



**Asia-Pacific Research and Training Network on Trade
Working Paper Series, No 7. , April 2006**

Why Trade Costs Matter?

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Executive Summary

Trade costs are often cited as an important determinant of the volume of trade. A growing literature has documented the negative impact of trade costs on the volume of trade. Most of these studies show that integration is the resultant of reduced costs of transportation in particular and other infrastructure services in general. Direct evidence on border costs shows that tariff barriers are now low in most countries across the world. Poor institutions and poor infrastructure penalize trade, differentially across countries. Therefore, today's trade strategy goes beyond the traditional mechanisms of tariffs and quotas and includes "behind-the-border" issues, such as the role of infrastructure and governance in supporting a well-functioning trading economy.

Although the systematic development of trade facilitation in Northeast Asia has for some time been an important consideration, there is clear lack of broader policy framework which is required for long term development. Moreover, there is dearth of studies to establish an appropriate causality of factors required for trade facilitation policy framework. The question then arises: how do the non-price determinants of international trade such as infrastructure and transaction costs affect integration of the Northeast Asia?

To provide an answer to the above question, the analysis carried out in this paper place sufficient evidences to ascertain that today's trade issues in Northeast Asia go beyond the traditional mechanisms of tariffs, and include "behind-the-border" issues. The link between trade flows and trade costs has been based previously more on intuition than evidence, particularly in context of Northeast Asia. This study shows that variations in transaction costs along with trade mobility infrastructure facilities have significant influence on regional trade flows in Northeast Asia. This paper concludes that when tariffs tend to become low in Northeast Asia, the economies of this region could potentially benefit substantially from higher trade provided trade facilitation measures are strengthened to a great extent.

Introduction

Success of globalization across countries of very diverse dimensions remains to be attained in full (Stiglitz, 2003; Friedman, 2005). But the process initiated during last decade has explicitly given rise to growing regionalization in all regions of the world with varying success. The growth of regionalism has been one of the major developments in international relations in recent years; all countries are now members of at least one bloc and many belong to more than one.¹ In general, regionalism has shared an objective to reduce trade barriers – quantitative and qualitative.

A growing literature has documented the negative impact of trade costs on the volume of trade.² Most of these studies show that integration is the resultant of reduced costs of transportation in particular and other infrastructure services in general. Direct evidence on border costs shows that tariff barriers are now low in most countries, on average (trade-weighted or arithmetic) less than 5 percent for rich countries, and with a few exceptions are on average between 10 to 20 percent for developing countries (Anderson and van Wincoop, 2004). Poor institutions and poor infrastructure penalize trade, differentially across countries. Therefore, today's trade strategy goes beyond the traditional mechanisms of tariffs and quotas and includes "behind-the-border" issues, such as the role of infrastructure and governance in supporting a well-functioning trading economy. For instance, many studies show that liberalisation of international transport services foster international trade very much the same way as tariff liberalization does (Baier and Bergstrand, 2001; Andriamananjara, 2004). In taking this route, the attention is now being focused on minimization of trade costs through facilitation of merchandise and services trade logistics, both inbound and outbound.

In our particular case, the three Northeast Asian countries, namely, China, Japan and Korea, together contain more than 1.46 billion population (23 percent of world population), and boast a GDP of US\$ 6.32 trillion (17 percent of world GDP) in 2005. Japan and Korea are termed as high-income economies, whereas China is seen as lower middle-income country.³ While Korea is becoming a mature economy, catching up Japan, China, on the other, has emerged as an engine of growth, not only for the Northeast Asia, but also for the entire world. The rapid trade among China, Japan and Korea has demonstrated broader prospects for regional cooperation. In 2005, China has become the largest trading partner of Korea and second largest trading partner of Japan. A remarkable growth in China's two-way trade with Korea and Japan has resulted in robust growth of the economies in Northeast Asia. However, Northeast Asia is still characterized by its low level of regional integration, despite the fact that the economies in the region are complementary to a large extent and could potentially benefit substantially from deeper economic integration.⁴

In recent years, Northeast Asia has received growing attention as a region that has successfully begun the process of integration into the global as well as neighbouring regional

¹ Regional Integration Agreements (RIAs) have been around for long period of time since 1664 when a custom union of the provinces of France was proposed (Schiff and Winters, 2003). As on January 2005, 312 RTAs have been notified to the GATT/WTO (of these, 170 are currently in force) and a further 65 are estimated to be operational, although not yet notified (Crawford and Fiorentino, 2005)

² Refer the study Anderson and van Wincoop (2004), which has elaborately covered the major studies carried out on this subject.

