12.1 A First Assessment

Location is not only a prime determinant of market value for real estate property, but more generally is important in all socio-economic phenomena. Every individual case, that is, every ‘real-life-object’ and its corresponding ‘statistical-counting-unit’ in a statistical data base must contain detailed information about its geographic location. Although location is usually not one of the properties of the ‘statistical-counting-units’, their geographic location becomes important when incorporating them into an aggregate.

The practical need for reliable geographic work in statistical surveys has long been recognized. Statistical theory, however, has ignored this geographic feature of its phenomena, proceeding as if human activity were not place-bound. This attitude dates back to the time when the sciences, which inspired the paradigms of present day statistical theory, were not yet concerned with location-related ecological phenomena.

On the other hand, research in geography has developed in a quantitative, particularly statistical direction. Geographers, city planners and regional economists are increasingly relying on statistical data and methods for their work. Statistics and geography overlap, although geography as a related discipline does not come to mind when considering subjects that border on or even overlap with statistics. Although the geographic component of statistical data was discussed in earlier chapters, the relationship between business, economic and social statistics with economic, social and political geography needs further clarification. The prominent geographic component in all socio-economic statistical work requires that a theory of this field of statistics at least must recognize this geographic component. At present, textbooks of business and economic statistics completely ignore it. This, unfortunately, has resulted in the neglect of the international aspects of statistics which at present is treated as a timeless and place-less mathematical discipline. Statisticians are also missing a great opportunity to make a valid and unique contribution to the internationalization of business and economic curricula.

Of the two major fields of geography – physical geography and human geography – mostly the latter is of concern here. It includes economic and social geography, political geography, (e.g. the geography of federal spending in a county),
historical geography (the ‘human impact’), behavioral geography and political studies from a geographer’s perspective.

Books such as ‘People in Durham: A Census Atlas’ and statements by geographers indicate that no clear boundaries between statistics and geography seem to exist. Let geographers speak about this matter: “the Negro question is taken up mainly through the voice of individuals and the testimony of statistics . . . the clash of cultures . . . by way of the regional novel supported by impersonal surveys . . .”

“This ‘Synthesis of information collected from a wide variety of sources’ adopts a systematic approach to the human geography of Western Europe . . . stress is laid on both temporal and spatial variation in human activity and on the processes responsible for the variations . . .”

“Three questions are central . . . where is the economic activity located? what are the characteristics of the activity? . . . to what other phenomena is the economic activity related? . . . the student is introduced to various techniques . . . location quotients and the index of diversification . . . It is a pity that so many of the maps are drawn using state, rather than county data, as in the first edition . . .”

Various statistical methods have been devised to deal with distributions of points, lines and areas on the terrestrial surface. It would be important to incorporate them into business and economic and social statistics. Maps as models of the earth’s surface are the language common to statisticians and geographers. Yet, their interests differ. Statisticians construct choropleth maps as an added means of displaying regional data. Geographers use statistical data to add to their maps a stronger sense of socio-economic realism. Unfortunately, geographic maps are seldom found in textbooks of business and economic statistics – as if location were irrelevant for statistics, and hence, for its theory. Geographers on the other hand, use census results and areal distributions. They show concern for the non-sampling characteristics of socio-economic data, and for the meaning of statistical aggregates.

12.2 Statistics in Geography

12.2.1 Using Statistical Data

For the statistician, unfamiliar with the work of geographers, the use of statistical data in geography is amazing. One can find for example, geographers discussing at length the taking of a population census. In one study, the author used data of the population censuses of 1938, 1951, 1964 and 1973, to compute detailed rural-urban growth differentials for each area in a study of population changes in Colombia. Another geographic study “ . . . focuses upon the data sources . . . with facsimile reproductions of some of the data sources . . . It is refreshing for the critical comment on the reliability of individual data sources . . . The book demonstrates the wealth of readily available material for project and practical work in urban geography . . .”

“ . . . details abstracted from the population register can prove invaluable in tracing the turnover of populations and provide a basis for population density, migration and