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Core IV-B, Fourth Floor, India Habitat Centre, Lodhi Road, New Delhi-110 003, India.  
Ph. 91-11-2468 2177-80, Fax: 91-11-2468 2173-74-75, Email: [publication@ris.org.in](mailto:publication@ris.org.in)  
Website: <http://www.ris.org.in>, <http://www.newasiaforum.org>



## Does Governance Matter for Enhancing Trade? Empirical Evidence from Asia

Prabir De

Discussion Paper # 164



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Core IV-B, Fourth Floor, India Habitat Centre  
Lodhi Road, New Delhi – 110 003 (India)  
Tel: +91-11-2468 2177/2180; Fax: +91-11-2468 2173/74  
Email: [publication@ris.org.in](mailto:publication@ris.org.in)

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# Does Governance Matter for Enhancing Trade?

## Empirical Evidence from Asia\*

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Prabir De\*\*

**Abstract:** The primary objective of this paper is to find whether or not the governance and institutions matter for enhancing Asia's trade. In this study, we have performed a comprehensive empirical analysis of the linkages between governance and trade at the Asian subregional level. Our results indicate that all individual governance indicators except regulatory quality have significant impact on trade in Asia, of which government effectiveness is the most crucial for Asia's trade promotion. One of the conclusions of this paper is that soft infrastructure such as the institutions and governance are important for enhancing Asia's trade. In other words, good governance and institutions help unlock trade potential of a region (or a nation). Improved governance, particularly at the sectoral level, can carry huge payoffs at a time when Asia is planning to pursue a free trade for the entire region. Ignoring "governance weaknesses" can stultify economic returns to free trade. Therefore, more effective policy approaches toward improved governance are needed to complement the regional trade policy in Asia and beyond.

## 1. Introduction

The rise of Asia as a major economic power and growth centre in the world is an unprecedented development in the contemporary world. By any standard, Asia's economic performance has greatly improved; per

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\*\*Fellow, RIS. Email: prabirde@ris.org.in; prabirde@hotmail.com

capita incomes have risen much more rapidly in past few decades as the rate of growth of population has fallen while the rate of increase in output has risen; and the absolute number of people living in poverty, while still large, has decreased dramatically. Asia's participation in the international economy has increased, with greatly reduced barriers to international transactions.<sup>1</sup> The trade and economic integration within the region and the rest of the world has played an important role in its economic success. However, the current financial crisis has severely affected the global trade, including exports from Asia, due to which economic integration has become a major challenge.

Economic integration is successful where "prosperity-neighborhood" sentiment becomes stronger (Lindberg and Schneingold, 1971; Lombaerde and Langenhove, 2007). Its pace escalates when well-planned policies, institutions and governance enforce the regional projects - physical or otherwise - towards building a regional harmony and unity. Regional economic integration reaches a higher level when the higher trade and investment coupled with good governance supports the region's growth and prosperity. The ongoing financial and economic crisis has refocused our attention on the governance aspects of economies, but to which economists have not paid enough attention.

Institutions such as property rights, judicial system, rule of law, and contract enforcement, etc. play an important role in the process of economic growth. It is argued that a favourable institutional environment reduces transaction costs, encourages skill formation and innovation, supports capital formation and capital mobility, and allows risks to be priced and shared, all of which positively influence economic growth. Similarly, good economic governance fosters productivity and growth by ensuring a consistent policy environment. Most of the Asian economies generally rank low in terms of various indicators of the quality of institutions and governance (De, 2010). It is the interaction between institutions and organizations that shapes the institutional evolution of an economy (or a region). An appropriate institutional and policy framework is thus needed for the functioning of an effective governance framework (WBI, 2008)

The primary objective of this paper is to find out whether or not the governance and institutions matter for enhancing Asia's trade. We attempt to answer two important policy questions: first, ways and means through which the countries in Asia can make a positive contribution to improving governance that are responsible for enhancing trade in the region; and second, what role the regional cooperation can play in strengthening governance and institutions in Asia. The rest part of the paper is organised as follows. Section 2 presents a literature review on the role of institutions and governance in growth and development. Section 3 presents the performance of countries in governance in Asia. Section 4 deals with the empirical relationship between trade and governance in Asia. Finally, conclusions and policy implications are briefed in Section 5.

## **2. Institutions and Governance for Development: Literature Review**

Institutions form the incentive structure of a society and the political and economic institutions, in consequence, are the underlying determinants of economic performance. North commented:

“Institutions are the humanly devised constraints that structure human interaction. They are made up of formal constraints (rules, laws, constitutions), informal constraints (norms of behaviour, conventions, and self imposed codes of conduct), and their enforcement characteristics. Together they define the incentive structure of societies and specifically economies. Institutions and the technology employed determine the transaction and transformation costs that add up to the costs of production”. (North, 1993).

Noted in Dixit (2009), good economic governance is needed to secure three essential prerequisites: (i) collective action, (ii) enforcement of contracts, and (iii) security of property rights. It assures that corruption is minimized, the views of minorities are taken into account and that the voices of the most vulnerable in society are heard in decision-making. It is also responsive to the present and future needs of society.

