

CHAPTER 1

INTRODUCTION



1.1 Problem Statement

Transportation has played the more important role in economics and social development of many developing countries. As Thailand is an agricultural developing country, road network has been constructed in order to link rural areas of the country with the major cities where the agricultural needs can be satisfied and farm production from those areas can be exported. Many research have been conducted with the view towards the economic impact of the road network in the rural area without due consideration given to the impact on people's travel pattern. Therefore, it is necessary that the travel characteristics as affected by the modification or the development of transport facilities in the rural area be analysed from which the result may be served as suitable and feasible guide line for future development of transportation facilities in other rural areas of the country.

1.2 Objectives of the Study

The objectives of this study are as follows:-

- a. Survey of socio-economic activities and transportation facilities in Amphoe Ban Tak which is one of the seven Amphoes in Changwad Tak.
- b. Analyses of trip generation characteristics as a function of socio-economic activities.
- c. Establishment of an index as a measure of personal mobility.

1.3 Expected Usefulness of the Study

The study will provide essential informations relating to socio-economic activities of the study area such as family income, household size, educational level, etc; as well as description and operational characteristics of the transport facilities which can be used as a basis for social and transportation development planning of a rural area. In particular, the relationship between trip generation characteristic and socio-economics activities derived from this study is applicable to the transportation development planning of the study area. With regard to the personal mobility index as will be derived, it can be used as an index to indicate quality of people movements in the area.

1.4 Literature Review

Institute of Traffic Engineering Western Section (1967)

In the year 1967 the Institute conducted a survey on the traffic generation in Los Angeles. It was found that there is a significant difference between the average traffic generation rate of 9.7 trips per dwelling unit on weekday during 1967 and that of 8.3 trips per dwelling unit in 1950, due to the growth of socio-economic activities of the city.

Texas Transport Institute (1973)

The study of the effect of socio-economic activities on trip generation characteristics of the cities in Texas State whose population are less than 175,000 was carried out by the Texas Transport Institute in 1973. The data necessary for the determination of this effect were obtained by a home interview survey. As results of this study, it was found that income per capita has played a very

important role on a trip generation rate. It is reported that the trip generation rate increased from 1.9 to 3.4 trips per person during 6 years period as a result of the increase of income per capita increase from \$ 1,000 to \$ 1,500 during the same period.

Winiyakul (1976)

Winiyakul conducted study on the degree of potential development achieved in selected remote areas of Amphoe Hua-Hin served by feeder road and on trip characteristics. It was found that agriculturists' trip-making rate was only slightly smaller than those of merchants, civil servants and employees. The total minibus trips per month made by agriculturists was nearly half of all trips being made in the study area because of the majority of the population is an agriculturist. It was also found that the higher the level of education attained, the greater is the monthly trip generation rate.

Viriyapinyocheep (1977)

Viriyapinyocheep conducted a study to investigate the role of the Ban Khai-Ban Bung feeder road in the agricultural development of the area and to analyse transportation problem relating to the feeder road. He found that the presence of the feeder road provided greater accessibility to the area and in part stimulate farmers from other areas to occupy new farming areas. In addition, he found that trips made by farming households are closely related to the distance from house to farm, the household size, and the size of a farming area.

Punyaratanabandhu (1977)

Punyaratanabandhu conducted a study on trip characteristics and trip rate generated from five estates of the National Housing Authority of Thailand. The data were obtained by a direct home-interview survey. He found that the average household size is 5.80 persons and the average number of home-based trips per household was 4.30 trips per day. A regression analysis was also carried out in order to identify factors which affect trip generation rate. As the result, it reveals that household size was found to be significantly related to trip generation rate whereas other factors such as car ownership, distance from CBD and socio-economic level were slightly related to trip generation rate. The classification of trips in accordance with purpose reveals that approximately 40 percent of home-based trip was work and school trips. In addition, it was found that for low socio-economic level household, 70 percent of home-based trip was made on public transport mode and 23 percent was a walking trip. For medium and high socio-economic level household, 41 percent of home-based trip was made on public transport mode, 56 percent on private transport mode and the remaining was a walking trip.