Micro-Economic Business Test Data Compared With Traditional Statistics

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1. Introduction

This article is concerned with data from surveys which have in recent years been set up in the Netherlands and in several other countries according to the prototype of the Munich Business Test. These Business Tendency Surveys are based upon monthly questionnaires in which entrepreneurs are asked to state the actual direction of change of certain micro-economic variables (production, prices, etc.) in the preceding month (derived by comparing the level of the variable in that month with that of the previous month), as well as the anticipated direction of change in the next month. Hence, for each firm, each variable and each month, there are three possible answers in the sphere of realizations, viz., increase (+), no change (=) and decrease (−); and the same applies to expectations and plans. For a more detailed description in English we refer to Theil's expository article in *Econometrica* [17] and to a Committee Report on Economic Survey Data [22]. Here, we confine ourselves to observing that the method considered, after having been set up by the IFO-Institut für Wirtschaftsforschung at Munich, Germany, less than ten years ago, has been

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1) The authors have highly valued the stimulating criticism of Professor Theil, who suggested this problem to them and was always willing to participate in the discussions.

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3) Most questions in the Dutch surveys refer to a time period of one month, while in Business Tendency Surveys of other countries, time periods of two, three and six months are not unusual. Moreover, there are various bases of comparison of the direction of change, e.g., the same period one year ago instead of one month ago.

4) The notation (+), (=), (−) is not fully satisfactory, but we adopt it here because it has become a tradition. More satisfactory notations are (+), (0), (−), indicating the sign of the first difference, or (>) (=), (<) indicating whether this month's level exceeds, is equal to, or is below last month's level.
taken over by agencies in several other countries, such as Austria, Belgium, Denmark, Japan, the Netherlands, the Union of South Africa, and Sweden.\(^5\)

It goes without saying that there are numerous problems connected with these surveys and their results. First, there is the problem of a rational statistical design in relation to the selection of participants among the firms of the various branches of manufacturing and commercial activity, while the non-response is another statistical problem. A recent meeting, held at Munich in July 1957, and devoted to Business Test problems, revealed that in most cases the statistical design is rather unsophisticated, the Konjunkturinstitutet at Stockholm, Sweden, being in some aspects a favourable exception. It seems clear that more substantial efforts in this direction are worth-while.

Quite another set of problems is that of the analysis of the results of these surveys. It is useful to make a distinction according to two types, viz., the analysis of the interrelationships of Business Test data themselves, and that of the relation between these data on the one hand and "traditional" (i.e., numerical) statistical data on the other hand. Examples of the first type of analysis are: the accuracy of the predictions of the directions of change for the next month (the plans and expectations mentioned earlier), measured by comparing these predictions with the actual direction of change as reported at the end of the month; the relationship between expected buying prices and planned selling prices, between actual buying and actual selling prices in successive stages of industry; the effects of changes in certain determinant variables on the plans of the entrepreneurs, etc. Considerable efforts in these directions have been made by Anderson and his collaborators \([2,3,4,5,6]\) in Germany and by Theil \([19, 20, 21]\) in the Netherlands, both on German Business Test data, while Hastay did similar work on Dun & Bradstreet data in the United States \([7]\). The second type of analysis (that of the relationship with conventional data) can be divided into two categories according to the macro- or the micro-level upon which the comparison of the two types of data is carried out. First, there is the macro-economic approach, which implies that an aggregative time series based on Business Test data is constructed (e.g., for the production of shoe manufacturers or for the selling prices of shoe wholesalers), after which this series is compared with a time series based on corresponding numerical data. Anderson \([1, 2]\) was the first to apply this idea; he found a rather satisfactory similarity. In a recent study Jochems and De Wit \([10]\) arrived at similar encouraging conclusions. No doubt, these results are of considerable importance; in the first place, because

\(^5\) In France the "Institut National de la Statistique et des Etudes Economiques" (I.N.S.E.E.) has developed independently a similar Business Tendency Survey, which is held each half-year but differs in some aspects substantially from the Ifo-Survey. For a detailed description of these differences, see Stutz \([14]\).