Various studies have demonstrated that institutional quality is crucial for economic and social development.<sup>2</sup> For example, Smith (1776) noted that private contracting (institutional quality) is an important prerequisite for the mutually beneficial exchanges that promote specialization, innovation and growth, which are again the main factors for the gains from trade. Empirical studies revealed that institutional quality is associated with higher economic growth and income levels (Campos and Nugent, 1998; Lee and Kim, 2009),<sup>3</sup> an increase in investment (public and private) (Knack and Keefer, 1995; Alfaro *et al.*, 2005), an improved stock of human capital (Arimah, 2004), better management of (ethnic) conflicts (Easterly, 2001), less income inequality (Chong and Gradstein, 2004), better financial development (Beck *et al.*, 2001), efficient allocation of aid (Epstein and Gang, 2009), sustaining “common resource pools” through human cooperation (Ostrom, 2005), among others.

The quality of institutions and governance is an important determinant of economic growth and income levels, since it affects, for example, the costs of transactions (Aron, 2000; Rodrik *et al.*, 2002). Transaction costs are far higher if economic actors and agents can not fully trust property rights or the rule of law. As a consequence, they typically operate on smaller scale, use inexpensive but less efficient technologies and are thus less competitive. They may even retreat to the black market economy and rely on bribery and corruption to facilitate their operations (Busse *et al.*, 2007). Ultimately, this leads to rise of rent-seeking informal economy. Overall, as indicated in Rodrik *et al.* (2002), the impact of institutional quality on income levels can be explained through three different channels: (i) information asymmetries, as institutions channel information about market conditions, goods and participants; (ii) the reduced risk, as institutions define and enforce property rights; and (iii) the restrictions on the actions of politicians and interest groups, as institutions make them (more) accountable to citizens (WTO, 2004). Yet there might also be a reverse influence from income levels to institutions and governance, since citizens from richer countries are likely to have stronger preferences and choices (as well as the knowledge and the resources) for high quality institutions and good governance.

Exploring comparative advantages in particular goods, using economies of scale in the production or taking advantage of technology spillovers and knowledge information, institutions and governance are likely to boost economic growth rates and thus income levels. Institutions might also have an indirect impact on income levels through trade, as high quality institutions reduce the risk premium required for (international) trade. Conversely, trade might also influence the quality of institutions and the governance therein. From a theoretical perspective, there are two main paths for a positive linkage (Busse *et al.*, 2007). Firstly, economic agents in open economies may learn from the experience in their trading partner's countries by adapting (or imitating) successful institutions and regulations. Secondly, international competition may force countries to improve their institutional and regulatory setting, as domestic producers would go out of business without reforms.

Better regional institutions improve the regional investment climate and increase FDI inflow into each country of the region (Busse *et al.*, 2007). Rent seeking and corruption might be harder in more open economies, as foreign firms increase the number of economic agents involved (Rajan and Zingales, 2003). Anderson and Marcouiller (2002) argued that weak institutions act as significant barriers to trade. Increasing the transparency of the trading environment through greater predictability and simplification can be an important way of reducing trade costs (Helble *et al.*, 2009). De Groot *et al.* (2004) found that both institutional quality and existence of similar institutions in trading partners are positively associated with bilateral trade. Strong institutional coordination coupled with improved infrastructure helps minimise international trade costs (Francois and Manchin, 2007).

Institutional quality can be proxied by good governance in a country (Busse *et al.*, 2007). Bolaky and Freund (2004) demonstrated that regulatory quality influences the interaction between trade and economic growth and that countries with excessive regulations do not benefit from trade. Excessive regulations may encourage a country to produce goods for which the country has no comparative advantage and/or the terms of trade have been unfavourable over recent decades (Rodrik *et al.*, 2002).<sup>4</sup>

Based on economic theory, we could expect beneficial effects from lowering trade barriers for Asian countries, as nations may benefit from the well-known gains from exchange and specialization through trade. However, trade benefits would be suboptimal or unattainable if not supported by adequate infrastructure and proper institutions that practice good governance in Asia and the Pacific (Kohsaka, 2007). Smaller economies in Asia are less likely to achieve welfare gains from trade liberalization in presence of perennial economic asymmetry, where increased market access to smaller economies may produce no good result in short to medium run. Among the various reasons for the disappointing export performance and, in general, economic development of smaller and vulnerable economies, and other developing countries, the quality of institutions has been identified as a major impediment.<sup>5</sup> Therefore, many FTAs (free trade agreements) intend to go beyond the standard features of FTA by enhancing the political dimension, explicitly addressing corruption, promoting participatory approaches, and refocusing development policies on poverty reduction.<sup>6</sup>

What follows is that improved institutions and good governance are positively associated with growth and development, and countries need to improve them for the long-term growth prospects of an economy or a region.

### **3. Measuring Governance in Asia**

Good governance is one of the key pillars of United Nations (UN) poverty reduction strategy. Assisting developing countries in improving governance is a strategic priority of UN in its work to eliminate poverty in Asia and the Pacific (UN, 2009). UN (2009) argued that the attainment of good governance requires a sound infrastructure to support effective implementation.

