International Journal of Research in Economics and Social Sciences (IJRESS)
Available online at: http://euroasiapub.org
Vol. 7 Issue 5, May- 2017, pp. 288~298
ISSN(o): 2249-7382 | Impact Factor: 6.939 | Thomson Reuters Researcher ID: L-5236-2015

Consolidation of Regional Integration in South and South-East Asia: A Comparative Analysis Of Conditional Beta Convergence In SAARC and In ASEAN

Shabari Paul Dey[1],

Doctoral Research Scholar,
Department of Humanities and Social Sciences,
National Institute of Technology Agartala,
Tripura, India

Dr. Debasis Neogi[2]

Associate Professor,
Department of Humanities and Social Sciences,
National Institute Of Technology Agartala,
Tripura, India.

Abstract:

The paper is an attempt to test for the effectiveness of SAARC (South Asian Regional Cooperation) as a regional bloc over the years by using the concept of conditional beta convergence. The formation of SAARC as a regional bloc in December 1985 consisting India, Bangladesh, Pakistan, Bhutan, Srilanka, Maldives and Nepal had the basic objective of enhancing economic growth of the member countries by encouraging intra-regional trade. Over three decades later, today, when we evaluate the progress of such regional arrangement, it is not found satisfactory. Under such circumstances, effort to find out the possibilities for consolidation of the integration process in near future becomes imperative. In this context, the present paper tries to check whether the GDP per capita of all the member countries of SAARC are showing conditional convergence for the period 1970 to 2011 or not. From the view point of persistent political unrest among SAARC members especially between India and Pakistan, it also checks for the possibility of a more effective and alternative regional bloc by combining India with the member countries of ASEAN. The insignificant results of the regression analysis suggest conditional beta divergence of GDP per capita for the study period. But if India could leave SAARC and join ASEAN then the results would show conditional convergence (insignificant) which confirms the possibility of formation of alternative economic integration of India with ASEAN.

Keywords: Regional Bloc, SAARC, Conditional Convergence, ASEAN, GDP Per Capita.

Introduction:

Globalisation of the world economy has paved the way for a number of regional policy initiatives for the formation of regional integration among countries. Globalisation has made the countries more interdependent both economically and financially. Now countries are compelled to compete in the global market with more powerful economies of the world. It has been observed that the economy of the countries can grow simultaneously through economic integration particularly in the field of trade. The formation of South Asian Association for Regional Cooperation (SAARC) consisting seven countries of South Asia namely India, Bangladesh, Pakistan, Sri Lanka, Bhutan, Maldives and Nepal as members has been an outcome of globalization. Afghanistan became a member of SAARC in 2005. The member countries constitute 22% of the world's population, 3.6% of total land area and account for only 2.5% of the world GDP. The primary objective of the association was to accelerate the process of economic development of the member countries and to make them more competitive in the global market. And one of the best way to do so is to encourage intra-regional trade among member countries which in turn leads to the increase in gross domestic product (GDP). From the literature survey in the relevant area, it can be supposed that GDP per capita is the most suitable indicator for measuring economic growth. So the feasibility of better economic cooperation can be found out from the convergence/divergence characteristics of GDP per capita across the nations.

Convergence refers to the process by which relatively poorer regions or countries grow faster than their rich counterparts. Convergence hypothesis was advanced by Solow in 1956 and documented by Baumol (1986) and Barro and Xavier-Sala-i-Martin (1995). There are three concepts of convergence widely used in the literature namely sigma convergence, absolute beta convergence and conditional beta convergence. Absolute β convergence is said to exist if the poorer regions tend to grow faster than the richer ones, so that the poor country tends to catch up to the rich in terms of levels of GDP per capita. Sigma (σ) convergence occurs if the dispersion declines over time. Conditional beta convergence implies that a country or a region is converging to its own steady state while the unconditional beta convergence (Absolute convergence) implies that all countries or regions are converging to a common steady state potential level of income.

The absolute and conditional beta convergence hypotheses have been tested by many researchers using different methodologies and data sets. In the present paper conditional beta convergence has been tested among SAARC member countries for the specified period. Convergence can be tested using different indicators. According to the literature, GDP per capita is the most appropriate indicator for measuring income convergence. So the present study considers GDP per capita as the indicator for measuring conditional beta convergence of the SAARC countries.

