asia. Besides, education and training, human resource and investment, trade openness give rise the industrial productivity in South Asian Countries. In this study, it is found that the south Asian countries are not matured to create industrial productivity, trade creation and physical efficiency as they have plenty of potentiality of resources. Based on cross fixed effect model which is suitable for an panel data analysis, time series and cross sectional, this study covers time frame for the period of 1980- 2013. Following pooled least squares and fixed effects estimation techniques, models are estimated using the fixed effects estimation. Fixed effect is tested through the sum of sequence of F-Test and chi-square test besides study has observed correlation among the concerned variables. In this empirical analysis, south Asian countries are taken in order to oversee into industrial productivity and growth competition.

Key Words: Trade openness; industrial productivity; growth competition; south Asia

Background

South Asia is economically backward region of the world. The economies of this region mostly followed protectionist trade policies during their initial phases of development. Since the world we live in changes every now and then trade openness which is one of the most controversial hotly discussed and highly debated topics in economics, is supposed to be an engine of growth. After the implementation of SAARC, overall performance of selected countries got better. The best and detailed overview of growth theories can be found in (McCombie & Thirlwall, 1994) from where the authors extracted that the literature of economic growth and development can be classified with reference to four points of views: The linear stage growth models, International dependence revolution, structural changes and the neo-classical free market counter revolution.

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Rostow (1960) argued that a country must pass through certain stages of economic growth to reach the status of the present developed countries. These theories emphasized how critical saving, investment and foreign capital inflow were for a nation to proceed along the historical economic growth path. Solow (1957), Hicks (1980), and Wheeler (1980) claimed the role of free markets, open economy and privatization in economic growth and development. Grossman & Helpman (1990), Romer (1990), Kruger (1978), and Tyler (1981) specified and tested the relation between exports (proxy for openness) and economic growth for different countries. The story of exports and economic growth originally concentrated on the correlation between exports (openness) and economic growth.

Emery (1967), Maizeles (1968), Kravis (1970), and Lucas (1988) developed three models: one emphasizing physical capital accumulation and technological change, second considering human capital accumulation through schooling and the third one including human capital accumulation through learning-by-doing. This study utilized the World Bank data. Wolf (1993) estimated regressions nine different measures openness on estimates that he has calculated of ten-year averages of total factor productivity from 1960-90 for 93 developed and developing countries. Controlling for initial per capita GDP in 1965 and the average number of years of education in 1965, he found that six of the nine measures of openness are statistically significant in the expected direction.

Dollar & Kaary (2004) estimated that regression analysis and focuses on within-country changes in growth rates and changes in the volume of trade where volume of trade is used as a proxy to openness. Using instrumental-variable regressions, they find a strong and significant positive relationship between the effect of changes in trade and changes in growth. As Baldwin (2006) analyzed the effect of trade liberalization on employment in OECD (Organization for Economic Cooperation and Development) countries. The study shows that trade liberalization has insignificant impact on these economies. There is imbalance between openness and the economies. Sayyid, Muhammad, Sayyid, and Mustafa (2010) focusing on the three largest economies of South Asia, the authors applied several models, a panel data model to a panel dataset of India, Pakistan and Bangladesh for the period of 1980 to 2008. The result revealed the fact that openness played an important part in the economic growth of South Asia during the period 1980-2008.

The process of globalization has focused to be competitive region of any part of the world. However, that is not realized from the single sector endowment. The trade development and industrial sector productivity could be a part of the desired outcome. South Asia is region where industrial sector endowments take place if necessary condition belongs to this is fulfilled creating job opportunities through investment. SAARC is one of the largest regional organizations founded in December 1985 with seven members Nepal, India, Bangladesh, Bhutan, Maldives, Pakistan, and Sri Lanka. Afghanistan joined as an eighth member of SAARC in 2007. The regional cooperation has distinct pattern of economic growth and development. The region is very weak in industrial sector performance although the evidences are shown positive relationship in various aspects. Policies of south Asian economies have given significance to evaluate the effectiveness of perused initiatives through testing the performance and practices of each and every individual economy in macro-economic level. With this fact, observation of region's linkages to the global economy through international competitiveness and FDI along with an assessment of its persistent problem from different aspects is also equally an important.

But Moinuddin (2013) estimated that a log-linear form of the gravity equation of international trade in South Asia using bilateral merchandise export flows expressed in free

on board (FOB) terms as the dependent variable. It was reported that economic size of the trading countries apparently plays important role in trade flow. The distance variable has appeared as negative. On the other hand, market size proxies by population for both trading partners implied absorption effects as these variables were highly significant with negative signs. The coefficient of the variable exchange rate showed a very low value with opposite sign. Import-GDP ratio which is a proxy of openness of the economies presented significantly positive impact. The rest of the variables such as tariff-import ratio and applied tariff rates of the importing country were statistically significant but had opposite signs.