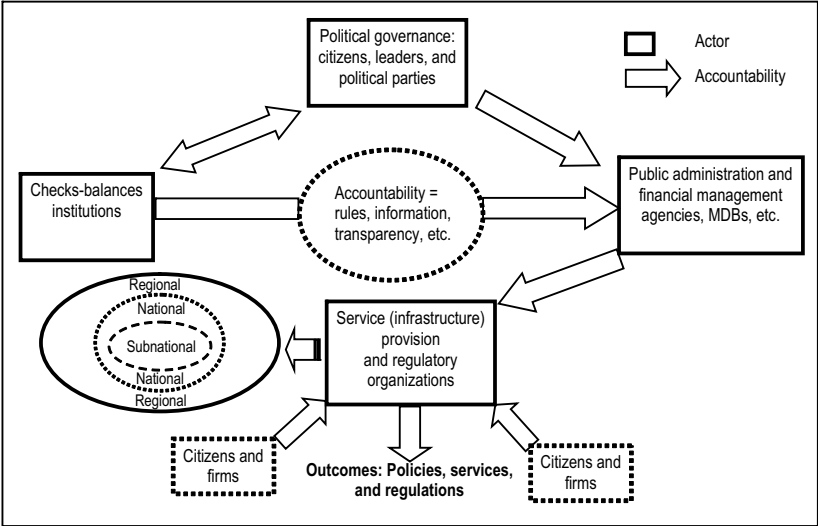
Good governance has eight major characteristics - participatory, consensus oriented, accountable, transparent, responsive, effective and efficient, equitable and inclusive, and follows the rule of law. This infrastructure can be broadly defined as requiring sound financial and legal systems, the systemic protection of rights and supported by strong regulatory bodies to provide oversight and to monitor and enforce these rules.



To monitor governance, Levy (2007) discussed the role of actors and their accountabilities (Figure 1). A regional governance system includes many institutions and actors, including politicians, policy makers, citizens, and other stakeholders. The governance there can be monitored provided

- citizens and firms can use measures of governance to hold governments accountable for their actions on regional infrastructure;
- governments in member countries (and regional organizations, development partners, etc. seeking to provide technical support) can use governance measures to improve the design of regional policy, for example, by providing “actionable” guideposts for operational efforts to improve regional governance; and
- regional organizations, donors, and development partners seek assurance that the resources they provide for regional infrastructure are being well used, and not misappropriated.

**Figure 1: Regional Governance Systems - Actors and Accountabilities**



Source: Adapted from Levy (2007).

As Figure 1 illustrates, transparency, effectiveness of government, rule of law, control of corruption, voice and accountability, political stability and regulatory quality are essential elements of governance system, contributing to the efficacy of both actors and the accountability relationships.

- (i) Accountability: Officials are answerable to the entity from which they derive their authority, that work has been conducted according to agreed rules and standards, and reported fairly and accurately.
- (ii) Participation: Allowing public employees a role in decision making; empowering citizens, and especially the poor, by promoting their rights to access and secure control over basic entitlements that allow them to earn a living.
- (iii) Predictability: Fair and consistent application of laws, regulations and policies.
- (iv) Transparency: Low cost, understandable, and relevant information made available to citizens to promote effective accountability, and clarity about laws, regulations and policies.

Within Asia, there is already strong appreciation of the role of governance as the vehicle towards enhancing productivity. By increasing capital allocation in that should accrue to rightful stakeholders and, in this manner, enhance long-term economic growth prospects (Kohsaka, 2007). Autonomy, transparency, accountability, decision making and decision tools are important in regulation of regional infrastructure and governance (ADB, 1995). Being central in development, monitoring governance would help achieve regional development goals.

Since governance is a multidimensional phenomenon, analysis of governance includes more disaggregated dimensions (Kaufmann, *et al.*, 2008). Given large scale of heterogeneity, improving governance is one of the primary aims of economic and social policies in many Asian countries. World Bank Institute (WBI) provides following set of indicators which can represent governance structure of a country:<sup>7</sup>

- Voice and Accountability (VA) – measuring perceptions of the extent to which a country’s citizens are able to participate in selecting their

government, as well as freedom of expression, freedom of association, and a free media.

- Political Stability and Absence of Violence (PS) – measuring perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism.
- Government Effectiveness (GE) – measuring perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government’s commitment to such policies.
- Regulatory Quality (RQ) – measuring perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.
- Rule of Law (RL) – measuring perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.
- Control of Corruption (CC) – measuring perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as “capture” of the state by elites and private interests.

Governance being a dynamic phenomenon calls for a systematic analysis to capture countries achievement over time. Table 1 presents global ranks of selected Asian countries in above six governance indicators for the years 2007 and 1996. Following observations are worth noting.

First, although New Zealand witnessed sliding of global ranks during 1996 to 2007 in all indicators, it is the only country from Asia that could enter into the top 10 league in all indicators except PS in which it slipped into 11<sup>th</sup> position in the world without any change in rank between the years. Hong Kong and Australia in RQ and Singapore in GE, RQ and CC also entered into the top 10 league from Asia.