³ According to World Bank (2005)

⁴ Progress towards forming regional economic bloc in Northeast Asia has always been very slow since its inception. According to Yip (2001), Northeast Asian regionalism has been delayed owing to political factors rather than economic reasons.

economies.⁵ Considering the increase in trade interdependency of the three economies in Northeast Asia⁶, the need for an FTA in the region has gained high momentum in recent years. This has been reflected in a growing number of studies conducted in last few years aiming to find out the feasibility of an FTA in Northeast Asia.⁷ Latest is Lee (2005), which using CGE Model, shows that the integration through trade (read, FTA) in Northeast Asia would lead to GDP growth of 5.15 percent for Korea, 1.54 percent for China and 1.21 percent for Japan, and all taken together is likely to generate economic welfare of US\$ 30 billion in the region (Lee, 2005).

The fact is that without having any regional trade agreement (PTA or FTA), the tariff barriers among the three countries in Northeast Asia have become low; weighted average tariff in 2004 of the three economies was less than 6 percent, as compared to more than 20 percent in 1991, with a few exception of China's average 40 percent tariff on imports from Japan and Korea in 1991. Over time, tariff has been reduced to a great extent in this region such that the regional trade volume in Northeast Asia increased from US\$ 56 billion in 1991 to US\$ 325 billion in 2004.⁸ However, despite higher intraregional trade observed in Northeast Asia, there is no evidence of lowering costs of trade in the region. For example, bilateral transaction costs between China and Japan has been hovering around 27 - 28 percent for last one and half decade, while the same between Korea and Japan is found to be around 2 - 4 percent. Apparently, it seems that the regional trade would have been much higher had the costs of trade among the three countries were low along with reduced tariffs.

Some studies have indicated that the cost of trade facilitation, specifically trade documentation and procedures, is high, between 4 to 7 percent of the value of goods shipped. In 1996, APEC conducted a study that highlighted the gain from effective trade facilitation. For example, the gains from streamlining customs procedures exceeded those resulting from trade liberalization, such as tariff reduction. Gains from effective trade facilitation accounted for about 0.26 percent of real GDP of APEC members (about US\$ 45 billion), while the gains from trade liberalization would be 0.14 percent of real GDP (about US\$ 23 billion).⁹ According to World Bank, raising performance across the region to halfway up to the level of the APEC average could result in a 10 percent increase in intra-APEC exports, worth roughly US\$ 280 billion (World Bank, 2002).¹⁰

Although the systematic development of trade facilitation in Northeast Asia has for some time been an important consideration, there is clear lack of broader policy framework which is required for long term development. Moreover, there is dearth of studies to establish an appropriate causality of factors required for trade facilitation policy framework. The

⁵ In view of recently concluded East Asia Summit 2005, Northeast Asian countries are now looking towards deeper trade integration with ASEAN. An FTA among ASEAN+3 will lead to welfare gain of approximately US\$ 129 billion (Yungling, 2005).

⁶ For a detailed study on trade interdependency in Northeast Asia, refer Lee (2005). According to Lee (2005), trade concentration ratio in Northeast Asia increased from 1.09 in 1990 to 1.65 in 2004, which was even higher than that of EU since 2001.

⁷ Refer page 31 of Lee (2005) to know the list of studies which have dealt the feasibility of FTA in Northeast Asia. Also refer, Cheong (2005).

⁸ The share of intra-regional trade in Northeast Asia has increased from 12.40 percent in 1990 to 23.90 percent in 2004 (Lee, 2005).

⁹ Similar indications were obtained for countries in APEC (Cernat, 2001, World Bank, 2002; Wilson et al, 2003)

¹⁰ In a study, De (2004) shown that for most Asian countries, trade cost works as a strong barrier to trade integration than tariff. By estimating a structural Gravity model of economic geography using cross-country data on income, infrastructure, transaction costs and trade of selected Asian economies, De (2004) provided evidence that transaction cost is statistically significant and important in explaining variation in trade in Asia. In addition, this study also found that port efficiency and infrastructure quality are two important determinants of trade costs.

question then arises: how do the non-price determinants of international trade such as infrastructure and transaction costs affect integration of the Northeast Asia? This paper attempts to find out the answer to the above question for the following three reasons.

First, the reason for focusing on trade costs in Northeast Asia is pressing if we look into the region's trade coverage. When most of the Northeast Asian economies – either through ASEAN+3 or through APEC or combination of both¹¹ – are planning to promote regional trade, integration of the whole region is limited by lack of an integrated and improved transportation and customs.

Second, since the countries in Northeast Asia are planning to intensify economic cooperation through bilateral FTAs (China-Korea, Korea-Japan, China - Japan), trilateral FTA (China-Japan-Korea), inter-regional FTA (ASEAN+3) and multilateral FTA (WTO), these countries should display small trade costs. These FTA events are expected to put added competitive pressure on Northeast Asian economies, particularly on trade and through which investments.