Recently, it is found that openness has expanded the freedom to produce and consume.

Table 1: Total Regional Trade by Each Member of South Asian Countries (in million US\$)

Year	Afghanistan	Bangladesh	India	Maldives	Nepal	Pakistan	Sri Lanka
1990	80.23	224.68	495.31	23.38	92	344.3	170.64
1991	32.7	238.9	519.44	32.47	115.28	339.07	262.64
1992	44.76	309.21	714.85	36.8	124.25	500.67	383.13
1993	35.6	418.7	814.64	39.71	108	366.61	396.66
1994	23.96	524.35	1044.19	50.43	122.82	379.14	471
1995	25.53	1070.01	1636.08	57.57	158.23	421.01	551
1996	33.82	1063.26	1668.14	70.18	528.6	532.2	650
1997	42.85	862.4	1680.63	84.12	545.5	453.22	664
1998	50.15	1279.18	1782.6	87.84	607.8	640.13	643.72
1999	53.13	1106.72	1679.4	95.13	335.73	501.87	646.04
2000	60.2	1018.46	2015.33	102.09	892.2	534.67	795.16
2001	47.25	1279.97	2324.24	108.66	978.8	559.77	771.51
2002	79.04	1207.89	2836.01	115.5	951	456.86	1094.82
2003	176.61	1579.06	4100.47	128.13	1262.4	655.97	1417.79
2004	216.28	1846.64	4571.66	149.87	1500.9	1045.12	1933.91
2005	220.04	2109.14	5612.02	143.61	1778.2	1444.5	2475.36
2006	230.63	2273.84	6038.57	131.87	2049.93	1998.85	2745.85
2007	344.17	2940.88	8375.87	166.42	2560.64	2750.86	3225.75
2008	521.8	3956.69	8228.7	190.24	2804.91	2925.74	3963.17
2009	635.77	3117.5	6680.94	173.89	2011.34	2027	2239.32
2010	576.29	4299.85	10107.26	200.3	2625.04	3557.23	3146.47
2011	694.76	5511.57	13663.09	227.56	3497.92	3290.39	5097.47
2012	676.44	5366.56	14245.76	217.08	3870.01	3360.62	4552.06

Source: Asia Regional Integration Center (ARIC) International Indicators Database, Asian Development Bank (ADB) Available at <http://aric.adb.org/indicator.php>

Table 1 possesses total regional trade by each member of south Asian countries in million US\$. In order to validate the competitiveness indicator, trade shares among the countries can be analyzed by the trade statics. India has high dominance in this region's trade. Small countries like Afghanistan, Maldives and Nepal have small economies. Comparatively, trade within the region has been increased. However not have subsequent growth.

It seems that India is stable and competitive in south Asia. Others are also growing their export and price competitiveness. Bhutan and Maldives are two small economies having less than a million populations doing better performance following appropriate strategies in south Asia. Bhutan is having benefit from developing number of hydropower to sell to India. Maldives is developing its tourism. Bangladesh is achieving growth through exporting textiles. But it has disasters and political problems are issue. Afghanistan and Pakistan are having ethnic conflicts rather than economic growth. Still their economies are rising. Nepal has natural disaster and political instability however struggling to stabilize the

implementation of new constitution. Its export trade competitiveness and market access is high as it has potential of factor endowment and trade policy implementation. With this analysis, a country India is the dynamic and competitive economy in south Asia. Nepal has broad scope of industry development

Table 2: Trade Ratios of South Asian Countries

	Afghanistan	Bangladesh	India	Sri Lanka	Maldives	Pakistan
1980	55	23.4	15.1	87	358.7	36.6
2014	44.7	55.3	54.7	59.3	212.6	32.6

Source: World Bank Economic Indicators, 2014

Table 2 shows trade ratio in south Asian countries. Trade is considered as an engine of economic growth. Tariff reduction and trade liberalization has significantly depicting the level of globalization. To transform economies of south Asian countries, trade promotion policies including Free Trade Area (FTA), South Asian Free Trade Area (SAFTA) Bay of Bengal initiatives for multi sectoral, technical and economic cooperation (BIMSTEC), Power transformation agreement (PTA) and Project Development Agreements (PDA) are required to be effective trade ratio has been increasing in each country of South Asia. However, deficit in trade of each country is high in amount.

