Study on Common Transport Statistics in East Asian Countries

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Abstract: This paper describes the present status and major issues of transport statistics in Asia, the strategy for promoting a seamless Asia, and the outline of the study for preparation of database for common and standardized transport statistics in East Asian countries.

Key Words: Transport Statistics, Seamless Asia, Common Transport Policy

1. INTRODUCTION

Traffic and transport system and their operation are inefficient and far behind the optimized system in Asia. Hence those situations are large obstacles for trades in the region as well as logistics.

On the other hand, Association of South-East Asian Nations (ASEAN) countries have agreed to adopt the policy for the regional economic integration by 2015. Therefore, if trunk transport network in Asia will be improved under the priority projects implementation, cross border issue at borders will be appropriately solved, and a common transport policy to realize seamless transport network in the whole Asia will be promoted, which is one of the emergency issues. Also, when the transport network will be efficiently improved and also greatly contribute to achieve disparity in economic growth, alleviation of poverty, reduction of energy consumption, and mitigation of green house gases generation,

As a first step, it is necessary to promote acceleration of improved, standardized, and common transport statistics in Asia, which will contribute to activate research works for evaluation method of policy impact and policy.

2. PROMOTION OF A SEAMLESS ASIA AND PERSPECTIVE FOR COORDINATION IN EAST ASIA

2.1 Sharing Policies for Promoting Communications and Coordination in Asia

As economic coordination has progressed in Asian countries, frameworks for multinational cooperation, such as the Asian Highway, the Trans Asian Railway, and the Greater Mekong Sub-region (GMS) development cooperation program, have been strengthened. As a result, cross-border issues, such as inharmonious structural standards for transport infrastructure and systems, and safety standards, need to be resolved in the near future.
In parallel with the progress of bilateral frameworks such as the Economic Partnership Agreement (EPA) and Free Trade Agreement (FTA), as well as the multilateral frameworks such as the economic and social cohesion of Asia, there is a growing need to formulate various infrastructures for economic activity; the movement of people, goods, and information; production, and so forth. In order to secure sustainable development in the whole Asian region, priority should be placed on resolving cross-border issues.

Therefore, the “New National Land Sustainability Plan” (National Plan) proclaimed in Japan recommends that the transport infrastructures in each country should be developed according to a plan with mutual cooperation among East Asian countries. The Plan also recommends standardizing various transport technologies, such as the Integrated Transport System (ITS), etc., and creating a safe and efficient international inter-modal logistics environment by improving the use of transport equipment among each other, and utilizing electronic tags to promote the sharing of transport policies in Asian countries. It is also recommend to set up an intellectual platform for sharing the methodology of studying policies.

2.2 Suggestions for Achieving a Seamless Asia

In order to prepare a common transport policy in East Asia, the European Union (EU), where the seamless movement of people and goods has been mostly achieved as if one country, is a good reference.

In order to achieve the spatial integration of member countries in the EU, the Trans-European Network for Transport (TEN-T) Program was set up. This program was driven forward mainly by a neutral research organization, the European Spatial Planning Observation Network (ESPON). ESPON was established to assist the preparation of policies related to the European Spatial Development Perspective (ESDP) and to organize specialists in the field of regional development research. ESPON provides comprehensive evaluation and monitoring tools such as databases, indices, analyses of regional development effects, and geographic information systems (GIS). Also, the Directorate-General for Mobility and Transport (DG MOVE) of EU, which was reorganized in February 2010, provide funds for studies related to the common transport policy related to TEN-T.

The sole official statistical institution in Europe, the Statistical Office of the European Community (EUROSTAT), has been collecting and providing the statistical data and information that are necessary for the activities of ESPON. Since one of the functions of EUROSTAT is to collect major transport data from member countries of the EU as an obligation stated in the treaty and shares statistical data and information with the Statistical Department of the United Nations, EUROSTAT serves as an important organization in assisting the activities of ESPON.

Even though the process of economic integration is very different between Asia and the EU, a neutral research organization to assist the preparation of common transport policies and the EU system for sharing transport statistics with such an organization are of great relevance to Asia.

3. ISSUES RELATED TO TRANSPORT STATISTICS IN EAST ASIA COUNTRIES

The present transport network and its operation in the Asian region is inefficient and far from
optimized, hence it is a large obstacle for expanding intra regional trade and logistics. This situation will affect negative impacts for poverty alleviation, intra-regional economic growth, environmentally sustainable growth and regional economic integration with a target year of 2015.

