

***Income Inequality and Income Mobility* - ANTHONY SHORROCKS**

The usual indices of inequality are derived from observations on income, wealth etc. corresponding to a particular point or period of time, It has been frequently argued that inequality values by themselves do not accurately reflect the differences between individuals, since the true situation depends to a large extent on how the relative positions of individuals vary over time. Thus, it has been argued, “static” measures of inequality should be supplemented by “dynamic” measures of changes through time, which we shall call measures of mobility. Studies which have proposed ways of quantifying these dynamic changes broadly fall into two categories: those which use elementary statistics, such as the correlation coefficient; and those which make more sophisticated suggestions based on transition matrices and other simple stochastic specifications of dynamic processes. Shorrocks [9] provides a number of references and discusses some of the issues involved in deriving an index of mobility from transition matrices. Particular consideration is given to the interval of time between observations, since a relationship is expected between the amount of observed movement and the length of time over which movement can take place; in a short space of time there is little opportunity for movement, even if the society is inherently very mobile. These earlier attempts to define an index of mobility are mainly concerned with stock variables, interpreted in a wide sense to include social status and occupation as well as wealth and the assets of firms. Once attention is turned to flow variables, such as income, it becomes apparent that there is another important consideration. Observed variations in income depend not only on the interval between observations, but also on the length of the accounting period chosen for incomes. Data availability and custom dictate that the period selected is normally one year, although shorter intervals, a week or a month, are occasionally used. If the accounting period were extended from, say, one month to one year, variations in monthly incomes (previously classified as dynamic changes) become subsumed within the annual income figure. Some of the dynamic changes are therefore incorporated in the static inequality value, and the distinction between the static and dynamic aspects becomes very blurred. Similarly, as we pass from annual to lifetime income inequality, intra-lifetime income mobility is lost in the process of aggregation. However, the effects of income variations over time do not disappear altogether: they are reflected in the changes recorded in the inequality value. Those occupying the highest and lowest positions in the income hierarchy rarely remain there forever. So the aggregation of incomes over time tends to improve the relative position of those temporarily found at the bottom of the distribution, and the situation of those at the top tends to deteriorate. For this reason it is commonly supposed that inequality falls as the accounting period is lengthened. Empirical confirmation of this relationship requires longitudinal income data samples, of which very few exist. However, the little evidence available agrees with expectations. For example, Soltow [10] traced the annual incomes of a sample of Norwegians over the period 1928-1960. The Gini coefficient for the 33 years combined was 0.134 compared to an average value of 0.183 for the separate years. Using US data, Kohen et al. [3] found that the Gini coefficient for family income and earnings of young men (aged 16-24) fell by 4.7-7.4 “/,, when cumulated over two years, and by 9.2-10.8 % when cumulated over three. For middle-aged men (45- 59 years old), aggregating incomes over two years caused the Gini to decline by about 4 %.” There are reasonable grounds, therefore, for supposing that the existence of mobility causes inequality to decline as the accounting interval grows. Furthermore, intuition suggests that the extent to which inequality declines will be directly related to the frequency and magnitude of relative income variations. If the income structure exhibits little mobility, relative incomes will be left more or less unaltered over time and there will be no pronounced egalitarian trend as the measurement period increases. In contrast, inequality may be expected to decrease significantly in a very (income) mobile society. The main purpose is to exploit this relationship between mobility and inequality, to derive an index of mobility for flow variables. In essence, mobility is measured by the extent to which the income distribution is equalized as the accounting period is extended. Defining Mobility as the complement of rigidity, as much as we define equality as the complement of inequality. For inequality measures with the desirable properties.

Rigidity Index = Income Inequality Index for Longer Period/ Mean Inequality Index for Shorter Periods