

Chapter 1 COMMUTING POPULATION IN CAMBODIA

1.1 REASONS WHY “PLACE OF WORK OR SCHOOLING” WAS ENUMERATED IN THE 2008 POPULATION CENSUS

In modern society people can move in a short time between multiple places by help of modes of transportation such as automobiles, motorcycles, bicycles, boats, buses and trains - sometimes by choice. Development of road system, railway, highway and air route accelerated movement of people between places. Particularly, as a result that the way of living of segregation between place of residence and place of work became popular and common, most people commute between their place of residence and their place of work or schooling within a day.

“Commuting” which is the word derived from *Pendelwandrung* in German and is called as “commutation” sometimes, has had a large impact on people’s life. It has allowed cities or towns to grow in size and it has led to the generation of suburban areas. A large city is surrounded by suburban areas where most of the prototypical commuters live and travel daily to the workplace in the city core.

While new businesses can appear in outlying suburban areas as urban sprawl pushes people and businesses farther and farther away from central business districts, leading to the existence of the reverse commuters who lives in a city core but works in the suburb.

Most commuters move at the same time of day, morning and evening, causing “rush hours” with congestion on roads and public transport systems those which are not designed or maintained well enough to cope with the peak of movement of transport. Increase of traffic congestions by cars and motorcycles brings air pollution. In large cities it is well known that a major factor contributing to air pollution is commuting by automobiles and motorcycles.

Particularly, in the global large cities such as Bangkok, Jakarta, Beijing, Shanghai, Delhi, Kolkata (or Calcutta) and Mumbai (or Bombay) in developing countries as well as Tokyo, New York, London and Paris in developed countries, commuting and its effects are very common. Even in Phnom Penh, smaller than those cities, this phenomenon can be observed easily.

The question on “commuting” or place of work was introduced in 1901 Census of England Wales for the first time in the world. Following this, it was commenced in 1930 Population Census of Japan. After the second world war most of developed countries have introduced the

question on commuting into the population census. In Japan since 1955 census, the question on commuting or place of work has been asked in every five year's census. Nowadays, in those population censuses not only the question on place of work but also the questions on modes of travel for commuting and/or hours of commuting are asked.

The data, including daytime population, derived from the questions on commuting and by cross-classifying other enumeration items such as sex, age, marital status, school attendance, economic activity, industry and occupation, etc. are used for various purposes by policy makers:

for planning of industrial development, of transport system, of land usage, and of private and public facilities in employment centers,

for analyses of travel patterns within major metropolitan areas, of the distribution of industry across regions or districts, and of catchment areas for transport routes, and

for the modeling of fuel usage and the estimation of urban economic base.

1.2. PROBLEMS IN PREPARATION OF THE STATISTICS ON COMMUTING OF THE 2008 POPULATION CENSUS

In the 2008 Population Census of Cambodia, the question of place of work or schooling was asked for the first time. In the column 23 of the census questionnaire Form B, place of work or schooling is asked as follows:

Working at home.

Working or schooling in the same district.

Working or schooling in another district.

Working or schooling across the border of the country.

The first problem for preparing the statistics on commuting exists in that the spatial unit of "district" which is the administrative area under a province was used for presentation of the statistics. In Cambodia a district is not so small for statistical presentation on commuting not only in population size but also in spatial size. Number of districts is counted as 193. Total land area of Cambodia is 181,035 km². Average land area of districts is 938 km². Assuming it is a rectangular shape, the length of one edge is 30.6 km. This means that almost daily moves

between place of residence and place of work or schooling may conclude within the district. Accordingly, the “commune” of which number amounts to 1,621 should have been used as the spatial unit for collection of data and statistical presentation of commuting.

The second problem is due to the reform of administrative areas by sub-decree immediate after the census enumeration. As most of the census results are used for administrative purpose, NIS decided that the statistical presentation of all census results was based on new boundaries of administrative areas after the reform. Accordingly, commuting tables were excluded from the regular tabulation because of difficulty of boundary adjustment between old and new administrative areas .

In order to avoid a great loss of valuable data without any usage and to use the data for preparing the analytical report on commuting, the supplementary tables on commuting were prepared by help of international experts. In principle, the tables focused mainly on commuting in the provinces of Battambang, Kampong Cham, Kandal, Phnom Penh and Siem Reap being based on the old boundaries of districts. Analysis of this report was made using those tables.

1.3 POPULATION BY PLACE OF WORK OR SCHOOLING IN CAMBODIA

1.3.1 Place of Work or Schooling of National Population

According to Table 1.1 which presents population aged 10 and over by place of work or schooling, among 10,233 thousand persons aged 10 years old and over in this country, 9,699 thousand persons directed to place of work or schooling within a same district where they reside and returned back to their homes daily at the time of 2008 Population Census in Cambodia. Also, number of the persons directed to place of work or schooling within another district presents 310 thousand persons, and those to place of work or schooling across the national border does 20 thousand persons While, 203 thousand persons stayed at home. Accordingly, 98.0 percent of the persons aged 10 and over left their homes for work or schooling and return back to their homes daily at the time of the census. However, .96.7 percent of those or 94.8 percent of the population aged 10 and over were the commuters within a same district where they reside but their destinations for work or schooling are unknown because the census question of place of work or schooling was not asked on the basis of “village” or “commune”. Therefore, the commuting flows between districts can be said to be formed by the population aged 10 and over who direct to and return from another district than same district, presenting 3.0 percent only.

Although the persons who direct to and return from another nation can be included to a same group of the former population, it is insignificant in terms of commuting flows as its number amounts to only 0.2 percent of the total population aged 10 and over.

Table 1.1 Number of Population aged 10 and over by Place of Work or Schooling

Province	Total*	At home	Same district	Another district	Across border
Total	10,232,713	203,055	9,698,973	310,218	20,467
Employed persons	6,928,378	193,869	6,464,378	250,011	20,120
Persons attending school	3,304,335	9,186	3,234,595	60,207	347
Total	100.0	2.0	94.8	3.0	0.2
Employed persons	100.0	2.8	93.3	3.6	0.3
Persons attending school	100.0	0.3	97.9	1.8	0.0
Total	100.0	100.0	100.0	100.0	100.0
Employed persons	67.7	95.5	66.7	80.6	98.3
Persons attending school	32.3	4.5	33.3	19.4	1.7

Classifying the population aged 10 and over into the two groups of the employed persons and of the persons attending school, the share of the former group shows 67.7 percent against 32.3 percent for the latter group. In the population forming the commuting flows between districts the share shows 80.6 percent for the employed persons and 19.4 percent for the persons attending school.

On the other hand, the proportion of the population aged 10 and over who direct to and return from another district than same district presents 3.8 percent for the employed persons against 1.8 percent for the persons attending school. From those finding, it is disclosed for the first time in Cambodia that the commuting flows between districts is formed mainly by economically active persons and they may not be said to be large.