

Lifetime Migration in Japan

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This study attempts to examine lifetime migration in Japan using data of the Fourth Migration Survey, which was conducted by the National Institute of Population and Social Security Research in 1996. Other studies have chiefly employed the following two indices to describe the characteristics of lifetime migration: the average number \bar{n} of residence changes during one's lifetime and the proportion l of lifetime migrants. These indices, however, have an undesirable tendency to increase monotonously with aging population. Thus the author proposes several new indices by removing the influence of age structure from the indices \bar{n} and l . First, the annual rate of lifetime migration is given by

$$m = \frac{\bar{n}}{\bar{a}}, \quad (1)$$

where \bar{a} demotes the mean age of target population. Secondly, the theoretical annual rate \hat{m} of lifetime migration is obtained from the proportion l (equation (2)).

$$\hat{m} = -\frac{\ln(1-l)}{\bar{a}} \quad (2)$$

The value $-\ln(1-l)$ in equation (2) corresponds to the average λ of Poisson distribution $f(x) = e^{-\lambda}\lambda^x/x!$ for $x = 0, 1, 2, \dots$, if $f(0) = 1-l$. Thirdly, equations (1) and (2) lead to the most important index r (equation (3)).

$$r = \frac{m}{\hat{m}} = -\frac{\bar{n}}{\ln(1-l)} \quad (3)$$

The index r , that is, the ratio of m to \hat{m} shows how the migration behavior of target population deviates from Poisson distribution and how frequently migrants of the population remigrate. For this reason, r can be called "index of remigration."

Furthermore, these new indices on lifetime migration as well as previous ones are calculated for each of subgroups into which the total population is divided by sex, age, place of residence, birthplace, occupation, and educational level. The major finding of this study is that the remigration frequency of migrants is high in male populations, cohorts who were born before 1936, residents in non-metropolitan regions, and so forth.