TRIP CHARACTERISTICS OF SELECTED ISRAELI CITIES

S. REICHMAN
A. ELIASH

The Israel Institute of Transportation Planning and Research,
14 A had Ha'am St., Tel Aviv, Israel

ABSTRACT

Over the last 15 years travel patterns were investigated in 15 urban settlements in Israel. The results indicate an unusual combination of high trip generation by dwelling unit and low motorization rates.

The diversity of socio-economic characteristics of population groups, as well as that of city size distribution, are reflected both in motorization rates and in trip generation.

INTRODUCTION

Transportation surveys were begun in Israel, as in many other countries, because of the combined needs of capacity expansion and requirements by funding institutions. In the 1960's, the level of service of many urban and interurban roads sharply deteriorated and a need arose to greatly increase the capacity of the road network. Public institutions which were responsible for the funding of the new projects, first the World Bank, and subsequently the Ministry of Transport, conditioned their financial support to the collection of appropriate data for traffic prediction purposes.

Between 1958 and 1971, transportation data concerning all trips by private and public transportation were collected in 15 urban settlements in Israel. For three cities data exists at two points in time. The average number of daily trips per dwelling unit ranges from 1.79 trips in the small, low income, town of Kiryat Shmona to 6.01 trips in western Jerusalem.

It should be pointed out that the data represents the first generation of transportation surveys in Israel and has therefore a number of limitations, especially in terms of the comparability of the operational definitions used in various surveys. Notwithstanding these limitations, there remains enough ground for comparison and analysis of the results.
I. Trip Generation in Selected Cities

The average number of daily trips per dwelling unit in the three main metropolitan areas of Israel is relatively high as compared to American standards, taking into account the low rate of motorization in Israel. One explanation might be the looser relationship between motorization and income as a result of government tax policy. The extraordinarily high motor vehicle taxes raise the relative prices of private vehicles in Israel high above the common level of vehicle prices in other countries. As a consequence, the rate of motorization in Israel is low, in relation to the national income per capita (Figure 1). Hence, rise of income in Israel had the effect of raising the number of trips per dwelling unit more than is demonstrated by the rate of motorization.

Fig. 1. Annual income and rate of motorization 1969 (20 countries).