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**Imperatives of Regional Economic
Integration in Asia in the Context of
Developmental Asymmetries:
Some Policy Suggestions**

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Abstract

Regional economic integration agreements are considered to be important policy mechanisms to address regional developmental asymmetries. The Asian reality is characterized by developmental asymmetries across countries on the one hand and a lack of comprehensive pan-Asian formal regional economic integration agreements on the other. The need for such regional agreements is of paramount importance given the phenomenal economic performance of Asia.

Against this backdrop this paper tries to describe the nature and extent of developmental and growth asymmetries in Asia. Some conceptual aspects of growth asymmetries are summarized before undertaking an econometric exploration of growth convergence in the Asian region in comparison to some other prominent regions of the world. The paper finds some evidence of growth divergence among East Asia Summit (EAS) countries though it is statistically not significant. This divergence, combined with a strong logic for developing-developing and developed-developing inter-country cooperation in the EAS region help the paper to make some policy suggestions, especially regarding enabling the less developed countries of EAS to achieve global market access in order to assist development and growth convergence in the region.

JEL Classification: F15, O19, O47

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1. INTRODUCTION

Recent times have witnessed an unprecedented growth in the number of regional economic integration agreements across the globe. Such agreements are considered to be important policy mechanisms to address developmental asymmetries in particular regions. Experiences in some regional groupings suggest regional economic cooperation helps bridge development gaps among members.

However, despite the prevalence of such agreements internationally, Asian reality is characterized by developmental asymmetries across countries on the one hand and a lack of formal, comprehensive pan-Asian economic integration agreements, on the other. The need for such agreements is important because of the phenomenal economic performance of Asia. It is now common knowledge that India and the People's Republic of China (PRC) are the fastest growing economies in Asia. This could further accentuate the existing economic asymmetries in the Asian region, making Asia-Asia economic cooperation even more imperative in the future.

Regional economic integration could work in a variety of ways to address developmental gaps across countries. It could help less developed countries take advantage of global market access opportunities. This could be made possible with the support of regional economic integration schemes that optimally deploy the region's natural, financial, human, and technological resources to help converge the region's different levels of economic development among countries.

An emphasis on a more balanced and equitable regional development could create conditions for more enthusiastic participation of all regional members of Asia including those lacking the capacity to negotiate and implement regional economic integration schemes. This is an important aspect in terms of bringing together countries at varying stages of economic development.

In this context, trade-investment linkages play an important role. There is some evidence suggesting increased trade by itself does not ensure economic development. It needs to be accompanied by complementary development policies including investment, especially in infrastructure, education, research and development, and regional and sector-specific programs to ensure balanced growth (Smith 2005). Globally, there are attempts to integrate the regional trading arrangements with balanced regional development and social cohesion policies (Yeats and Deacon 2006).

This is important to help poorer countries of the region take advantage of market access opportunities in an open global trading system by helping them enhance their development capabilities.

Against this backdrop, this paper explores the nature and extent of development and growth asymmetries in the region in Section 2. On a more positive note, how growth asymmetries expand the scope for tapping economic complementarities is also highlighted. In Section 3 some of the conceptual aspects of growth asymmetries are summarized and Section 4 presents an econometric exploration of growth convergence in the Asian region compared to some other prominent regions in the world. Section 5 puts forth a rationale for development cooperation that could be used to inform intra-Asian cooperation to bring about development convergence, drawing upon the arguments put forth in Das (2006). Finally, in Section 6 some policy prescriptions to reduce developmental gaps in Asia are presented with the particular objective of enabling poor countries to take advantage of emerging global economic opportunities. Section 7 presents some concluding remarks.

At this stage it is appropriate to clarify that while various developmental indicators will be considered here, due to data limitations the econometric exploration focuses primarily on

growth. Hence, the difference between growth and development in terms of development representing growth plus other dimensions needs to be kept in mind.

2. EXPLORING DEVELOPMENT GAPS AND GROWTH ASYMMETRIES

In this section, the extent of development gaps and growth asymmetries in East Asian countries (i.e., ASEAN+6) is highlighted, in terms of gross domestic product (GDP), per capita GDP, unemployment, inequality, and physical and social infrastructure.

2.1 Growth Asymmetries

As is evident from Table 1, in terms of real GDP recorded in 2006, the lowest performer, Lao People's Democratic Republic (Lao PDR) is more than 2000 times behind the highest performer, Japan. In terms of annual growth rates in 2006, the highest performer Cambodia is almost 6 times ahead of the lowest performer, New Zealand.