Table 3: International Reserves (millions of SDRs) in SAARC Countries

	Afghanistan	Bangladesh	India	Sri Lanka	Maldives	Pakistan
1990	0.22	0.44	1.44	0.3	0.02	0.28
2013	4.21	11.42	180.2	4.32	0.25	3.42

Source: World Bank Economic Indicators, 2014

Table 3 possesses international reserves (millions of SDRs) in SAARC countries. India is dominant country of south Asia region. Its economy is diversified in terms of trade and commodities traded. Landlocked Nepal has huge trade deficit with India. Bhutan has also trade deficit with India. Skilled and unskilled labor force of south Asia can play important role to fulfill the gap in balance of payment. For example, EU seems one of the one of the major external partners to south Asia. Rising trade deficit has effect on depreciation of the values of its own currency with respect to reserve currencies. Indian currency has depreciated by 9 times against the SDR (from 10.1 Rs. to 95.3Rs. per SDR) in the last 33 years. This evidences has shown that foreign goods more expensive to its citizens and deteriorated living standard. Rate of depreciation of currencies were much higher in all other countries of south Asia than in India except Maldives.

As the global economy is becoming competitive, production of standard goods can transfer the economies of emerging countries such as India in south Asia and China in Asia. WTO regulation supports all potentials in the region. Earning from export trade competitiveness expands production creating more opportunities. The benefits of openness for consumers are too often overlooked, with attention often falling on the more concentrated gains or losses felt by producers in specific sectors. Citizens in economies that have become more open are presented with greater choice in products and services.

In brief, openness has expanded the freedom to produce and consume in daily life, thereby widening the life choices and prospects for large numbers of ordinary people. Therefore openness is related to production and productivity of industrial sector and the

consumption freedom of the consumer. But the scenario of industrial productivity and efficiency has high opportunity. The openness has not gear up trade and industrial sector growth at desired level. So it is relevant to explore the relationship between trade openness and industrial productivity which is important in the long run manufacturing of developing countries. For this study, SAARC is taken sample and presents model and statistical calculation of variables.

Research Methodology and Model Use

Regression analysis is done as the nature of data available from the secondary source. Since the regression models is estimated with cross-section fixed effects. This study has used the pooled least squares and fixed effects estimation techniques. Models are estimated using the fixed effects estimation. Fixed effect is tested through the sum of sequence of F-Test and chi-square test besides study has observed correlation among the concerned variables. The standard Cobb-Douglas production function based on endogenous growth theory of (Locus 1998) can be based to specify the model for an empirical analysis. Dijkstra (2000) stated that dynamic effects of trade liberalization are principally related to manufacturing sector. Firms can be benefited from larger market created by trade liberalization. For this study, production function is specified.

$$Y_{ind,t} = A(t)F[K(t), L(t)] \quad \dots\dots\dots(1)$$

Where, $Y_{ind,t}$ = measure of industrial productivity

Equation 1 shows that, $A(t)$ technological progress is Hicks-neutral that affects both capital and labor alike and is measured by the higher education level.

In the extensive form,

$$Y_{ind.pro} = f(\text{Openness, Human Resource, Education and Training, Investment, Inflation}) \quad \dots\dots\dots(2)$$

In Logarithmic form the equation can be expressed as:

$$\ln y_{ind.pro,t} = \beta_0 + \beta_1 \ln \text{openness}_{it} + \beta_2 \ln \text{humanRes}_{it} + \beta_3 \ln \text{edu.train}_{it} + \beta_4 \ln \text{invest}_{it} + \beta_5 \ln \text{infla}_{it} + U_{it} \quad \dots\dots\dots(3)$$

Hence, it considers the properties of OLS

So,

$$\ln y_{ind.pro,t} = \beta_0 + \beta_k (X)_{it} + U_{it} \quad \dots\dots\dots(4)$$

Where,

$(X)_{it}$ is an independent variable

$\ln y_{ind.pro,t}$ = Log of Industrial productivity value added to percentage of GDP

$\ln \text{openness}_{it}$ = open k and open c as the database

$\ln \text{hum.res}_{it}$ = % of population aging between 15-64 years

$\ln \text{edu.train}_{it}$ = gross enrollment ration – primary, secondary and tertiary education

$\ln \text{invest}_{it}$ = gross fixed capital formation

$\ln \text{infla}_{it}$ = approximated from annual growth rate of GDP deflator

Asia with low performance. Hence, it is necessary to increase the efficiency of labor to realize higher level of productivity.