**Table 1: Global Ranks of Asian Countries in Governance Indicators**

Subregion	Country	VA		PS		GE		RQ		RL		CC	
		2007	1996	2007	1996	2007	1996	2007	1996	2007	1996	2007	1996
Central Asia	Afghanistan	148	167	171	158	159		169		173	148	172	
	Armenia	117	119	96	68	92	118	67	150	99	98	119	107
	Azerbaijan	146	141	128	118	125	139	121	143	132	132	154	127
	Kazakhstan	140	127	66	103	115	148	115	123	131	122	143	118
	Kyrgyzstan	121	118	144	50	132	109	109	126	158	112	161	115
	Tajikistan	155	162	138	165	149	165	148	164	156	157	137	148
	Turkmenistan	172	164	101	73	162	164	170	166	161	144	164	144
	Uzbekistan	169	154	155	93	131	147	164	157	151	137	147	130
South Asia	Bangladesh	120	92	157	132	135	120	140	110	130	121	157	96
	Bhutan	128	152	48	36	74	56	133	72	57	148	36	
	India	65	72	141	137	73	81	94	100	70	57	91	88
	Maldives	131	140	85	70	85	74	81	72	73		130	
	Nepal	130	83	168	114	136	86	130	132	117	75	118	80
	Pakistan	138	120	172	149	124	110	126	121	138	108	135	128
	Sri Lanka	107	94	163	159	90	105	84	60	71	74	72	77
Southeast Asia	Brunei	142	142	14	9	40	27	36	1	64	45	59	46
	Cambodia	127	131	118	146	138	153	122	92	150	140	160	134

*Table 1 continued*

Table 1 continued

Indonesia	92	143	145	124	100	57	98	66	125	93	125	103
Lao PDR	163	138	95	16	137	69	149	155	143	160	150	123
Malaysia	115	99	76	45	33	32	56	42	54	41	62	37
Myanmar	173	172	150	141	169	157	171	145	164	147	171	140
Philippines	91	70	154	108	75	65	86	54	112	69	133	78
Singapore	108	91	16	13	1	2	4	2	11	14	9	6
Thailand	118	61	142	81	66	44	75	63	76	46	97	82
Vietnam	162	153	69	66	101	83	112	115	103	114	123	102
Northeast	164	161	113	100	67	59	95	83	95	85	117	67
Asia	55	65	19	85	13	26	3	4	20	24	17	20
Japan	39	39	21	34	23	23	32	59	21	19	29	26
Korea, south	51	54	60	76	26	31	42	61	38	42	51	53
Mongolia	74	56	49	48	127	111	103	133	92	67	113	46
Taiwan	48	53	58	26	34	21	40	31	46	31	48	32
Pacific	16	12	30	10	7	22	9	20	12	10	12	14
Fiji	113	95	88	37	110	69	116	119	88	60	100	**
New Zealand	7	1	11	11	10	5	8	3	5	3	5	4
Rank correlation	0.91*	0.80*	0.90*	0.87*	0.89*	0.93*						

\*Significant at 1 percent level. \*\* Data not available.

Source: Calculated based on World Governance Indicators (WGI) 2009 of the World Bank Institute (WBI)

Second, the bottom positions are also occupied by the Asian countries. For example, performance of Central Asian countries in all the six indicators is unusually poor. None from Central Asia has witnessed even a median achievement except Kazakhstan in PS (2007) and Armenia in RQ (2007). The same repeats in case of Bangladesh, Nepal and Pakistan from South Asia. Performance of South Asian countries is below the mean level. Although countries from Northeast Asia dominate governance ranks in Asia, their performances vary between top to middle level. Except Pacific, rest subregions of Asia show mixed results of achievements in governance. High and significant rank correlations suggest there has not been much change in Asian countries global ranks in governance. Improvement in performance is visible most in case of smaller countries such as New Zealand or Singapore. While New Zealand's performance is consistent across the indicators, there is wide variation in case of other smaller countries such as Singapore. In GE, Singapore is the top ranked country in the world, whereas it occupied 108<sup>th</sup> position (out of 176 countries) in VA. Overall consistency is important for infusing improved governance environment in a country and for trade it involves.