Considering the per capita real GDP, which should give a better picture of growth asymmetries and some broad indication of the development gap, with this measure Lao PDR, the lowest performer, is 91 times behind Japan, the highest performer. In terms of per capita GDP growth rates, New Zealand is 16 times behind the PRC. If the GDP per capita growth asymmetries are averaged over 2000–2006, Brunei Darussalam is 28 times behind the PRC. Thus East Asian countries have tremendous growth asymmetries and the growth distance low performers have to cover to catch up to the high performers appears enormous.

Table 1: Growth Asymmetries

Indicators** (2006)	Highest Performer (H)	Lowest Performer (L)	Gap between H and L	% Gap	Growth Distance*
GDP (US\$ bn at constant 2000 prices)	5087.80 (Japan)	2.53 (Lao People's Democratic Republic)	5,085.27	201,118.11	2,012.18
GDP growth (annual %)	10.83 (Cambodia)	1.90 (New Zealand)	9.00	470.21	5.70
GDP per capita (US\$ at constant 2000 prices)	39,824.00 (Japan)	439.02 (Lao People's Democratic Republic)	39,385	8,971.11	90.71
GDP per capita (annual %)	10.08 (PRC)	0.67 (New Zealand)	9.00	1,415.48	15.15
Average GDP per capita growth (2000–2006)	8.87 (PRC)	0.32 (Brunei Darussalam)	8.55	2,696.96	27.97

GDP = gross domestic product, PRC = People's Republic of China, US\$ = United States dollar.

Notes: * Growth Distance is how many times the lowest performer is behind the highest performer, ** Myanmar data not available.

Source: World Bank, *World Development Indicators*, CD-ROM, 2008.

2.2 Growth Volatility

Quite often concerns relating to growth levels and growth rates take precedence over stable growth in literature on economic growth and policy. As a measure of volatility in per capita GDP growth among the East Asian countries a coefficient of variation was calculated and as can be seen in Table 2, which shows that the region exhibits high GDP growth volatility. This

is true of most of the countries except Indonesia, the PRC, and Viet Nam. This is yet another dimension on which asymmetries are present and efforts need to be made to understand their causes and potential strategies for rectifying them.

**Table 2: Extent of Volatility in GDP Per Capita Growth
(annual %)**

Country Name	2000	2001	2002	2003	2004	2005	2006	Average 2000– 2006	Coefficient of Variation
Australia	0.74	2.38	1.89	2.77	1.48	1.46	1.01	1.68	43.21
Brunei Darussalam	0.43	0.35	1.48	0.57	-1.73	-1.80	2.91	0.32	528.01
Cambodia	6.61	6.02	4.65	6.65	8.17	11.55	8.95	7.51	30.14
India	2.31	3.52	2.13	6.79	6.79	7.75	7.70	5.28	47.86
Indonesia	3.55	2.28	3.12	3.39	3.62	4.26	4.31	3.50	19.83
Japan	2.68	-0.04	0.03	1.20	2.71	1.90	2.21	1.53	76.22
Lao PDR	3.82	3.94	4.21	4.47	4.72	5.42	5.78	4.63	15.98
Malaysia	6.42	-1.80	2.07	3.68	4.84	3.11	4.03	3.19	81.08
Myanmar	8.65	10.20	10.98	12.83	2.14	4.12	..	8.15	51.06
New Zealand	1.54	3.02	2.76	1.38	2.16	0.85	0.67	1.77	51.41
Philippines	3.77	-0.36	2.27	2.75	4.20	2.76	3.37	2.68	55.78
PRC	7.64	7.52	8.37	9.32	9.44	9.69	10.08	8.87	11.54
Republic of Korea	7.58	3.08	6.38	2.59	4.22	3.74	4.72	4.62	38.85
Singapore	8.17	-5.00	3.21	2.86	7.46	4.08	4.46	3.61	119.44
Thailand	3.76	1.29	4.49	6.36	5.53	3.76	4.29	4.21	38.04

GDP = gross domestic product, Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.

Source: World Bank, *World Development Indicators*, CD-ROM, 2008.

2.3 Unemployment and Inequality

The development distance for employment is roughly 8 times different between the lowest and the highest achievers, as illustrated in Table 3. In terms of inequality the gap between the lowest performer, the Philippines, is nearly half that of the best performer, Japan.

Table 3: Unemployment and Inequality

Indicator (2006)	Highest Performer (H)	Lowest Performer (L)	Gap between H and L	% Gap	Development Distance*
Unemployment (% of total labor force)**	1.30 (Thailand)	10.30 (Indonesia)	9.00	692.31	7.92
GINI Index [^]	24.90 (Japan)	44.00 (Philippines)	19.10	76.71	1.77

Note: * Development Distance is how many times the lowest performer is behind the highest performer, ** Data for Australia, Myanmar, Japan, and New Zealand not available, ^ Index calculated on the basis of year of survey.