Key issues for formulating transport network in the Asian region are identified as follows:

- Present transport network to support rapidly increasing intra regional trade is inefficient and there are many areas to be improved.
- For the improvement and efficient operation of the transport network, it is requisite to examine options for the policy and evaluation of policy to optimize the transport network in the Asian region by introduction of common transport policy across the border through investment for the optimized trunk transport network, modal selection, mitigation of discontinuity of transport infrastructure at borders and system barriers of cross border procedures. At present, however, information for the evaluation of policies is insufficient.
- For the optimization of the transport network across borders, it is requisite to build a model to evaluate policies to cope with common policy issues, and to conduct policy dialogue of countries based on the objective policy evaluation. Another word, a mutual agreement between countries for cost burden involving multi nations and benefits distribution to counties is requisite, however, data for the evaluation of policy is insufficient.
- Since traffic and transport data is insufficient, it is not possible to objectively and accurately evaluate profits and risks by investments, hence private investment for transport infrastructures are not accelerated.
- Based on above mentioned facts, it is necessary to establish and operate a common transport database as a regional public property, which is requisite to determine the common transport policies including framework of fund raising. At present, however, improvement levels of transport statistics are varied by country, and standardizations and sharing of statistics are rarely achieved.

As a reference, key issues of transport statistics in Asia, identified based on presentation materials and results of discussions in the 1st and 2nd EASTS Volunteers’ Meeting and the 1st and 2nd Workshop for Transport Statistics in Asia, which were held at Tokyo in March 2008 and Tokoname City of Aichi Prefecture in October 2008, are as shown below:

(1) Fundamental issue
- No uniformity of data, such as definition and unit of measurement.
- Private sector provide too expensive data.
- Some countries use own language for their statistics.
- It is not clear who does maintain the data and who will pay for it.

(2) Issues on the data of port/shipping sector
- Lack of survey items, such as transhipment cargos, TEUs, empty containers, type of containers (20ft, 40ft, 45ft, high-cube, etc.).
- Lack of uniformity and accuracy of data of port/shipping, such as names of commodities, methods for count, etc., because of no common guideline for the port/shipping statistics.
- Private sector provides too expensive data. Even though measures to use existing data and official statistics more effectively, there are lacks of effective usage of the data.
(3) Issues on the data of land transport sector

- Some countries never conduct necessary statistical survey due to lack of understanding on the importance of data collection, scarce incentive to conduct, insufficient funds, etc. However, various types of data are needed for comprehensive understanding of transport.
- Some organizations collaborate with other organizations for collecting data and traffic projection. However, most of organizations try to collect and estimate data, but most of them are done independently.
- It is very important to maintain database. However it not easy to maintain database and there are cases difficult to catch-up rapidity of change situation.

(4) Issues on the data of air transport sector

- It is rarely found the complete Origin-Destination (OD) data of country to country. Statistics of full OD information do not exist, except for the data in the Computer Reservation System (CRS).
- It is almost impossible to have authorized airfare data.
- There are no other uniform database which cover worldwide airports.
- Segment Information, such as aviation revenue vs. non-aviation revenue, cost structure by operating segment, revenue (profit) by airport in an operator, and revenue (profit) by region in an operator, is not formalized.

4. PURPOSE OF THE STUDY

In the past decades in Asia, its economic growth has been accompanied with trade expansion and increased foreign direct investments. Among other sub-regional integration efforts in Asia, ASEAN has been taking an initiative to integrate their economies and it intends to be a single market by 2015. This intention was endorsed by the increase in ASEAN intra-regional trade ratio from 17% in 1980 to 25% in 2005. However, the transport and logistic systems necessary to achieve the target in ASEAN are inefficient and unreliable, causing high transaction costs. It should be noted that a simple summation of optimum transport systems of individual countries is not an optimum system as a region. Individual country’s transport system should be designed as part of the network of the region. Current conditions are far behind the optimum transport networks, and the connectivity, competitiveness and community as a single market need to be much improved in ASEAN.

Formulation of efficient transport and logistic networks in ASEAN is precondition to realize an effective single market in ASEAN and its neighbors. Cross border transport networks can efficiently work only if adequate investments are made on trunk corridors and effective cross-border facilitations and operations are implemented. Namely, the regional common transport policies need to be prepared, implemented and monitored properly in ASEAN as soon as possible. Otherwise the connectivity, competitiveness and community of ASEAN will be soon eroded.

Preparation and operations of the regional common transport policies in ASEAN are not easy at all, which requires adequate analysis and simulations of policy scenarios. Based on the objective analysis and policy simulations, the members of ASEAN may mutually understand the benefits and costs of regional integration and can reach consensus on the proposed policy implementation. Thus, ASEAN will be able to achieve seamless transport networks in the
region, which is expected to disseminate to the neighboring regions in Asia. Seamless ASEAN will greatly contribute to accelerate economic growth, to alleviate poverty, reduce energy consumption, and mitigate green house gases emission.

With the sound objectives mentioned above in mind, there is however a serious problem in transport sector management in ASEAN, which is total lack of common transport statistics and data to be shared among ASEAN members. To prepare, plan, execute and monitor the ASEAN common transport policies, it is definitely needed to share the common specifications for generation of transport data and statistics. It is also needed to standardize transport data and statistics in ASEAN. Only when these common data and statistics become available, policy research on the regional transport systems or policy simulation analysis to evaluate impact of various regional policy scenarios become possible. The proposed Study is to address this important issue, namely to establish the common transport data and statistics base in ASEAN, which will be compatible and consistent with the neighboring countries in east Asia.