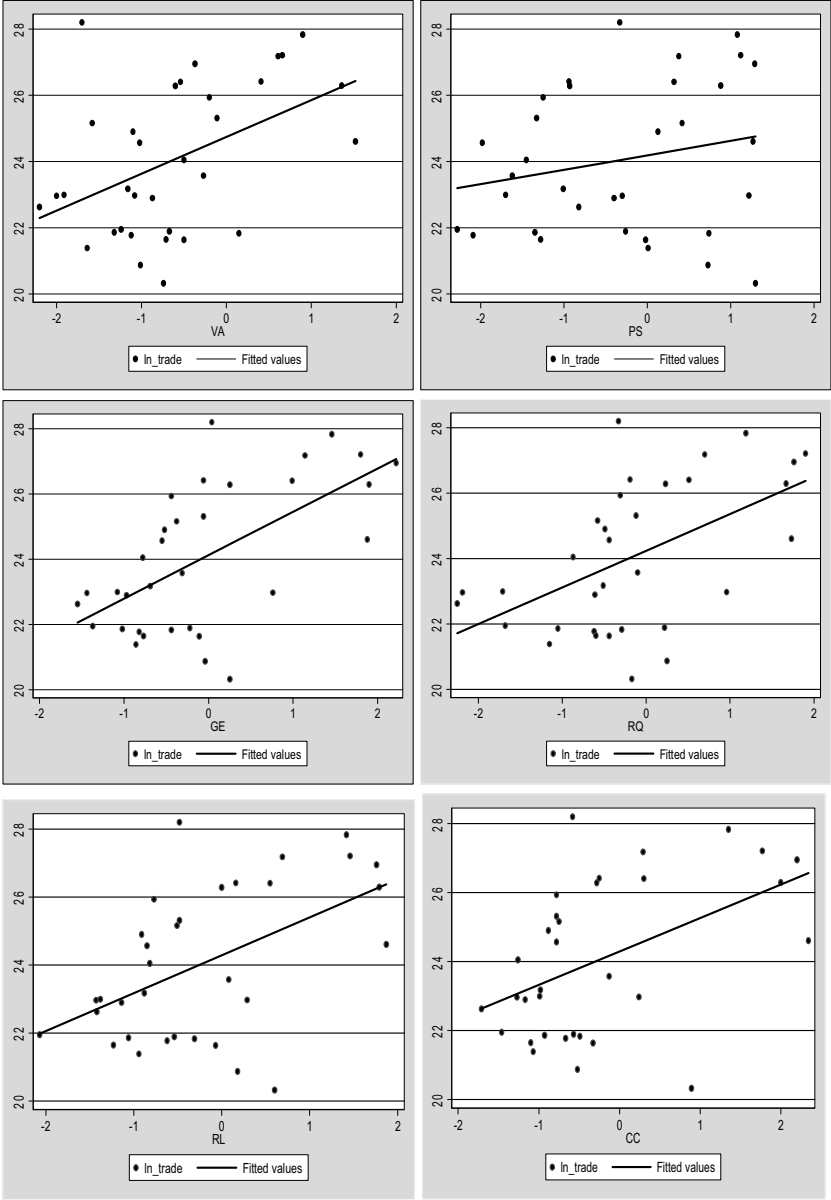
Third, given that governance indicators are perception-based indicators, it is not surprising that all six indicators are closely associated with (the log) of trade (Figure 2).<sup>8</sup> Scatter diagrams drawn for 2007 in Figure 2 indicate positive association between governance and trade. Therefore, countries with higher governance show positive association with trade.<sup>9</sup>

Do countries with higher income and improved governance also witness higher trade? To test this hypothesis, we look at the relationship between trade and governance with the same set of countries next.

#### **4. Impact of Governance on Trade in Asian Subregion**

A region like Asia which is vast and heterogeneous, impact of governance on trade might vary across subregions. In order to find the empirical

**Figure 2: Scatter of Trade and Governance Indicators in Asia: 2007**



relationship between governance and trade across Asian subregions, we use following equation:

$$Trade_{it} = \alpha_0 + \beta_1 Gov_{it} + \beta_2 TI_{it} + \beta_3 X'_{it} + \beta_4 Subregion_{jt} + \varepsilon_i \quad (1)$$

where  $i$  represents a country,  $j$  is a subregion,  $t$  is time and  $\varepsilon_i$  is the error term. The dependent variable is *Trade*, whereas independent variables are *TI* (trade infrastructure), *Gov* presents governance indicators of country  $i$  for year  $t$ ,  $X$  is a vector of additional regressors, *Subregion* is a dummy variable, representing four subregions of Asia (following the specification of Table 1). Additional regressors ( $X$ ) include some control variables to represent internal and external demand for trade such as per capita income, population, FDI, among others.

*TI* is the trade infrastructure index, constituted over national and regional infrastructure indicators, which represents a country's trade infrastructure stock in a particular year. A part of national infrastructure also constitutes regional infrastructure. Ultimately, these indicators individually and/or jointly represent a region's physical infrastructure. It can be assumed that higher the national infrastructure implies higher regional infrastructure. Specifically, *TI* is an index over six key physical infrastructure indicators, namely, (i) roadways, (ii) railways, (iii) airports, (iv) seaports, (v) telecommunications, and (vi) electricity, for the years 1996 and 2006.<sup>10</sup> With the help of the principal component analysis (PCA), *TI* has been constructed, which is a linear combination of the unit free/scale free values of the individual facilities.<sup>11</sup>

We introduce an interactive term between *governance* and *subregion* to understand the variability of subregional governance and its impact on trade in particular. We then rewrite equation (1) as follows:

$$Trade_{it} = \alpha_0 + \beta_1 Gov_{it} + \beta_2 TI_{it} + \beta_3 X'_{it} + \beta_4 Subregion_{jt} + \beta_5 (Gov_{it} * Subregion_{jt}) + \varepsilon_i \quad (2)$$

We include a sample of 30 Asian countries for which we have data



for the dependent and independent variables. Baseline regression results are presented in Table 2. The usual caveat is that there is no accepted definition of subregional or regional governance and it is a very difficult concept to measure. It can be measured partially by the effectiveness of subregional institutions implementing subregional programmes, such as SAARC, GMS, ASEAN, and CAREC. However, the governance of individual member of the program affect overall subregional governance. Following observations are worth noting.

First, the coefficients of national governance of all the six indicators have positive sign but their significance level varies. For example, estimated coefficients of national RQ is not significant (thereby meaning no association with trade in Asia), whereas remaining others are significant at 5-10 per cent level.