Source: World Bank, *World Development Indicators*, CD-ROM, 2008.

2.4 Physical Infrastructure

The enormity of the development gap among EAS countries is most evident and pronounced on the dimensions of physical infrastructure, as illustrate in Table 4. The gap is more than 7,000 times in air transport related freight and almost 600 times in air passenger traffic. In the former, the gap is between Japan and Cambodia and in the latter it is between Cambodia and the PRC. In terms of electric power consumption, the gap is 140 times

between Australia and Myanmar, the highest and lowest performers, respectively. The gap is more than 1,000 times between Australia and Myanmar in terms of internet users.

Table 4: Physical Infrastructure

Indicator (2006)	Highest Performer (H)	Lowest Performer (L)	Gap between H and L	% Gap	Development Distance*
Air Transport, Freight (million tons-km)	8,480.00 (Japan)	1.11 (Cambodia)	8,478.89	763,176.33	7,632.76
Air transport, passengers carried (1000 people)	158,010.00 (PRC)	256.16 (Cambodia)	157,753.80	61,584.10	616.84
Electric power consumption (kWh per capita)**	11,481.00 (Australia)	81.639 (Myanmar)	11,399.361	13,963.132	140.63
Internet users (per 100 people)	69.56 (Australia)	0.07 (Myanmar)	69.49	105,688.33	1,057.88

km = kilometer, kWh = kilowatt-hour, PRC = People's Republic of China.

Notes: * Development Distance is how many times the lowest performer is behind the highest, ** Data for Cambodia and Lao People's Democratic Republic for 2005 and 2006 not available.

Source: World Bank, *World Development Indicators*, CD-ROM, 2008.

2.5 Social Infrastructure

From Table 5 it is noticeable that considerable gaps exist in the realm of social infrastructure, including health and primary education. These illustrate that EAS countries are not only characterized by physical infrastructure gaps but are also asymmetric in terms of social infrastructure.

Table 5: Social Infrastructure

Indicator (2006)	Highest Performer (H)	Lowest Performer (L)	Gap between H and L	% Gap	Development Distance*
Health expenditure per capita (current US\$)^	3,181 (Australia)	4.00 (Myanmar)	3,177	79,425	795.25
Mortality rate, under 5 (per 1000)	104.00	2.77	101.23	3,649.91	37.50
School enrollment, primary (% net)#	99.83 (Japan)	82.7 (Lao PDR)	17.13	20.719	1.21

Lao PDR = Lao People's Democratic Republic, US\$ = United States dollar.

Notes: * Development Distance is how many times the lowest performer is behind the highest performer.

Source: World Bank, *World Development Indicators*, CD-ROM, 2008.

This section has highlighted growth asymmetries and development gaps among the EAS countries by analyzing some key indicators. Having observed that EAS countries exhibit considerable development gaps, it is important to explore if the region is characterized by growth convergence over time. In order to do so, the conceptual basis of the growth convergence literature is presented in the next section to serve as the basis for a subsequent econometric analysis in Section 4.

3. THE CONCEPTUAL BASIS FOR GROWTH CONVERGENCE AND REGIONAL ECONOMIC INTEGRATION

That the rich and poor economies would eventually converge in terms of income levels in the long run was an inference drawn on the basis of the standard economic model of growth that focused primarily on the role of savings and investment. However, growth disparities among countries have persisted.

To explain a lack of growth convergence, attempts were made to extend the growth models to include other factors for growth such as human capital and endogenous technological change in new growth theories. These new growth theories sought to shed more light on the links between openness and growth by taking into account technology. According to these theories, openness creates opportunities for countries in terms of enhancing access to a global pool of technology. Achieving technological advancements thus creates a growth dynamism in the economy as decline in the marginal productivity of capital is arrested due to increasing returns as a knowledge factor. The belief of the theory is that growth profiles can be enhanced and sustained and income convergence among countries can be achieved (Romer 1986; Lucas 1988; Scott 1989).

Based on the insights discussed above regarding the new growth theories, one of the channels by which convergence of national economies may be brought about is through trade and foreign direct investment (FDI) integration both globally and regionally. However, aspects of regional integration were not given adequate emphasis in the attempts to explain growth trajectories theoretically.

It has also been argued that growth in output per worker depends not just on capital per worker and technology but on a wide range of factors such as the political and cultural system in which the economy operates. This implies that convergence will take place within countries which have similar political and cultural backgrounds, but not necessarily between countries with dissimilar political and cultural backgrounds.