Factors Determining Conditional Convergence / Divergence of GDP Per Capita:

In the initial phases of the development of growth theories, it has been stated in 1939 in the Harrod- Domar model that an economy's growth rate is dependent on the level of savings and the capital-output ratio. But it has been mentioned in the paper by the author Nicholas Stern (January 1991) that with subsequent rise in growth theory it has been realised that only in the short or

medium term, output can be increased by increasing the level of capital. Eventually the rate of growth of labour force and their efficiency levels must be increased along with the increase in the level of capital to achieve higher economic growth. It has been proposed by Solow in 1956 that the rate of growth of output is determined by the rate of growth of labour force. Besides savings, rate of growth of labour force can play an important role in determining the growth rate of an economy in the long run. If population grows and more people join in labour force overtime, then more output will be produced and it will help the economy to grow faster. Techniques of production or the growth of technology can be another crucial determinant of economic growth. New technology can be launched or current technology can be improved which can lead to faster the production process and raise output. Efficiency level of the labour force that is decided by the relative skills of the labour can contribute to advance economic growth. It can be assumed that healthy labour force can give highest efforts in the production of goods and services. Extensive Studies of the existing literatures also suggest another crucial factor of economic growth which is trade or international trade and trade openness. In their paper, Caleb et. al. (September 2014) has suggested that there is a strong relationship between trade and economic growth and if barriers to trade are removed then it will enhance trade among countries which will, in turn, lead to economic growth. In another paper by author Hendrik Van Den Berg (1997) a simultaneous equation time series regression model has been used to confirm the hypothesis that trade and growth are directly related. Share of industry value added is another important factor of economic growth. Share of industry value added is the share of private or government contribution to the GDP of the country.

All these possible factors can have a positive impact on economic growth of a country. These factors have been considered in the context of the present study. If it has been found that these factors have positive influence on GDP per capita of a country, then all the countries in a regional bloc will grow simultaneously which, in turn, will accelerate convergence process among the member countries of region. Sigma and absolute beta convergence of GDP per capita has been found convergent among all the member countries of the regional cooperation of SAARC[1]. Now the purpose of the present study is to find out whether these countries show any sign of convergence over the study periods, by taking into consideration the above-mentioned determinants of economic growth.

Objectives:

This paper aims to analyse the conditional beta convergence of GDP per capita among SAARC countries during the time span 1970 to 2011. Afghanistan has not been included in the present study as it joined SAARC in 2005 and thus data for this country are not available for the whole study period taken into consideration. The data on GDP per capita has been collected from World Bank Open Data. This paper tries to examine the effects of domestic savings rate, population growth, trade openness, industry value added and human capital (proxied by life expectancy) on GDP per capita growth across region.

1. Dey, S P and Neogi, D.. Testing Sigma and Unconditional Beta Convergence of GDP for SAARC Countries: Can inclusion of China further consolidate the convergence?. Global Business Review, Vol.16, No.5, October2015, pp. (845-855), (2015).

In the following section, some data on the demographic and economic indicators of all member countries of SAARC have been discussed to understand the relative positions of these nations in SAARC.

India:

India with a population of about 1.27 billion (Census 2012-14) is known as a developing country. It shares about18 per cent of the world population. In the year 2015-16 the GDP growth of India is estimated 7.56 per cent at constant prices 2011-12. For India exchange rate of INR/1 USD (as on 22 December 2015) is 66.29. exports of India as on November 2015 is US$ 20014.22 million. Imports for the same period is US$ 29795.91million. According to 2013 estimate life expectancy for male in India is 66.38 years and for women it is 68.7 years. Population of India is expected to overtake China's in 2028 to become the world's most populous nation. With New Delhi as its capital the total area of India is 3.1 million square kilometre excluding Kashmir. Major religions in the country are Hinduism, Islam, Christianity, Sikhism and Budhhism. India is a rising economic powerhouse and India has emerged as an important regional power[2].

India, as a member of SAARC can play a very important role to facilitate intra-regional trade among other member nations of SAARC as it is the only member which shares border with all member countries except Afghanistan. Again, no other country shares a border with any other SAARC countries except India. In both the way it shows the sole importance of India among all the SAARC members.

