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PRESENT SITUATION AND ISSUES OF SURVEY SYSTEM FOR REGIONAL PLANNING AND IMPLEMENTATION IN DEVELOPING COUNTRIES

Sathindra SATHYAPRASAD, Student member, Yokohama Nat'l Univ.
Kazuaki MIYAMOTO, Regular member, Yokohama Nat'l Univ.

1. INTRODUCTION

Gathering information about the present status of regional/urban activities and availability of infrastructures can be considered as the first step in any planning study. In developed countries, there are some established data survey systems for regional planning, which have been in use for some decades. Regional planning studies in developing countries are mainly handicapped due to the unavailability of reliable data which are indispensable for them. Furthermore, the financial constraints faced by the developing countries urge less expensive data usage, as the cost of data collection and coding in a regional planning study is as high as 50 - 60% of the total cost of the study. As most of developing metropolises grow so dynamically that they need planning studies urgently, making the promptness of data availability as important as the precision of data. This situation may be handled either by development of low data-intensive planning models or by establishment of low-cost and less time consuming data survey systems for developing countries. The investigation of present situation of survey systems for regional planning in developing countries has a crucial importance on both of these aspects.

2. EXAMPLES OF PLANNING STUDIES

As the first step of the analysis of present situation of data survey systems, three case studies carried out in developing metropolises were considered; Urban transport conditions in Delhi, Planning and issues in coordinating urban development planning and transportation planning in Jakarta metropolitan area, and Makati central business district and the light rail

transit system (in Manila).

3. SUBJECTS OF SURVEYS

Data required by regional planning studies include data about population, land use, transportation and travel particulars and traffic flows. All these data are desired at the city block level.

Population data include household characteristics as well as housing characteristics. Under the household characteristics come size, distribution by age and sex, racial and religious affiliation, income, educational and employment particulars etc. Type of dwelling, number of families occupying the dwelling, ownership of house, are important under the housing data.

Land use classification and existing infrastructure facilities are required under land use data.

As for transportation data, daily trip making by household members, vehicle ownership, parking facilities are interested. Regarding the trips, purpose, distance and time of trip, travel time, mode of transportation are the important particulars that should be considered.

Traffic data are usually comprise of the vehicle type, capacity, number of occupants, origin and destination etc. In case of trucks, the type of industry of ownership, truck loading, land use classification at origin and destination are also interested.

4. METHODOLOGIES TAKEN

So far the practice have been the use of conventional methods that have been adopted in developed countries. In Jakarta study, population data were obtained from the published census information. It is observed that population census data, usually decennial, are available in most countries, although not published at city

block level. One popular way of getting land use data is the use of aerial photographs and land use maps, usually prepared by the state authorities. These land use maps were available at 1:10,000 and 1:50,000 scales (in Jakarta and Manila). It is observed that most of data related to transportation were not available. In all three cases studied, these data were obtained from special surveys carried out under various planning projects. These surveys included roadside or home interviewing of about 2 - 2.5% of urban population. Interviews were oriented at person-trip data, vehicle ownership and parking etc. These interviews were supported by truck surveys, and market and facility surveys (Jakarta). Use of secondary data as a source of information was not observed.

5. ISSUES FOR IMPROVEMENTS

Since there were no already established data survey systems in developing countries, every regional planning study should incorporate a data collection phase, which may cost about 50 - 60% of the total cost of a study, if conventional methods are adopted in data collection. Hence the financial constraints faced by the developing countries urge low cost data survey systems.

Adoption of conventional methods can result in less accurate data in developing countries due to the lack of public awareness, inadequately trained data collectors etc., as most of these methods are to be first introduced. Due to this very factor, it is necessary that the input data should be as simple as possible.

Metropolises in developing countries grow rapidly and hence frequent updating of plans become necessary. This necessitate the data survey systems be less time consuming and can be adopted more frequently at lower costs. Conventional data survey methods are usually time consuming and expensive. Furthermore it needs more time for a good preparation as the quality of the results

heavily depend on it. The possibility of repeating the data survey at an interval shorter than that is used presently when using conventional methods will be necessary. It is obvious that handling data should be carried out on computer.

After collection, processing raw data for computerized planning models takes time and can be error prone. If a data survey system uses less manual work, or if it can feed more original data directly to the model, lot of error prone areas in data handling can be bypassed.

Since the developing countries are facing a shortage of expertise in planning, these data survey systems should have the facility of repeating the same data collection procedure without much expertise, after the system has once been installed.

It is not possible to use secondary data sources such as city directories, assessors' records, building permits or utility companies in developing countries as the availability of these records is very poor. Nevertheless the quality of these records also cannot be guaranteed, as the interval between updating is usually too long for rapidly growing metropolises.

6. CONCLUDING REMARKS

For regional planning studies in developing countries to be successful, some reliable and efficient data survey system has to be established first. Conventional data survey systems cannot be directly applied in developing countries, since these are usually expensive and time consuming. Lack of established data survey systems, financial constraints, lack of expertise in regional planning, rapid growth of metropolises can be identified as common characteristics of developing countries. Any data survey system which is applied in these countries should be compatible with these constraints. They should be less expensive, less time consuming and repeatable at less expertise and cost at intervals shorter than usual.