

21. Normally, in designing the basis of compilation of a consumers' price index, statistical experts favour the taking of a family budget inquiry. Indeed, if the application of the index is to be limited to any "given economic group" or to a "specified type of community," a family budget inquiry is necessary in order to ascertain the spending habits of the particular group or groups covered by the index. Previous practice in New Zealand—and in some other countries—has been to use the "aggregate expenditure" method* for the major groups, combining the group indices by percentages representing the relative importance of the groups as ascertained by a family budget inquiry in order to obtain an "all groups" index. New Zealand's experience in family budget inquiries has been uniformly disappointing. The first family budget inquiry in this country, carried out by the Department of Labour in 1910-11, covered the living-expenses of 69 families; a second official budget inquiry, carried out in 1919, covered 109 households. The third (and latest) comprehensive family budget inquiry was conducted by the Census and Statistics Department in 1930.† Although many thousands of budgets were distributed, and although generous prizes were offered for well-completed books, only 318 useable budgets were received in that year. But, more important still, analysis of the results of the last-mentioned inquiry showed that, while the national virtues in spending habits were generously represented in the family budgets received, the national vices were curiously absent. The reason for this apparent anomaly does not require much seeking. Obviously, if only a scant 300 budgets are received out of many thousands issued, the probability is that those completing the budgets will represent not the community as a whole, nor any section of it other than the most careful, painstaking, economical, and admirably virtuous section. The "weaker members" fall by the wayside when it comes to filling in a detailed account of household expenses over an extended period. Yet, if the results of the budget inquiry are to be regarded as typical, the sample of households covered must include a proper proportion of all types of spending habits.

22. Family budget inquiries, conducted by staffs of skilled enumerators, covering families selected in accordance with recently developed sampling techniques can yield results freed from the sources of bias which largely nullified the usefulness of such inquiries conducted in New Zealand—and elsewhere—by the cruder techniques of the past. The Government Statistician has advised us that it would take at least twelve to eighteen months to organize and carry out a properly designed family budget inquiry in this country. The results of such inquiries, conducted by modern methods, would shed a great deal of light on social and economic problems: in fact, the provision of a weighting pattern for a consumers' price index is but one of the lesser ends served by such inquiries. We consider that family budget inquiries should be carried out in New Zealand: but, for the purposes of the proposed index, the time element involved ruled out this source of information and led us to seek alternative means of designing a weighting diagram. We were advised by the Government Statistician that a sufficiently

* For a detailed description of this method (which consists essentially in the adoption of Laspeyres' formula), see G. H. Knibbs, "Price-indexes, their Nature and Limitations, the Technique of Computing them, and their Application in Ascertaining the Purchasing-Power of Money" (Commonwealth Bureau of Census and Statistics, Melbourne, 1918), Part I. Section 4, &c. The formula of Laspeyres may be written—

$$i_n = \frac{\sum q_0 p_n}{\sum q_0 p_0}$$

where i_n is the price index number for the n th period of time (or at the n th epoch), the p_0 's and the q_0 's prices and quantities respectively of the items in the regimen for the base period (or at the base epoch), and the p_n 's prices of the same items for the n th period (or at the n th epoch). The q_0 's may, according to Knibbs, be (a) compiled from household budgets, &c., or (b) deduced from the total consumption of a population; method (b) being, in his judgment, "probably the safest."

† Official inquiries covering limited groups of workers were carried out by the Department of Scientific and Industrial Research in 1938-39 covering tramwaymen (128 families) and boot operatives (122 families) (see H.-43, 1944, pages 22-23).