Third, to gain anything from liberalised trade regime in Northeast Asia, there is an urgent need to control trade costs, which might not only multiply the welfare emanating from liberalized trade environment but also strengthen the trade capacity of the region in the era of globalization.

In view of above, this study is attempted to assess the impact of trade costs on regional trade in Northeast Asia, and propose policy measures that would facilitate trade in the region. The remainder of the paper proceeds as follows. Section 2 deals with the definition of trade costs and its relevance. Data and methodology are dealt in Section 3. Section 4 describes the broad profile of trade and trade costs in Northeast Asia. Section 5 provides some estimates for the impact of trade costs and discusses the results. Finally, conclusions are briefed in Section 6.

Definition of Trade Costs and Its Relevance

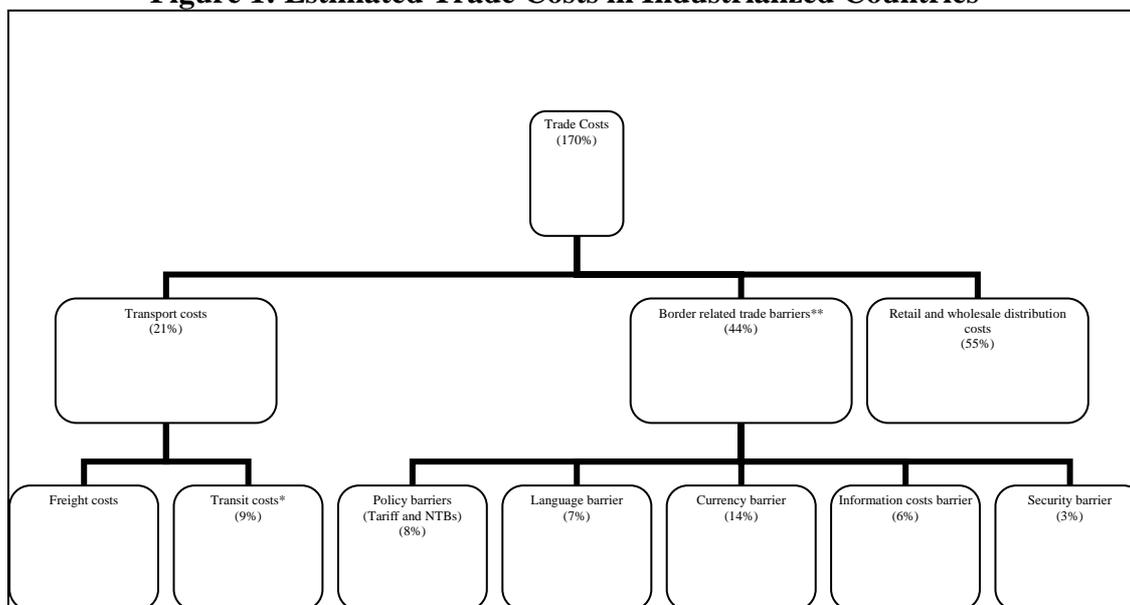
Broadly defined trade costs include all costs incurred in getting a good to a final user other than the marginal cost of producing the good itself: transportation costs (both freight costs and time costs), policy barriers (tariffs and non-tariff barriers), information costs, contract enforcement costs, costs associated with the use of different currencies, legal and regulatory costs, and local distribution costs (wholesale and retail). Trade costs are reported in terms of their ad-valorem tax equivalent. In Anderson and van Wincoop's (2004) term: the 170 percent 'representative' trade costs in industrialized countries breaks down into 21 percent transportation costs, 44 percent border related trade barriers and 55 percent retail and wholesale distribution costs (Figure 1).

In general, an exporter or importer incurs trade costs in all the phases of the export or import process starting from obtaining information about market conditions in any given foreign market and ending with receipt of final payment. One part of the trade cost is trader specific and depends upon his operational efficiency. The magnitude of this trade cost diminishes with an increase in the efficiency level of the trader, under the prevailing framework of any economy.

¹¹ Some of the Northeast Asian countries are also members of other extra-regional arrangements too. For example, three Northeast Asian countries, are members of APEC, and two of which (China and Korea) are also member of Bangkok Agreement, now renamed as Asia Pacific Trade Agreement (APTA).

The other part of trade costs is specific to the trading environment and is incurred by the traders due to the in-built inefficiencies in the trading environment. It includes institutional bottlenecks (transport, regulatory, and other logistics infrastructure), information asymmetry and administrative power that give rise to rent seeking activities by government officials at various steps of transaction. This may cost traders (or country) time and money including demurrage charges, making transactions more expensive.