Table no. 8 Individual Countries Averages (1980-2013)

Country	Industrial productivity Output	Investment	Human Resource	Inflation	Openness (nominal)	Openness (Real)	Education and Training
Bangladesh	23.98645	20.72684	57.38744	7.206161	29.76485	28.99	36.47949
Bhutan	31.86637	44.29259	57.49014	6.710903	87.84857	73.086	30.2264
India	26.83371	24.82684	60.74785	7.496483	26.85324	25.09441	43.04956
Nepal	17.44875	19.88481	55.81944	8.984152	44.69706	42.04118	36.03672
Pakistan	23.38399	16.36	55.19878	9.78137	30.25118	32.33118	25.53615
Sri Lanka	27.82737	25.01754	64.48093	10.6783	69.76676	66.32294	80.20163

Source: WDI, 2014

Table 8 shows the country wise averages of South Asia. Bhutan is highest in an industrial productivity, investment. Similarly, Sri Lanka is highest in human resource and education and training. India has second highest in human resource and education and training. Nepal has low industrial productivity. Pakistan has low investment and equal averages in human resources. Similarly, Nepal has low average in education and training. In south Asia, average rate of inflation in Nepal, Sri Lanka and Pakistan is very high. Therefore, most of the developing countries need to improve in human resource development which can boost up the industrial productivity as SAARC has a high mass of resources.

Table 9: Regression Analysis

C	9022	9.52
Lninvest _{it}	0.05	0.08*
Lnopenness _{it}	0.23***	
Lnopenness _{C_{it}}		0.22888
Lnhum.res _{it}	-2.11***	-2.23***
Lnedu.train _{it}	0.42***	0.45***
Lninfla _{it}	0.01	0.001
Statistical Criteria	R-Square = 0.87 Adj R-Square=0.86 S.E.R=0.09 F=125.98	R-Square=0.86 Adj R-Square=0.85 S.E.R=0.09 F=116.79

Note: The dependent variable is the share of industrial output as a ratio of GDP. (***), (**) and (*) shows 1 percent, 5 percent and 10 percent level of significance respectively. Standard errors are based on White cross section robust standard errors.

Table 9 reports that the trade openness has a positive impact on industrial productivity and growth. Higher the productivity, higher will be the foreign trade therefore South Asian developing countries should develop industrial efficiency and the result of R square is higher and fitted to the suitable model. Likewise F test also has supported the model which is statistically significant at a 1 percent level and applied models are efficient. Hausman test has approached to fixed effect. In this analysis, there is no significance correlation among the variables but some are correlated.

To conclude, trade openness has significant impact on the industrial productivity and growth positively and enhancing industrial productivity which has value added in the GDP of South Asian selected countries. Some south Asian countries are more open and some are closed e.g. Education is an important means to increase an efficiency of human resource for the industrial productivity through the investment. Human resource shall be strengthened. Increase in investment defiantly increases the industrial productivity and growth contributing to the GDP. Human Resource efficiency is low to increase the productivity of industries. Therefore in order to increase the efficiency of human resource of South Asian countries, more skill development training is required. Inflation has no positive impact on industrial productivity but positive value implies increase in rate of capital formation and industrial productivity. Hence openness has significant effect on industrial productivity. Based on this paper, it is to be suggested that the SAARC countries should integrate bilateral and multilateral relation to realize the outcome of industrial productivity.

References

- ARIC (Asia Regional Integration Center) *International Indicators Database*, Asian Development Bank. Retrieved from <http://aric.adb.org/indicator.php>
- Baldwin, R. E. (2006). *The effect of trade and foreign direct investment on employment and relative wages*. Cambridge National Bureau of Economic Research Working Paper No. 5037.
- Dijkstra, G. A. (2000). Trade liberalization and industrial development in Latin America. *World Development*, 28(9), 1567-1582.
- Dollar, D., & Kraay, A. (2004). Trade, Growth, and Poverty. *Economic Journal*, 114, 493.
- Emery, R. F. (1967). The relation of exports and economic growth. *Kyklos*, 20(2), 470-486.
- Grossman, G. M., & Helpman, E. (1990). Trade, innovation, and growth. *American Economic Review*, 80(2), 86-91.
- Hicks, N. (1980). *Economic growth and human resources*. World Bank Staff working paper #408. Retrieved from http://unctad.org/en/PublicationsLibrary/tdr2014_en.pdf
- Kravis, I. B. (1970). Trade as a handmaiden of growth. *Economic Journal*, 80, 850-872.
- Kruger, A. (1978). *Liberalization attempts and consequences*. Cambridge Mass. Ballinger.
- Lucas, R. E. (1988). On the mechanics of economic development. *Journal of Monetary Economics*, 22, 2-42.
- Lucas, R. (1988). On the mechanics of economic development. *Journal of Monetary Economics*, 22(1), 3-42.
- Maizeles, A. (1968). *Export and economic growth in developing countries*. London: Cambridge University Press.
- McCombie, J. S., & Thirlwall, A. P. (1994). *Economic growth and the balance-of-payments constraint*. New York: Palgrave Macmillan.
- Moinuddin, M. (2013). *Fulfilling the promises of south Asian integration: Gravity estimation*. Working Paper No. 415, ADBI. Retrieved from <http://www.eaber.org/sites/default/files/documents>
- Romer, P. M. (1990). Endogenous technological change. *Journal of Political Economy*, 98, 71-102.
- Rostow, W. W. (1960). *The stages of economic growth: A non-communist manifesto*. Cambridge: Cambridge University Press.
- Sayyid, S. R., Muhammad, K. K., Sayyid, H., & Mustafa, A. (2010). Openness and growth in south Asia : *Research Journal of South Asian Studies* 25(2), 419-428.
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References