Pakistan:

Among all the member countries of SAARC, Pakistan is the second largest country in terms of size after India. Islamic Republic of Pakistan is an underdeveloped country. Despite some advancements, Pakistan is still in the process of development because of the social and political unrest prevailing in the economy for a long time which have a detrimental effect in establishing sustainable development in the economy.

The economy consisting of 186.3 million population in 2015-16 has growth rate of 4.1 per cent of GDP(PPP) in the same year. The economy is facing 5.1 per cent unemployment and 8.6 per cent inflation (CPP). Export of Pakistan is 180899.00 PKR million in 2016 and Import is 470038.00 PKR million. As a member country of SAARC, after India Pakistan is the second important member country among SAARC.

But the progressively worsening relationship between these two countries accounts for one of the major reasons for over the years unsatisfactory performance of SAARC as a regional bloc. So, to make SAARC a success both the countries must move forward to remove all the conflicts among them and go hand in hand in the process of economic integration.

2.http://www.bbc.com/news/world-south-asia-12557384

Srilanka:

Srilanka also joined in 1985 with other member countries to form SAARC. According to the 2016 July estimates the total population of the country is 22.235 million and $11,200 is the GDP per capita. According to the estimate of 2016, GDP composition by sector of origin is: agriculture 8.5%, industry 30.9% and services 60.6%. rice, sugarcane, grain, pulses, oilseeds, pulses, vegetables, fruits, tea, rubber, coconut, milk, egg, beef and fish are the major agricultural products of the country. As per 2016 estimate, export of the country was $ 10.12 billion and import of the country was $18.64 billion. Major exportable commodities of the country are textiles and apparels, tea and spices, rubber manufacturers, precious stones, coconut products and fish. Major importable commodities are petroleum, textiles, machinery and transportation equipment, building materials, mineral products and food stuffs. As per 2015 estimates India is the major trade partner of Srilanka consisting 24.6 per cent of the total trade in this country. China is the second largest partner in trade which account for 20.6 per cent of the total trade in this country.

Bhutan:

Bhutan, one of the member countries of SAARC, is a Buddhist kingdom on Himalaya's eastern edge. It is known for its monasteries, fortresses, and dramatic landscapes. The current population of Bhutan is 789,410 as of February 8, 2017, based on the latest United Nations estimates. Bhutan population is equivalent to 0.01 per cent of the total world population. As per 2016 estimate GDP per capita of Srilanka is $8,100. Bhutan is a small and developing economy. The main livelihood for more than half of the population is based on hydropower, agriculture and forestry. GDP composition by sector of origin is: agriculture 16.4 %, industry 42.1 % and services 41.5%. rice, corn, root crops, citrus, dairy products and eggs are major agricultural goods of the country. As per the estimate of 2016, exports of the country are $500 million and imports of the country is $1.1 billion. Major importable goods are fuel and lubricants, passenger cars, machinery and parts, fabrics, and rice. Major exportable goods are electricity (to India), cement, calcium carbide, copper wire, manganese, and vegetable oil.

Bangladesh:

Bangladesh is one of the members of SAARC. As per 2016 estimate the population of Bangladesh is 156,186,882 and GDP per capita is $3,900. Despite political disturbances, poor infrastructure, corruption, insufficient power supplies, slow implementation of economic reforms and the 2008-09 financial crisis and recession, the economy of Bangladesh has grown up 6 per cent per year since 1996. Although more than half of GDP is generated through services sector, almost half of Bangladeshis are employed in the agriculture sector, with rice as the single-most-important product.[3]

GDP composition of the country by sector of origin is: agriculture 15.1 per cent, industry 28.6 per cent and services 56.3 per cent (as per 2016 estimate). Most common agricultural products of the country are rice, jute, tea, wheat, sugarcane, potatoes, pulses, oilseeds, spices, fruits, beef, milk and poultry. As per 2016 estimate, the export of the country is $33.32 billion and import for the same year is $39.17 billion. Major exported products of the country are garments, knitwear, agricultural products, frozen food (fish and sea food), jute and jute goods and leather.

Major importable goods are cotton, machinery and equipment, chemicals, iron and steel and food stuffs.

Nepal:

Nepal with a population size of 29,058,674 as per February 2017 estimate is the 93rd largest country in the world. Nepal population is equivalent to 0.39 per cent of the total world population. Nepal, officially the Federal Democratic Republic of Nepal is a landlocked central Himalayan country in South-Asia. Nepal is the poorest and least developed countries in the world. One quarter of its population is below the poverty line.

