

Regionalization and Cross-Border Transport — Empirical Study on Thailand and Malaysia —

リージョナリゼーションと越境交通 —タイ・マレーシアに関する実証研究—

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1. Background

In recent years, “regionalization” is a common trend in the world economy to promote stronger competitiveness with neighboring countries. It is typically observed in terms of drastic increase in intra-regional and intra-industry trade and active investments brought by the integration of trade policies which accelerate international division of labor [1]. As the means as well as ends of regionalization, Cross-Border Transport (CBT) needs to be facilitated to improve connectivity, competitiveness, and community governance of the region [2].

2. Purpose of the Study

This study aims to show the process and factors of the CBT evolution with empirical data. The result of this study could contribute to nurture facilitations of CBT in Asian and other developing regions. The case of CBT over land between Thailand and Malaysia is focused as one of the advanced example in Asia.

3. Methodology

This study adopts two different approaches to analyze inter-disciplinary issues involved in the subject. Namely, this study is based on macroscopic analysis of trade statistics (i.e. macro economic approach),

followed by microscopic analysis on companies' preference in selecting transport mode (i.e. transport engineering approach).

4. Macro Analysis

The macro trend of intra-regional trade and the CBT was analyzed by using trade statistics obtained from Thai customs and the United Nations' database.

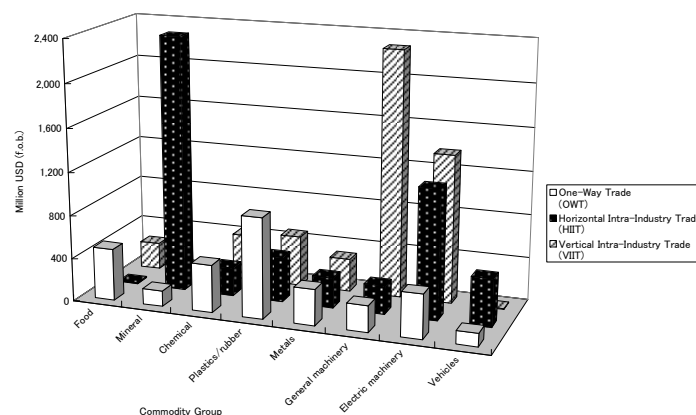


Figure 1: Trade Value by Type and Commodity

From this analysis, it was revealed that there are active intra-industry trades in general and electric machinery industries between Thailand and Malaysia. Furthermore, it was implied that these industries divide their production processes and locating them separately in two countries (i.e. fragmentation, [3]). The value of “Vertical Intra-Industry Trade” in Figure 1 represents the level of

division of production processes between the two countries. The current demand for the CBT is induced by the increase in transaction of intermediate parts between divided production processes in these industries.

With regard to mode of the CBT, the trade value by truck service increases especially for general and electric machinery products in the past eight years.

5. Micro Analysis

For microscopic analysis on the companies' preference, Analytic Hierarchy Process (AHP) [4] is applied to evaluate weights of major attributes for modal choice and desirability of each transport mode, as illustrated in Figure 2.

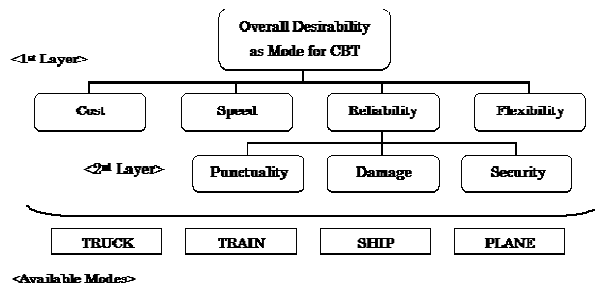


Figure 2: Hierarchy of Attributes for Modal Choice for CBT

The questionnaires were sent to manufacturers and forwarders, and 10 companies returned their answers. With the limited respondents, it was found that “reliability” of transport service was evaluated more or equally important as “cost”. “Reliability” consists of sub-attributes as “punctuality”, “(lesser) damage”, and “security”. Desirability of truck was evaluated relatively lower in security, and that of train was evaluated definitely low in all sub-attributes of reliability.

The result is consistent with the information in the field interviews that the train service in this case study has a problem in

punctuality, and it is different from the situation in high-income countries.

6. Policy Implications

Through the macro and micro analysis, the importance of upgrading physical infrastructure, harmonizing transport regulations, and institutional reform of operators were confirmed in view of improving reliability of transport service. The large imbalance of cargo flows between the two countries was found to be another big obstacle for service providers and users, though it was less controllable by transport policies.

7. Conclusions

From the analysis, it was revealed that the demand for the CBT increases by active trades between divided production processes in general and electric machinery industries, and companies in these industries desire higher reliability of transport service for the CBT. In addition, desirability of land transport was evaluated lower in some or all attributes for modal choice.

Furthermore, improved reliability could enhance competitiveness of the industries where their production processes are divided between two countries through reduction of the total transport and production costs.

Reference

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