- ARIC (Asia Regional Integration Center) *International Indicators Database*, Asian Development Bank. Retrieved from <http://aric.adb.org/indicator.php>
- Baldwin, R. E. (2006). *The effect of trade and foreign direct investment on employment and relative wages*. Cambridge National Bureau of Economic Research Working Paper No. 5037.
- Dijkstra, G. A. (2000). Trade liberalization and industrial development in Latin America. *World Development*, 28(9), 1567-1582.
- Dollar, D., & Kraay, A. (2004). Trade, Growth, and Poverty. *Economic Journal*, 114, 493.
- Emery, R. F. (1967). The relation of exports and economic growth. *Kyklos*, 20(2), 470-486.
- Grossman, G. M., & Helpman, E. (1990). Trade, innovation, and growth. *American Economic Review*, 80(2), 86-91.
- Hicks, N. (1980). *Economic growth and human resources*. World Bank Staff working paper #408. Retrieved from http://unctad.org/en/PublicationsLibrary/tdr2014_en.pdf
- Kravis, I. B. (1970). Trade as a handmaiden of growth. *Economic Journal*, 80, 850-872.
- Kruger, A. (1978). *Liberalization attempts and consequences*. Cambridge Mass. Ballinger.
- Lucas, R. E. (1988). On the mechanics of economic development. *Journal of Monetary Economics*, 22, 2-42.
- Lucas, R. (1988). On the mechanics of economic development. *Journal of Monetary Economics*, 22(1), 3-42.
- Maizeles, A. (1968). *Export and economic growth in developing countries*. London: Cambridge University Press.
- McCombie, J. S., & Thirlwall, A. P. (1994). *Economic growth and the balance-of-payments constraint*. New York: Palgrave Macmillan.
- Moinuddin, M. (2013). *Fulfilling the promises of south Asian integration: Gravity estimation*. Working Paper No. 415, ADBI. Retrieved from <http://www.eaber.org/sites/default/files/documents>
- Romer, P. M. (1990). Endogenous technological change. *Journal of Political Economy*, 98, 71-102.
- Rostow, W. W. (1960). *The stages of economic growth: A non-communist manifesto*. Cambridge: Cambridge University Press.
- Sayyid, S. R., Muhammad, K. K., Sayyid, H., & Mustafa, A. (2010). Openness and growth in south Asia : *Research Journal of South Asian Studies* 25(2), 419-428.
- Solow, R. M. (1956). A contribution to the theory of economic growth. *Quarterly Journal of Economics*, 70(1), 65-94.

- Tyler, W. G. (1981). Growth & export expansion in developing countries: Some empirical evidence. *Journal of Development Economics*, 9, 121-130.
- UNCTAD (United Nations conference on Trade and Development) (2014). Retrieved from <http://unctad.org/en/pages/PublicationWebflyer.aspx?publicationid=937>
- Wheeler, D. (1980). *Human resource development and economic growth in developing countries*. World Bank Staff Working Paper # 407.
- Wolf, H. (1993). Trade orientation: measurement and consequences. *Estudios de*, 20, 5272.
- World Bank (2014). Retrieved from <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators>
- WDI (World Development Indicator) (2014). *Key indicators of Asia and Pacific, 2014*. United Nations, World Development Center.
- World Investment Report (2014). Retrieved from unctad.org/en/PublicationsLibrary/wir2014_en.pdf