Nepal is heavily dependent on remittances which accounts for 29 per cent of its GDP. 70 per cent of the population of this country is engaged in agriculture. Industrial activities mainly involve the processing of agricultural products, including pulses, jute, sugarcane, tobacco and grain.[4] As per 2016 estimate the GDP per capita (PPP) is $2,500. GDP composition by sector of origin is: agriculture 29.4 per cent, industry 13 per cent and services 50.4 per cent (as per the estimates of 2016). In 2016, export of Nepal is $898.4 million and import is $7.116 billion. Major exported commodities of the country are clothing, carpets, textiles, pulses, jute goods and juice. Major imported commodities of the country are petroleum products, machinery equipment, gold, electrical goods and medicine.

Maldives:

Maldives, with a population of 392,960 as per 2016 estimate, has rapidly grown into a middle-income country. Tourism sector plays an important role in the rapid growth of this country. Tourism, construction, transport and communications are those sectors which accounted for 50 per cent of the output on average. As per 2016 estimate, the GDP (PPP) of the country is $5.407 billion. GDP composition of Nepal by sector of origin is: agriculture 3.5 per cent, industry 19.3 per cent and services 77.2 per cent (as per 2014 estimate).

Common agricultural products are coconuts, corn, sweet potatoes and fish. As per the estimate of 2014, export of the country is $300.9 billion and import of the country is $1.993 billion. Major exportable commodity is fish. Most common imported commodities are petroleum products, clothing, intermediate and capital goods. [5]

Data and Methodology:

Dataset comprises data of GDP per capita for the seven SAARC member countries namely Nepal, Bangladesh, Pakistan, India, Sri Lanka, Bhutan and Maldives for the years 1970 to 2011. To analyse conditional convergence among SAARC nations average annual growth rate of GDP per capita has been taken as dependent variable in the present study. It has been calculated for the years 1970 to 2011 using data collected from World Bank Open Data. Independent variables taken for present study are initial level of GDP per capita, gross domestic savings to GDP ratio, average annual population growth, average life expectancy at birth, average trade to GDP ratio and share of industry value added as per cent of GDP for all the SAARC member countries for the same period from 1970-2011.

3. http://www.cia.gov/library/publications/the-world-factbook/geos/bg.html

4. http://www.cia.gov/library/publications/the-world-factbook/geos/np.html

All the values for these variables has been collected and computed from World Bank Open Data.

Conditional convergence across countries will be tested by estimating the below given equation:

$Y_{i.t,,t+T}$ = a+b1*log(initial)+b2*log(gds)+ b3*log(n+g+∂)+b4*log(Life(H) + b5* log Trade(T)+ b6* log industry (I) + $e_{i.t}$ ……. (i)

Where,
Yi.t,t+T is the average annual growth rate of GDP per capita. Log (initial) is log of initial level of GDP per capita. Log(gds) is log of average annual gross domestic savings to GDP ratio. Log(n+g+∂) is log of [annual average growth rate of population of SAARC nations(n)+rate of growth of technology (g: which is assumed to be constant at 3 per cent)+ rate of depreciation (∂: assumed to be constant at 2 per cent)]. Log of Life (H)implies log of life expectancy in initial year. This is proxy for healthy labour force. Log of Trade (T) is the log of average annual trade to GDP ratio for SAARC member countries. Total trade is the summation of total exports and total imports of SAARC nations. Log of industry (I) is log of average annual share of industry value added to GDP ratio.

If b<0 and significantly different from zero, then it can be said that data sets exhibits conditional beta convergence and null hypothesis (H_0) of b1=0 can be rejected. It implies that countries which are further away from steady state will grow at a faster rate than countries which are nearer to it. The further an economy is 'above' its steady state, the slower the economy should grow.[6]

Analysis and Result:

An attempt has been made in this paper to analyse whether the member countries of SAARC has been gradually conditionally converging over specified period or not.
Conditional beta convergence has been tested by estimating equation (i) after controlling for the determinants of conditional convergence. Conditional convergence is defined as the existence of an inverse relationship between initial level of GDP per capita and annual average growth rate of GDP per capita once the determinants of steady state level of GDP per capita has been controlled. In the present study these determinants are average annual gross domestic savings to GDP ratio, rate of growth of population and technology, average annual life expectancy at birth, average annual trade to GDP ratio (exports plus imports as per cent of GDP) and share of industry value added to GDP ratio. Including all these factors equation (i) has been estimated to find out the effects of initial level of GDP per capita and these factors on average annual growth rate of GDP per capita.