Figure 1: Estimated Trade Costs in Industrialized Countries



Notes: *Tax equivalent of the time value of goods in transit. Both are based on estimates for US data.
 ** The combination of direct observation and inferred costs, which, according to author, is an extremely rough breakdown.

Source: Drawn from Anderson and van Wincoop (2004)

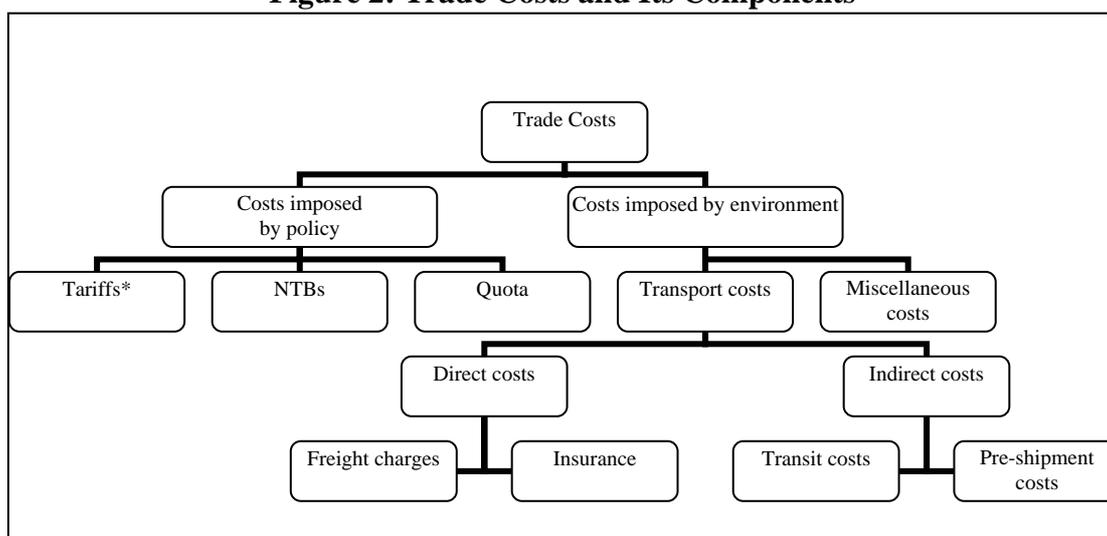
Trade costs are large, even aside from trade policy barriers and even between apparently highly integrated economies. In explaining trade costs, Anderson and van Wincoop (2004) referred the example of Mattel’s Barbie doll, discussed in Feenstra (1998), indicated that the production costs for the doll were US\$ 1, while it sold for about US\$ 10 in the United States. The cost of transportation, marketing, wholesaling and retailing represent an ad-valorem tax equivalent of 900 percent. Anderson and van Wincoop (2004) commented: “Tax equivalent of representative trade costs for rich countries is 170 percent. This includes all transport, border-related and local distribution costs from foreign producer to final user in the domestic country. Trade costs are richly linked to economic policy. Direct policy instruments (tariffs, the tariff equivalents of quotas and trade barriers associated with the exchange rate system) are less important than other policies (transport infrastructure investment, law enforcement and related property rights institutions, informational institutions, regulation, language).”

Direct transport costs include freight charges and insurance, which is customarily to the freight charge. Indirect transport user costs include holding cost for the goods in transit, inventory cost due to buffering the variability of delivery dates, preparation costs associated with shipment size (full container load vs. partial loads) and the like. Indirect costs must be inferred. Alongside tariffs and NTB’s, transport costs look to be comparable in average magnitude and in variability across countries, commodities and time.

Trade costs have large welfare implications. Current policy related costs are often worth more than 10 percent of national income (Anderson and van Wincoop, 2002). Obstfeld

and Rogoff (2000) commented that all the major puzzles of international macroeconomics hang on trade costs. Details of trade costs also matter to economic geography. For example, the home market effect hypothesis (big countries produce more of goods with scale economies) hangs on differentiated goods with scale economies having greater trade costs than homogeneous goods (Davis, 1998). The cross-commodity structure of policy barriers is important to welfare (e.g., Anderson, 1994).

Figure 2: Trade Costs and Its Components



As shown in Figure 2, we only deal with only those components of trade costs which are imposed by both policy (tariff) as well as environment (transport and others). In this paper, we term the costs imposed by environment as transaction costs.¹²

Methodology and Data

The case of Northeast Asia is highly appealing since the countries are showing rising costs of trade despite the drastic fall in tariffs. Focusing on three countries, this study is undertaken in two stages. Firstly, we provide some estimates of trade costs at regional (pooled) level. We stress that the specification of the gravity equation, together with the choice of the distance measure, are crucial for evaluating the size of the barriers. Secondly, we assess the impact of trade costs on regional trade based on a panel data, following which,

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