**Table 2: OLS (Cross-section Pooled) Regression Results**

<b>(a) Voice and Accountability (VA)</b>		
	<b>National</b>	<b>Regional</b>
TI	0.0116** (2.626)	0.0117*** (3.640)
LnPCI	2.604*** (6.512)	2.882*** (8.113)
LnPop	0.537*** (3.544)	0.776*** (3.771)
FDI	0.0212 (0.684)	0.1101* (1.257)
VA (National)	1.001** (2.079)	
VA (Regional), of which		
Central Asia		-0.0446 (-0.0621)
South Asia		-0.5517 (-0.548)

*Table 2 continued*

Southeast Asia		1.372* (1.678)
Northeast Asia		1.856* (2.006)
Mean VIF <sup>S</sup>	1.54	1.61
IM-test $\chi^2$ (p-value)#	18.74 (0.539)	30.00 (0.414)
Adjusted R <sup>2</sup>	0.837	0.801
Observations	60	60

**(b) Political Stability (PS)**

	<b>National</b>	<b>Regional</b>
TI	0.009* (1.968)	0.0113** (2.606)
LnPCI	3.010*** (9.037)	3.008*** (8.433)
LnPop	0.615*** (3.128)	0.605*** (4.267)
FDI	0.0149 (0.427)	0.039 (0.678)
PS (National)	0.0181** (2.038)	
PS (Regional), of which		
Central Asia		-0.989* (-1.528)
South Asia		-0.558* (-1.253)
Southeast Asia		0.599 (0.805)
Northeast Asia		3.344** (2.327)
Mean VIF <sup>S</sup>	1.80	1.56

*Table 2 continued*

Table 2 continued

IM-test, $\chi^2$ (p-value)#	18.05 (0.584)	30.00 (0.414)
Adjusted R <sup>2</sup>	0.854	0.869
Observations	60	60
<b>(c) Government Effectiveness (GE)</b>		
	<b>National</b>	<b>Regional</b>
TI	0.034 (1.477)	0.025* (2.298)
LnPCI	1.829** (2.356)	2.802** (4.421)
LnPop	0.454** (2.523)	0.467*** (3.023)
FDI	0.0070 (0.18)	0.284 (0.73)
GE (National)	2.129** (2.565)	
GE (Regional), of which		
Central Asia		-0.675 (-0.77)
South Asia		-2.159* (-1.69)
Southeast Asia		0.319 (0.279)
Northeast Asia		3.185** (2.16)
Mean VIF <sup>s</sup>	3.72	2.43
IM-test, $\chi^2$ (p-value)#	22.51 (0.314)	30.00 (0.414)
Adjusted R <sup>2</sup>	0.854	0.867
Observations	60	60

Table 2 continued

Table 2 continued

<b>(d) Regulatory Quality (RQ)</b>		
	<b>National</b>	<b>Regional</b>
TI	0.007* (2.029)	0.016*** (2.911)
LnPCI	2.672*** (4.636)	2.699*** (4.891)
LnPop	0.615*** (3.324)	0.516*** (3.729)
FDI	0.0027 (0.6081)	0.0082 (0.1501)
RQ (National)	0.521 (0.609)	
RQ (Regional), of which		
Central Asia		-0.819 (-1.407)
South Asia		-3.108* (-1.543)
Southeast Asia		-0.836 (-0.491)
Northeast Asia		3.673* (2.315)
Mean VIF <sup>s</sup>	2.44	2.50
IM-test, ch <sup>2</sup> (p-value)#	19.36 (0.499)	30.00 (0.414)
Adjusted R <sup>2</sup>	0.810	0.819
Observations	60	60
<b>(e) Rule of Law (RL)</b>		
	<b>National</b>	<b>Regional</b>
TI	0.014** (2.091)	0.027* (1.925)
LnPCI	2.204*** (4.43)	2.416*** (4.966)

Table 2 continued

Table 2 continued

LnPop	0.573*** (3.376)	0.547*** (3.489)
FDI	0.0202 (0.540)	0.0491* (1.418)
RL (National)	1.127** (2.354)	
RL (Regional), of which		
Central Asia		0.256 (0.471)
South Asia		-0.119 (-0.140)
Southeast Asia		1.782** (2.805)
Northeast Asia		3.771*** (3.205)
Mean VIF <sup>s</sup>	2.15	1.83
IM-test, ch <sup>2</sup> (p-value)#	21.43 (0.372)	30.00 (0.414)
Adjusted R <sup>2</sup>	0.856	0.867
Observations	60	60

**(f) Control of Corruption (CC)**

	<b>National</b>	<b>Regional</b>
TI	0.0082** (2.632)	0.0056* (1.489)
LnPCI	2.037*** (3.869)	2.410*** (5.531)
LnPop	0.625*** (3.731)	0.569*** (3.499)
PPI	0.019 (0.549)	0.0479 (1.311)
CC (National)	1.872** (2.876)	