5. METHODOLOGY AND KEY ACTIVITIES

The contents of the Study are as follows:

a) Grasp the Present Status of Transport Statistics and Identify Issues
   • To review the transport statistics system, budget, present status of transport statistics (including definitions of data, unit, collection process, etc.), process of disclosure, status of utilization and operation and maintenance in 10 countries in ASEAN region, Japan, China, Republic of Korea, Taiwan, Europe, etc. through data collection on the websites as well as visiting related authorities in some countries.
   • To review the existing transport statistics data stored in international organizations, such as the Asian Development Bank (ADB), the United Nations Economic and Social Commission for the Asian and the Pacific (UNESCAP), the World Bank (WB), ASEAN Secretariat, the Japan International Cooperation Agency (JICA), etc.
   • Items of traffic statistics data to be studied are as follows:
     ✈ Port and Maritime Sector: Present status of major ports and scheduled shipping routes (ocean routes and domestic routes), cargo handling volume at major ports (volume by tonnage, TEU, empty containers, transhipments), trade partners (port of loading/discharge, port of origin/destination), OD data, etc.
     ✈ Road and Road Transport Sector: Present status of major highways (road condition, road type, road development plan, inter modal connection), traffic volume, transport volume data, OD data, present status of cross border facilities, cross border traffic volume, etc.
     ✈ Railway Sector: Present status of trunk railways (Gauge, major stations, Inland Container Depot (ICD)), frequency of train operation (passenger trains and freight trains), number of passengers and cargo handling volume at major stations, number of passengers and cargo volume between major stations, operation of international trains, present status of cross border facilities, etc.
     ✈ Airport and Air Transport Sector: Present status of major airports, present status and frequency of scheduled air routes (international routes and domestic routes), number of passengers and cargo handling volume at major airports, OD data (between countries), etc.
     ✈ Inter-modal transportation data.
To identify key issues in the system and data for transport statistics in 10 countries in the ASEAN region based on the present status of transport statistics in each country.

b) Preparation of Plans to Standardize Transport Statistics Data and Data Conversion Method
- To identify data necessary for examination and research works of common transport policy in Asia.
- To examine data conversion method for above mentioned data in order to secure compatibility, if definition, unit, collection method, etc. are different.
- To examine a possible standardization of each transport data and to prepare a guideline to improve transport statistics data for 10 countries in the ASEAN region.
- To prepare a simple database program to select statistics (public domain) of some countries who disclose transport statistics through a website, and to find a list of links and name of organizations to provide transport statistics in each country.

c) Formulation of a Platform to Share Transport Statistics Data
- To arrange transport statistics data in Asian countries in order to share disclosed data on the network.
- To examine possible platform for sharing transport statistics in Asian countries and to prepare conceptual design of common database.
- To examine a possible sustainable scheme to operate and maintain transport statistics data in the Asian countries (e.g. compulsory up-dating of transport statistics data under a project supported by an international donor) and prepare a guideline to share data.

6. EXPECTED IMPACTS AND OUTCOME

The impact of the Study is to promote sustainable development through formulation of seamless transport network, which is a key issue in the East Asian region with rapid economic growth. As a first step, conceptual design to improve database for building and operation of standardized and common transport database, and capacity building for the related agencies in order to secure the sustainability of built-up database in the Asian Region will be conducted.

As direct impacts of the Study, the followings will be achieved through sharing transport statistics data by transport experts and researchers:
- To accelerate development of method for transportation project planning able to calculate the financial rate of return, and evaluate and avoid risks from viewpoints of private enterprises, in order to promote private investment for improvement of international transport network in the East Asian region.
- To accelerate development of evaluation method for investment to appropriately reflect comprehensive framework for determination and implementation of transport policies by countries, mutual consistency of policies between related governments for improvement of transport infrastructure and increment of efficiency of transport markets, incomplete competitive markets, and mutual effects between regions.

As results, if a common transport policy to realize seamless transport network in the whole Asia will be promoted, the transport network will be efficiently improved and also greatly contribute to suitable and strong logistics, greatly disparity in economic integration in ASEAN region and alleviation of poverty, and achieve reduction of energy consumption and mitigation of green house gases generation,
7. FURTHER ACTIVITIES

Following to the 1st and 2nd Workshop for Transport Statistics in Asia, the MLIT has a plan to hold the 3rd Workshop for Transport Statistics of East Asian Countries in Japan. This Workshop is expected to be held in the autumn or winter of 2011.

Agenda of this workshop will be as follows:
- Report of the contents of the Study.
- Discussion about results of the Study by EASTS IRG02 members.
- Operation and maintenance of simple database of transport statistics.

8. CONCLUSION

For preparing an Asian common transport policy, it is necessary, as a first step, to grasp where and what kind of data exists. Then, it is important to study methods for gathering various transport statistics data owned by countries and organizations and to design a system that can share such information with EASTS researchers and related personnel.

Therefore, for the time being, we intend to exchange opinions related to the results of the Study and tentative database of transport statistics in East Asia countries with researchers and related personnel through the tentative experts’ network as well as in the 3rd Workshop for Transport Statistics of East Asian Countries.