3.1 Growth Convergence and Regional Integration

The attempts to link global growth convergence and the process of regional economic integration are not very new, however the inferences drawn by various studies have remained far from conclusive. Vamvakidis (1998) in one of the early attempts tried to answer the question of whether regional trade agreements had any impact on growth. His empirical evidence showed that there was a case for smaller economies entering into such arrangements with larger economies in order to grow faster.

More recently there have been studies on growth convergence in individual regional groupings (Tsagkanos, et al. 2006). Cappelen, Fagerberg, and Verspagen (2000) found in the case of the EU (European Union) that regional integration and financial support may have succeeded in improving the EU's regional policy of generating growth in poorer regions and contributing to greater equality in productivity and income in Europe. The effect of European integration on long-term growth of the current EU member states is studied by means of panel data methods. The length of EU membership is found to have a significant positive effect on economic growth, which is relatively higher for poorer countries (Crespo-Cuaresma, Dimitz, and Ritzberger-Grünwald 2002). It has been found that laggards among the EU like Greece, Portugal, and Spain have converged towards more developed EU members due to the integration. That real convergence in the recently acceded EU member states is taking place is a fact confirmed by a recent study conducted by the European Commission (Székely and Watson 2007).

Kaitila (2004) estimates the growth of GDP per labor force in the new EU member states—the eight Central and Eastern European countries—for the period 1993–2002. These countries are shown to have converged conditionally towards the average level of GDP per labor force in the EU-15. Higher investment and lower public consumption have also supported growth in these eight Central and Eastern European countries.

In the Asian context, Jayanthakumaran and Verma (2008) demonstrate that multilateralism and regionalism are complementary and that regional income convergence is likely with a like-minded, committed regionalism that includes cultural and geographical links. They conclude that global (non-discriminatory multilateral) reforms have had a large impact on increasing trade. There is also a two-way causal relationship between the flow from trade to regional income convergence and vice versa.

Berthelon (2004) introduced a new measure of regional integration by interacting country membership to a regional grouping and the partners' share of world GDP, which allows capturing differentiated effects depending on the size of the partners. His results indicated that regional integration positively influenced growth. Martin and Ottaviano (1996) have argued that trade integration leads to a higher growth rate in the integrated area due to the spatial agglomeration of economic activities. The endogenous growth theory recognizes the importance of public policies in the determination of long term growth rates. If public infrastructure is an input in the production function, then an increase in public infrastructure raises the marginal product of private capital, which leads to an increase in capital accumulation and growth (Barro and Sala-i-Martin 1992). In a neoclassical framework, such supply side policy may speed up the convergence process as the marginal product of private capital increases with the provision of public capital.

At this stage the question arises about the mechanisms through which regional economic integration brings about growth convergence among members. These could be explained in terms of the linkages that get forged in a regional grouping among trade in goods, trade in services, investment, technology, human resources, and infrastructure. Just as an elaboration, investment integration facilitates restructuring of an industry across a region on the most efficient basis so as to exploit economies of scale and specialization. These efficiencies lead to generation of income and hence can act as drivers of trade and growth. In addition, trade-investment linkages run in both the directions. While a free trade agreement can spur investment flows in terms of efficiency-seeking regional restructuring, trade-creating joint ventures may impact regional trade flows more meaningfully. Trade-creating joint ventures are in a position to take advantage of regional free trade agreements, as has been observed in various studies, including Kelegama and Mukherji (2006) and RIS (2002). In a dynamic scenario, vertical integration and horizontal specialization in a regional grouping could be encouraged with the help of cross-country investment flows that strengthen trade-investment linkages. This may mean distribution of different stages of production in a particular industry regionally in an integrated manner. This may include focusing on vertical integration and horizontal specialization (Kumar 1998; Das 2004).

In summary, by recognizing the agglomeration, specialization, and scale effects available through a regional grouping, growth can be encouraged which, in turn, could lead to growth convergence within the regional grouping. Potential channels via which this convergence could be attained include strengthening of links between trade in goods and services. In this context, trade-investment linkages also assume importance, which can be further enhanced through cooperation in the areas of technology and human resources along with improvement in regional connectivity (Das 2009).

4. CAPTURING GROWTH DIVERGENCE AND CONVERGENCE IN ASIA: FRAMEWORK AND RESULTS

Regional integration and growth convergence can be linked in a framework that is based on the empirical literature relating to estimation of growth-convergence or divergence (Sala-i-Martin 1996). The β -convergence approach is considered to be a way of estimating the growth of GDP per capita over a certain period of time in relation to its initial level. There are two types of convergence, unconditional and conditional. Unconditional convergence is when all countries converge to the same terminal point (steady-state point). In this type of convergence it is assumed that countries do not differ significantly structurally. However, this assumption, that countries with different economic structures converge on the same terminal point, is a very strong one. As an alternative, conditional convergence assumes convergence on different steady-state points (Baumol 1986). In the case of conditional convergence, both the coefficient β and the structural variables which influence the level of growth of real GDP per capita are introduced into the model.