Table 2 continued

Table 2 continued

CC (Regional), of which		
Central Asia		0.683 (0.805)
South Asia		0.208 (0.287)
Southeast Asia		1.954*** (3.36)
Northeast Asia		3.343*** (3.634)
Mean VIF <sup>s</sup>	2.08	1.77
IM-test, ch <sup>2</sup> (p-value)#	24.27 (0.201)	30.00 (0.414)
Adjusted R <sup>2</sup>	0.876	0.886
Observations	60	60
<b>(g) Composite Governance (CG)</b>		
	<b>National</b>	<b>Regional</b>
TI	0.016** (2.132)	0.019* (2.431)
LnPCI	2.223*** (3.855)	2.618*** (4.714)
LnPop	0.611** (3.637)	0.642** (4.134)
FDI	0.014 (0.312)	0.067 (1.610)
Governance (National)	0.256* (1.923)	
Governance (Regional), of which		
Central Asia		-0.047 (-0.381)
South Asia		-0.110 (-0.501)

Table 2 continued

Table 2 continued

Southeast Asia		0.330*
		(1.414)
Northeast Asia		0.745**
		(2.784)
Mean VIF	2.67	2.29
IM-test, $\chi^2$ (p-value)#	21.24	30.00
	(0.383)	(0.414)
Adjusted R <sup>2</sup>	0.865	0.889
Observations	60	60

*Notes:* #Cameron & Trivedi's decomposition of IM-test (checking homoscedasticity). \$ VIF (variance inflation factors) to check multicollinearity. \*\*\*, \*\*, \* significant at 1%, 5%, and 10% level. t-values are in parenthesis.

Second, size of significant national governance impact on trade is highest in case of GE (2.129) and lowest in case of VA (1.001), thus meaning 1 point improvement in government effectiveness would lead to about 2 points rise in trade in Asia, other things being equal.

Third, when we consider subregional governance, Northeast Asia has come out with significant and robust coefficients in all six indicators. Southeast Asia has also followed the same direction except the case of government effectiveness (correct sign but statistically insignificant) and regulatory quality (negative sign but statistically insignificant). Estimated coefficients suggest that trade at the subregional level has also been benefited from the improvement in subregional governance in Northeast Asia. On the other hand, Southeast Asia's trade has benefited from most indicators of the quality of governance except for regulatory quality and government effectiveness which may require enhancement.

Fourth, estimated coefficients of regional governance of Central Asia and South Asia corroborate why they yet to witness higher regional trade, compared to other subregions in Asia. Most of the estimated coefficients of regional governance indicators show wrong negative sign (except control of corruption), thus suggest these two subregions did not witness any positive impact of their quality of governance. This may indicate that these subregions

did not witness adequate improvement in national as well as subregional governance in order to enhance trade. Indirectly, this calls for improvement in governance for Central and South Asian countries.

Fifth, trade infrastructure (TI) has come out as significant and positive (except national GE) thereby showing infrastructure has positive association with trade, and improvement of trade infrastructure would lead to increase trade in Asia, other things being equal.

Sixth, the estimated models explain 80–89 per cent of variations in observation. The robust estimation is also supported by the Cameron and Trivedi's decomposition of IM-test in all the cases which suggest no presence of heteroscedasticity in residuals (always reject null hypothesis). Next, low VIF (variance inflation factors) scores suggest our models do not suffer from multicollinearity (mean VIF always less than 10). Linearity of model, normality of residuals and model specification suggest the baseline OLS models sufficiently explain the impact of national and regional level governance on trade in Asia. More importantly, we find that the coefficient of the regional governance for Northeast Asia is positive and significant.

Seventh, estimated coefficients of control variables such as per capita income, TI, population and FDI show mixed results. Per capita income, population and TI are significant and positively associated with trade. Countries with higher income and population, improved infrastructure, and practicing good governance would help facilitate trade – national or otherwise.

To conclude, trade in Asia is very much contingent upon governance and institutional quality. Barring regulatory quality, rest governance indicators strongly influence the trade in Asia. At the same time, the impact of quality of governance on trade varies over subregions. Our estimation indicates those countries which have successfully improved governance and institutions over time have witnessed higher trade, *ceteris paribus*. Northeast Asia is a case in point.



## **5. Conclusions, Policy Implications, and Limitations of the Study**

In this study, we have performed an empirical analysis of the linkages between governance and trade. Our results indicate that the governance is crucial for trade, and all the Asian countries are able to benefit from improved governance and institutions. All individual governance indicators except for regulatory quality have significant impact on trade in Asia, of which government effectiveness is the most important. In other words, good governance and institutions help unlock trade potential of a region (or a nation). Therefore, more effective policy approaches toward improved governance is needed to complement the regional trade policy in Asia and also in the rest part of the world.

As observed in this study, the level of governance varies widely among countries and impact of regional governance varies over major subregions of Asia. Southeast and Northeast Asia are two subregions where trade has been influenced by improved governance and infrastructure. With respect to subregional governance, Northeast Asia shows strong relationship with all six indicators. Southeast Asia has similar relationship except for government effectiveness and regulatory quality. This also indicates that the subregional trade has been benefited from subregional governance in Northeast Asia, whereas Southeast Asia needs to improve regulatory quality and government effectiveness to have any positive impact on trade. In case of Central and South Asia, regional governance does not show significant relation with trade with expected positive sign. This may indicate improvement in governance is not significant enough over time to impact subregional trade. Therefore, it can be concluded that the soft infrastructure such as the institutions and governance are crucial determinants for enhancing trade in Asia.