Statistical Software SPSS has been used to estimate for conditional beta convergence of the regression equation (i). The results of the regression analysis have been given below:

---

5. http://www.cia.gov/library/publications/the-world-factbook/geos/mv.html
6.https://www.researchgate.net/Publication/4800386_Economic_Growth_and_Conditional_Convergence_its_Speed_For_Selected_Regions_For_1961-2001

Regression

[DataSet0]

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	VAR00007, VAR00004, VAR00002, VAR00003, VAR00006, VAR00005[b]	.	Enter

a. Dependent Variable: VAR00001

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.353[a]	.124	-.030	6.40063

a. Predictors: (Constant), VAR00007, VAR00004, VAR00002, VAR00003, VAR00006, VAR00005

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	197.671	6	32.945	.804	.574[b]
	Residual	1392.915	34	40.968		
	Total	1590.586	40			

a. Dependent Variable: VAR00001

b. Predictors: (Constant), VAR00007, VAR00004, VAR00002, VAR00003, VAR00006, VAR00005

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.225	225.188		.010	.992
	VAR00002	1.834	19.884	.079	.092	.927
	VAR00003	17.822	28.103	.338	.634	.530
	VAR00004	57.269	65.999	.249	.868	.392
	VAR00005	78.903	172.348	.627	.458	.650
	VAR00006	8.014	32.025	.120	.250	.804
	VAR00007	-79.304	50.842	-.825	-1.560	.128

a. Dependent Variable: VAR00001

The estimated values of the regression equation imply conditional beta divergence of GDP per capita over the period 1970 to 2011 once controlled for other factors as the initial level of GDP per capita has a positive effect on growth rate of GDP per capita. Average annual growth rate of gross domestic savings to GDP ratio has a positive influence on growth rate of GDP per capita. Growth rate of population, average annual life expectancy at birth and trade to GDP ratio are also positively related with average annual growth rate of GDP per capita. But share of industry value added as per cent of GDP has negative influence on average annual growth rate of GDP per capita.

Likelihood of Formation of Alternative Economic Collaboration of India with ASEAN:

Another important objective of the present paper is to make an analysis to check the possibility of formation of a different regional bloc of India with ASEAN. Due to the continual political unrest between SAARC member countries mainly between India and Pakistan the usefulness of SAARC as an economic integration has already started being questioned in the present world. Gradual political conflict among India and Pakistan contributes the most part behind the inefficiency of SAARC as a regional bloc. India had already signed an assignment on October 8, 2003 with ASEAN to form ASEAN-India Free Trade Area (AIFTA) which became operational from 1st January, 2010. Established in 1967 with only five original member countries, ASEAN has come a long way in the path of economic cooperation and integration. Presently it's a cooperation of ten member countries successfully achieving its goals. It is the second regional bloc after European Union (EU) which is thinking of a common currency for its member countries. India has already benefitted from the bi-lateral trade of goods and services with ASEAN. In 2011-12 the bilateral trade between ASEAN and India had already crossed US$79 billion and it is expected to be the largest FTA in the world. India seems to have the possibility of a more successful cooperation with ASEAN countries as compared to SAARC countries. This raises the necessity to think of an alternative economic integration including south east Asian countries with India. If India leaves SAARC and join with ASEAN countries, the possibility is that both India and SAARC can be better of. In this context, the paper checks for conditional beta convergence among ASEAN (Association of South-east Asian Nations) countries including India to find out whether there exists any process of convergence among these countries when included with India or not. If these countries show any sign of convergence of GDP per capita for the study period 1970 to 2011 then it can be concluded that India should join South East Asian countries for better and successful formation of another economic integration of India with ASEAN.