This paper tests the conditional β -convergence hypothesis using a panel data of countries belonging to different regions including ASEAN, EU-15, Mercosur, NAFTA, and the South African Development Community (SADC) for the period 1991–2006.

The equation used is below, and is followed by explanation of the augmented model used.

$$(\log Y_{Tt,I} - \log Y_{0t,I})/nt = \alpha + \beta_1 \text{Log}(Y_{0t,i}) + \beta_2 (GC) + \beta_3(OP) + \beta_4(FDI) + \beta_5(INF) + \beta_6(EXP) + \epsilon_{t,I} \quad (i)$$

$Y_{Tt,I}$ refers to the real GDP per capita in the last year of period t ($t = 1, 2, 3, 4\dots$). In the corresponding sub-periods for country I , $Y_{0t,I}$ is the value of real GDP per capita in the initial year of period t , nt is the number of years in the period, and T the last year in period t .

If the regression coefficient β is negative it indicates real GDP per capita of countries with lower initial real GDP per capita grow more rapidly than the countries with higher initial real GDP per capita. This would imply convergence after t time periods. However, a positive number would indicate countries are not experiencing growth convergence over time.

The conditional β -convergence is estimated by augmenting the model with additional variables. These are government consumption (GC) as a percentage of GDP, trade openness of the economy (OP), as imports as percentage of GDP (only import liberalization is included due to ambiguity in the concept of export openness), the FDI as percentage of GDP (FDI), and percentage of annual inflation (INF) as a deflator of GDP. These variables have been chosen on the basis of inferences drawn from various economic growth theories.

Government consumption is expected to have a negative relationship with growth rate of per capita GDP. Intuitively, although in the short run government spending may prove to be beneficial for growth, in the long run it may hamper growth with the rise in debt as a result of excessive government spending. Inflation also has a negative impact on growth in the long run. However, a minimum level of inflation is necessary to provide incentives to producers. On the contrary, openness of the economy, as measured by imports as percentage of GDP¹ and greater foreign direct investment give an impetus to economic growth and thus should have a positive relationship with growth of per capita GDP.

This helps to identify the extent to which different regional blocs have been successful in achieving growth convergence/divergence in their respective integrated regions. EXP is taken as a proxy for the depth of regional trade integration measured by intra-regional trade as a percentage of each regional grouping's total world trade.

¹ Ideally, export to GDP ratio need not be included as a trade openness policy variable since export openness at the policy level is influenced by import openness of the destination country.

Given the fact that all the regional groupings under consideration witnessed either formation of trade integration or deepening of trade integration during the 1990s, whether through formal arrangements or through market forces, we undertook the estimation by pooling the time series data of chosen variables with a cross section of each country from within a particular regional grouping. This posed the methodological problem of handling the stationarity issues in the pooled dataset. Thus we took recourse to the advancement in the literature in terms of treatment of the time series nature of data in a pooled framework, explained below.

In this regard, techniques relating to testing for unit roots in panel data were applied in their most sophisticated forms to make our estimates pertaining to the implications of regional integration for growth convergence/divergence more robust and reliable. The rationale for such an exercise and its methodology are presented briefly below.

The primary motivation behind the application of panel data unit root tests, as opposed to standard univariate unit root tests, is to exploit the extra information provided by pooled cross section time series data in order to get more powerful procedures. It has been noticed that the unit root test for a single time series, such as the Augmented Dickey-Fuller test has low power in the sense that it often the tendency to reject the stationarity hypothesis of a time series too frequently. During the last decade several such methods were developed, including Hadri's (2004), which is the panel data unit root test performed in this paper.

Data was obtained from the World Development Indicators (World Bank 2008). The results are presented in Table 6, where the statistically significant variables that correlate with economic convergence of the member countries include initial real GDP per capita, trade openness, government consumption, inflation, FDI, and intra-regional exports for ASEAN, the EU, and NAFTA. Significant results that correlate with economic convergence of the member countries include FDI for the EAS, Mercosur, and the SADC and intra-regional exports for the EAS and SADC. Government consumption and inflation correlate with economic convergence but are not statistically significant for the EAS, Mercosur, and the SADC. Overall there is evidence of growth divergence in the EAS and SADC, although it is statistically insignificant.