The results also show that improved national governance is crucial for enhancing regional governance for trade promotion. The quality of governance includes regulatory, and procedural effectiveness; technical standards; and appropriate policy and measures to address environmental, and other socio-economic issues. Improved capacity of national and regional institutions will help reduce risks and trade costs. Improved national and regional governance is also crucial to attract FDI.

Regional organizations, donors, and development partners can use governance measures for cross-country comparisons and monitor the trends across countries. However, regional governance cannot be monitored without greater involvement of member countries and their people. The most challenging task therefore is to make countries aware of the benefits of improved governance. Here comes the scope of regional cooperation and appropriate capacity building, which can make countries adaptable to change in governance for regional trade and infrastructure.

Poor governance makes countries isolated from best practice global markets. Countries face significant constraints in improving governance, and at the same time, improvement of governance requires lead time and structural adjustments. Regional cooperation has an important catalytic role to play in improving governance in countries. By sharing each others experiences, regional cooperation can make the countries efficient to integrate them to regional and international governance.

Finally, improved governance, particularly at the sectoral level, can carry huge payoffs in Asia at a time when the region is planning to pursue a free trade for the entire region. Ignoring “governance weaknesses” can stultify economic returns to FTA. Therefore, we need complementary policy initiatives by countries, regional organisations, and multilateral development organisations in order to strengthen governance in Asia and beyond.

The present paper is not beyond limitations. One, statutory robustness checks are needed for baseline equations we had in this paper. Two, future studies should be undertaken in order to understand the relationship between governance indicators and trade at much disaggregated level. Three, an analysis on causality between governance and trade is also worth trying. Four, efforts should also be made for collecting representative governance indicators, which contain better information. Five, the analysis may be verified with new governance indicators of alternate sources. Six, new studies, could be useful if it can provide policy directions on the ways and means through which the countries in Asia can make a positive

contribution to improving governance that go building regional trade. Seven, a more sophisticated dynamic analysis may be tried to verify the findings of the paper. Eight, a capacity building and training tool on impact of regional governance on trade for easy understanding of the policy makers may worth considering. Nine, since there may be a lag between governance and trade, future study may consider lagged values of independent variables or using autoregressive distributed lags (ARDL) model in a panel data to better capture the direction of association. Sector-specific analysis, particularly for high export goods, would be useful in order to derive better policy formulation. Finally, the relationship between governance and trade cannot be interpreted as causal or accurate as we cannot rule out the possibility of endogeneity in our baseline equations. Therefore, the endogeneity problem has to be addressed in future study.

## Endnotes

- <sup>1</sup> The fall in transportation costs over last few decades has been supporting the globalization and regional integration at different parts of the world.
- <sup>2</sup> See, for example, Ostrom (2005).
- <sup>3</sup> Particularly, quality of institutions and correct policies matter long-run economic growth (Knack and Keefer, 1995; Lee and Kim, 2009).
- <sup>4</sup> Trade is only beneficial if the involved adjustment costs are relatively low, that is, the reallocation of labour and capital from the import-competing sector to the export sector can be achieved at minimal costs. However, if the structure of the economy is relatively rigid, production factors cannot move to the sectors where large welfare gains can be achieved. The economy may end up in a situation where trade does not have a beneficial impact on the allocation of resources within and between sectors.
- <sup>5</sup> See, for example, Jutting (2003), Levine (2005), among others.
- <sup>6</sup> Refer, for example, Cotonou Agreement between ACP countries and EU.
- <sup>7</sup> However, there are many varieties of governance indicators such as those compiled by World Bank's CPIA, among others. For methodology of these indicators, please refer Kaufmann, Kraay and Mastruzzi (2008).
- <sup>8</sup> Trade is defined as export and import of merchandise. The correlations are in the range from 0.22 to 0.61, indicating a close linkage with trade (Appendix 1)
- <sup>9</sup> The usual caveat is that this association does not talk about the direction of causality between trade and governance.
- <sup>10</sup> This index has been taken from De (2010), which may be referred for further details.
- <sup>11</sup> Specifically,  $T_{ij} = \sum W_{kj} X_{kij}$ , where  $T_{ij}$  is trade infrastructure index of the  $i$ -th country in  $j$ -th time,  $W_{kj}$  is weight of the  $k$ -th facility in  $j$ -th time, and  $X_{kij}$  is unit free and scale free value of the  $k$ -th facility for the  $i$ -th country in  $j$ -th time point. It helps us to derive the index (score) after adding the multiplied values corresponding to each category. As discussed, the weights ( $W_{kj}$ ) in this equation have been derived from the PCA. Refer, De (2010) for PCA weights and data sources.

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**Appendix 1**  
**Correlation Matrix (2007)**

	<b>Trade*</b>	<b>VA</b>	<b>PS</b>	<b>GE</b>	<b>RQ</b>	<b>RL</b>	<b>CC</b>
Trade*	1						
VA	0.4594	1					
PS	0.2154	0.4136	1				
GE	0.6083	0.7573	0.7174	1			
RQ	0.5302	0.7911	0.658	0.9561	1		
RL	0.5074	0.7787	0.7392	0.9646	0.9252	1	
CC	0.4689	0.7491	0.7109	0.9527	0.8986	0.9633	1

\*Taken in log scale

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