A regression analysis has been conducted in the present paper to examine for conditional beta convergence of GDP per capita of India with South East Asian nations. Data have been collected for member countries of ASEAN and India from World Bank Open Data for all the countries. ASEAN includes ten member countries which are namely Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Phillippines, Singapore, Thailand and Vietnam. Along with India data has been collected for all these countries for the specified time periods. Like the previous regression equation average annual Growth rate of GDP per capita is the dependent variable here and initial level of GDP per capita is the independent variable. Data for the other independent variables namely average annual gross domestic savings as per cent of GDP, average annual growth rate of population, average annual life expectancy at birth, average annual trade as per cent of GDP and average annual share of industry value added have also been collected using

the same source.

Applying the concept of conditional beta convergence SPSS software has been used to estimate equation (i) with the changed interpretation. The results of the regression analysis are as follows:

Regression

[DataSet0]

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	VAR00007, VAR00004, VAR00005, VAR00006, VAR00003, VAR00002[b]	.	Enter

a. Dependent Variable: VAR00001

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.685[a]	.469	.377	1.45656

a. Predictors: (Constant), VAR00007, VAR00004, VAR00005, VAR00006, VAR00003, VAR00002

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	65.473	6	10.912	5.143	.001[b]
	Residual	74.254	35	2.122		
	Total	139.727	41			

a. Dependent Variable: VAR00001

b. Predictors: (Constant), VAR00007, VAR00004, VAR00005, VAR00006, VAR00003, VAR00002

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	80.844	51.678		1.564	.127
	VAR00002	-2.735	2.868	-.611	-.954	.347
	VAR00003	26.969	8.802	1.902	3.064	.004
	VAR00004	-25.988	15.617	-.369	-1.664	.105
	VAR00005	-42.278	34.456	-.775	-1.227	.228
	VAR00006	-1.128	5.741	-.096	-.197	.845
	VAR00007	-5.675	4.274	-.397	-1.328	.193

a. Dependent Variable: VAR00001

The estimates of the regression equation imply that the South East Asian countries along with India are converging over the years though the results of the analysis are not significant for the study period. The beta coefficients are negative except for the independent variable average annual gross domestic savings as per cent of GDP. The negative sign implies that over time countries are converging to their own steady states.

Conclusion and Policy Implication:

Conditional beta convergence has been assessed in the present paper with the objective to analyse whether SAARC member countries are showing any mark of convergence over the stated period or not. According to the theory if the beta coefficient turns negative then it can be asserted that there is an inverse relationship between the initial level of GDP per capita and average annual growth rate of GDP per capita which further confirm the presence of conditional beta convergence. A positive relation has been found between the initial level of GDP per capita and average annual growth rate of GDP per capita which implies conditional beta divergence (insignificant) of SAARC member countries for the period 1970 to 2011. Though the results of the empirical analysis do not show convergence, the values are insignificant and it cannot be asserted that there will not be any possibility of convergence among SAARC member nations in future. Policies should be made to improve the political cooperation among SAARC countries. Political cooperation and bilateral trade are highly correlated to each other. Therefore, member countries should take steps to remove political and trade barriers and encourage foreign direct investment which will increase trade flows and national income.

References:

1. Berg D. V. H (1997): *The Relationship Between International Trade and Economic Growth in Mexico*, The North American Journal of Economics and Finance, vol.8, Issue, pp. (1-21).
2. Caleb G., Mazanai M. and L Netsai D. (2014) - *Relationship between International Trade and Economic Growth: A Cointegration Analysis for Zimbabwe*, Mediterranean Journal of Social Sciences, MCSER Publishing, Rome-Italy, vol.5, no.20, pp. (621-627)
3. Dey, S P and Neogi, D.. Testing Sigma and Unconditional Beta Convergence of GDP for SAARC Countries: Can inclusion of China further consolidate the convergence?. Global Business Review, Vol.16, No.5, October2015, pp. (845-855), (2015).
4. http://data.worldbank.org
5. http://www.bbc.com/news/world-south-asia-12557384
6. http://www.cia.gov/library/publications/the-world-factbook/geos/bg.html
7. http://www.cia.gov/library/publications/the-world-factbook/geos/mv.html
8. http://www.cia.gov/library/publications/the-world-factbook/geos/np.html
9. https://www.researchgate.net/Publication/4800386_Economic_Growth_and_Conditional_Convergence_its_Speed_For_Selected_Regions_For_1961-2001
10. Stern N. (1991): *Determinants of Economic Growth*, The Economic Journal, vol.101, no.404 (Jan.1991), pp.-122-133.