The coefficient OP with respect to the world (import-to-GDP ratio) turns positive for all groups in consonance with economic intuition. The variable of intra-regional exports as a percentage of total exports to world (as a measure of regional trade integration, or EXP) has a positive and significant coefficient for the more integrated groupings of states like ASEAN, the EU, and NAFTA. However, EXP is negative for relatively recent, lesser, and informally integrated groupings like the EAS and SADC.

For the two variables OP and EXP a redundant variable test was conducted to determine whether they were important in influencing the GDP growth rate. The results appear to indicate both trade openness and regional trade integration have been important factors in influencing growth rates in the regional groupings.

The positive and statistically significant variables like initial real per capita GDP, import openness, and FDI inflows do suggest that a higher level of income coupled with policies which favor import openness and FDI inflows can promote economic growth. The negative convergence of FDI in the cases of the EAS, Mercosur, and SADC do not pose any problem of interpretation as it is quite consistent with the existing literature on the subject, according to which the link between FDI and growth is not clear (Kumar 1991; Marksun and Venables 1997; Agosin and Mayer 2000).

The statistically significant negative correlation between economic growth and both government consumption and inflation imply that in the policy making domain, the government role as facilitator needs to be recognized and inflation needs to be checked within reasonable limits to achieve economic growth.

It can be broadly concluded that regional integration leads to growth convergence and both openness to global trade and regional openness captured by intra-regional exports are important to achieve this convergence. A policy inference that can be drawn from these results is that at the global level economic cooperation for economic growth convergence needs to be flagged and appropriate institutional mechanisms created to intensify the processes of trade and FDI integration. The possible explanations for growth divergence in the case of the SADC could be a lack of proper implementation of their agreements and in the case of the EAS it could be a lack of formal agreements for regional integration.

Table 6: Panel Data Regression Results for Conditional Convergence for Different Regional Economic Groupings (Random Effects)

Variable	EU-15	NAFTA	Mercosur	ASEAN	EAS	SADC
Initial Real GDP Per Capita	-3.03 (-6.99)*	-4.71 (-5.31)*	-0.71 (-1.77)	-6.47 (-3.54)*	0.95 (0.01)	1.03 (1.00)
FDI	0.05 (4.16)*	0.99 (4.33)*	-0.01 (-3.31)*	0.31 (7.04)*	-0.32 (-4.22)*	-1.01 (-3.98)*
Government Consumption	0.01 (3.47)*	0.11 (3.97)*	0.01 (1.23)	0.02 (5.00)*	2.11 (1.07)	1.12 (0.07)
Trade Openness	1.10 (5.20)*	0.69 (7.08)*	0.01 (0.08)	1.33 (4.41)*	1.05 (1.33)	0.02 (3.72)*
Inflation	-0.05 (-3.61)*	-0.01 (-3.92)*	-0.07 (-0.92)	-1.27 (-4.76)*	-0.55 (-1.36)	-1.01 (-1.04)
Regional Trade Integration: Intra-regional Exports (% of Total Exports to World)	1.73 (6.30)*	0.52 (3.92)*	0.11 (1.02)	0.35 (2.09)	-1.66 (-5.02)*	-0.31 (-3.17)*
Adjusted R ²	0.69	0.54	0.60	0.63	0.70	0.44
Number of Observations	234	42	58	154	250	426

ASEAN = Association of Southeast Asian Nations, EAS = East Asia Summit, EU = European Union, FDI = foreign direct investment, GDP = gross domestic product, Mercosur = Mercado Comun del Cono Sur, NAFTA = North American Free Trade Agreement, SADC = South African Development Community.

Note: * significant at 99% level.

Source: Author's calculations.

The explanatory power of the independent variables included is also very high for almost all the regressions. The Durbin Watson statistic showed there is no problem of autocorrelation. The Wald test showed all coefficients of the additional variables in the model are jointly significant in explaining convergence within the regional trading blocs.

The test of stationarity (Hadri Test) helps us to conclude that the broad results of our paper need to be interpreted with caution due to the presence of some non-stationarity, although the problem is not uniform across variables, across tests, or across regional groupings.

The previous discussion of Beta-convergence highlights the importance of regional cooperation in EAS countries to address growth asymmetries. Against this background, some important rationales for cooperation among the EAS countries are presented below, both for among developing countries and for between developed and developing countries,.

5. CHANNELS OF CONVERGENCE: IMPORTANCE OF REGIONAL ECONOMIC INTEGRATION IN THE ASIAN REGION

There are various dimensions that need to be understood clearly to put forth a strong rationale for development cooperation and regional economic integration in the Asian region. This section considers possible channels that could bring about convergence in development profiles of the countries in Asia. For additional discussion on this topic of means of bringing about convergence of economic differences in Asia, please see Das (2006).

Firstly, regional cooperation versus multilateralism has been a much-debated aspect in the present era of economic policy making. It has been contended that while absolute protectionism is reduced as a result of economic integration, relative protectionism against the rest of the world increases, thus the processes of regionalism and multilateralism should not be considered complementary (Elena Jose Antonio, and Jose 1999). In our view, this requires a different explanation. As absolute protectionism is reduced in a regional framework, *ceteris paribus* the overall protectionism in the entire world (including the region under consideration) would be reduced. Therefore, reduction in protection in a particular region would contribute to globalization and multilateral liberalization. To argue about the effects of regional liberalization on multilateral liberalization by excluding the region and comparing it with the rest of the world could be misleading.

Hence it is untrue that regional economic integration is not complementary to globalization. This realization provides a basis for strengthening development cooperation in Asia.

Second, a better understanding of concepts like trade creation and diversion also provide a rationale for regional trade cooperation in Asia. One of the arguments against regional groupings has been that regional trade cooperation may not necessarily bring about welfare gains, especially in the short run, due to their trade diverting effects. Trade diversion occurs when participating countries in a regional grouping are not low cost producers. In this sense, the grouping may be an efficiency-reducing arrangement. Due to regional trade liberalization the member countries acquire an advantage over the extra-regional countries in terms of lower product prices. A member country thus switches its imports from the more efficient rest of the world producers to less efficient and higher cost co-member countries. This results in resource misallocation and amounts to trade diversion.

However, it is often left out of the analytical debate on the subject that trade diversion in some products could lead to trade creation in other products over time. For example, if an intermediate product is cheaper in a member country and it is imported by a partner member country on preferential terms, it becomes even cheaper in the importing country, making the final product highly competitive in the country where the product is ultimately sold. The possibilities of trade creation in the final product increase, generating a forward linkage effect. Similarly, there could also be a backward linkage effect in the country producing the intermediate product. Thus, through these backward and forward linkage effects, trade diversion could lead to trade creation (Das 2006). This could be an important channel through which development convergence could be brought about.

Third, if properly formulated and implemented, rules of origin also provide a rationale for regional trade cooperation in Asia. Whether or not a product has originated in a particular country is decided if the product has undergone substantial transformation. It is rather well known that there are three prime ways of determining this. The three modalities of determining origin of a product aim at substantial transformation in inputs. They together facilitate value-addition in the country of manufacturing and play a developmental role. Such requirements, checking the import content of value addition, have the potential for generating backward and forward linkages in a country adhering to the rules. Thus, a

member country is prevented from becoming a mere trading country as these requirements act as a deterrent to assembly production activities. This is yet another channel through which convergence could be envisaged.

Fourth, placing regional development and trade cooperation in a dynamic setting as opposed to a static framework also builds a case in its favor. In the literature on regional trading arrangements, the effects of removal of trade barriers in terms of export growth are analyzed in the context of static and dynamic gains. For instance, reduction in tariffs means greater market access to member countries, which manifests itself in export growth in a static setting. The scenario of a dynamic framework is different because, due to economies of scale which arise through enhanced market access, ultimately manufacturing gains cost reductions and improved product competitiveness. Short term static trade diversion effects, if present, are likely to be outweighed by the long term positive dynamic effects of regional integration in terms of increased competition, economies of scale, and benefits from intra-industry trade. The positive influence of regional associations on trade becomes even more pronounced if trade-investment linkages are also brought into the analysis (Das 2009). Thus considering a dynamic model of manufacturing gains from increased regionalism provides another avenue through which development and growth convergence could be sought.

Fifth, the relevance of cooperation among developing countries also arises from the replicability of the development experiences of one country in other co-developing countries. Cooperation among developing countries is part of a solidarity building partnership for development rather than development assistance or aid. In the process of development, developing countries accumulate valuable lessons, skills, and expertise that can be valuable for other developing countries. These skills and capabilities, including technologies, are often more appropriate than those available from industrialized countries due to the shared developmental challenges similar among developing countries. Kumar (2008a) offers a discussion of how skills and technologies used in one developing country are also appropriate for other developing countries.

Finally, a rationale for cooperation specific to Asia also needs to be highlighted at this stage. A more important stimulus for regionalism in Asia seems to have come from the emergence of Asia as a source of final demand. India and the PRC with their large populations have become powerful drivers of world economic growth, enabling Japan, the second largest economy in the world, to recover from a decade-long recession. Asia is quickly becoming the center of gravity of the world economy and India and the PRC are projected to become the two largest economies in the world. For many products, from jet planes to motor cars to mobile telephones, the biggest markets are in Asia. More than 55% of Asia's trade is now intraregional, thus making regional economic integration an increasingly viable trade strategy (Kumar 2007). Furthermore, regional economic integration could also help Asia exploit the profound synergies that have developed between the economic structures of Asian economies. For instance, the growing scarcity of labor in Japan and the Republic of Korea is complemented by labor abundance in Southeast and South Asian countries. Similarly, some Asian economies are focused predominantly on manufacturing and hardware capabilities while others have complementary capabilities in software and services. Already regional production networks have begun to be developed across Asia to take advantage of these synergies through vertical specialization. Regional economic integration could help in exploiting the potential for such rationalization or restructuring more fully and in expediting its development for the benefit of all. These are also reflected in other studies like Kesavapany (2005) and some of the CGE estimates by Kawai and Wignaraja (2007) and Das, Edisuriya, and Swarup (forthcoming).

The reasons outlined above set the context in which some policy suggestions aiming at narrowing the development gaps in Asia are put forth in the following section.

6. NARROWING DEVELOPMENT GAPS IN ASIA: SOME POLICY SUGGESTIONS TOWARD REGIONAL ECONOMIC INTEGRATION

Regional development cooperation strategy in Asia could well provide an answer to narrowing the development gaps as per the rationale and empirical evidence presented in this paper's preceding sections. However, it has been noticed in various regional integration schemes that when cooperation efforts are spread over a multitude of dimensions and executed in multifarious ways that often dissipate and become less effective. Hence, evolving focused policy-strategy is crucial. This could involve a three pronged strategy as follows:

6.1 Broaden and Deepen Regional Economic Integration in Asia: Trade and Investment Cooperation, Liberalization, and Facilitation

Given the potential of regional economic integration especially in the realms of trade and investment cooperation to help narrow the development gaps and bring about convergence in levels of development, the RIS proposal of an Asian Economic Community bringing together all major sub-regions of the continent following a building bloc approach assumes importance (RIS 2008). These may cover trade and investment liberalization, cooperation and facilitation across sectors as recommended by the Comprehensive Economic Partnership of East Asia Track II Study under the East Asia Summit process.

In this regard, a balanced analysis of trade creation, diversion, rules of origin, and static and dynamic gains becomes a precursor for aiming at development and growth convergence in the region.

6.2 Accord Special and Differential Treatment to Less Developed Nations during Trade Liberalization

The differences in the capacities of partner countries have to be recognized in a regional economic integration scheme bringing together highly advanced economies like Australia, Japan, New Zealand, and the Republic of Korea, developing economies like India, the PRC, Thailand, and the Philippines, and less developed countries like Cambodia, Lao PDR, and Myanmar. Particularly, special and differential treatment is necessary to enable the relatively poorer countries to participate in regional economic integration. Under an FTA, tariff liberalization commitments may have longer transition periods and safeguards for sensitive industries so as to facilitate development convergence in the region. In view of the importance of agriculture as a source of livelihood for the bulk of the population in a number of countries, agriculture liberalization could be put on a different track than that for industrial goods, providing flexibility for populations dependent on agriculture for employment. This will make the programs of regional economic integration more acceptable to the masses in the relatively poorer countries (Kumar 2008b).

6.3 Cooperation in Appropriate Technologies and Human Resources for Bridging Development Gaps

Under an FTA, cooperation in the domains of information and communication technologies to bridge the digital divide could be given greater emphasis in Asia in order to encourage development convergence in addition to trade liberalization. The economic underpinnings of such measures and their potential to increase efficiency and empower people is obvious.

Technological capabilities with the help of capacity building modules and proper diffusion of infrastructure need to be focused on. Cooperation in medicines and public health through joint research and development is yet another area of priority in order to bring about development convergence.

Similarly, sharing of experience for skill development and trade in educational services has rich potential for bridging development gaps in the region. This could cover a whole range of skill formation across sectors.

7. CONCLUSION

This paper has tried to address the issues pertaining to development gaps and growth asymmetries in the Asian region, especially the EAS countries with a view to suggest certain policy mechanisms to help the lesser developed EAS countries to become more capable of taking advantage of market access opportunities in the global market. In so doing, the paper analyzed the nature and extent of development gaps among EAS countries and tried to determine if there is any evidence of growth convergence among EAS countries. It has been found that considerable development gaps exist in the EAS region and that there is some evidence of growth divergence among EAS countries, although this is not statistically significant.

Given these findings and the backdrop of strong logic for cooperation between developing-developing and developed-developing countries in the EAS region, the paper put forth certain policy prescriptions that need to be focused upon, particularly to enable less developed countries in the EAS to take advantage of global market access opportunities and to realize development and growth convergence in the region.

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