Science and Technology Indicators for Development, edited by Hiroko Morita-Lou, United Nations Science and Technology for Development Series, Westview Press, Boulder, CO, 1985.

Science and Technology Indicators (STI's) for Development is a useful contribution to the analysis, development, and practical use of STI's in countries of the Third World. The aim of the book is threefold. First, to draw attention to policy makers of the importance of STI's in monitoring and assessing the impact of science and technology in developing countries (DC's). Second, to evaluate the usefulness and limitations for DC's, of the use of conventional STI's designed for the economically advanced nations. Third, to extend conventional STI methods to various aspects of the analysis of science and technology in DC's with policy making in mind.

The study is divided into two parts. Part 1 presents a brief overview of the issues, problems, and prospects concerning the measuring and monitoring of science and technology in the DC's. A useful outline of current indicators of STI inputs and outputs, as well as indicators of utilisation and impact, is also offered in Part 1. The main section of the book, Part 2, is a collection of 12 papers dealing with a wide range of analytical, methodological, and empirical aspects of use of STI's in the development process.

Although the individual papers are not mutually exclusive in the various STI issues analysed, overall the collection succeeds in covering a comprehensive range of problems concerned with the definition, application, usefulness, and importance of STI's to development planning. Existing approaches to STI are defined and evaluated as instruments for resource allocation and development planning. Current STI's are extended and disaggregated into constituent parts so as to be appropriate for meeting specific development objectives.

As well as analysing the problems of predicting the impact of science and technology on DC's, various specific issues are discussed in detail. Among the most important of these are: (1) the relationship between scientific and technological change, and their impact on the environment; (2) the search for 'intrinsic' indicators of S and T, relevant to specific technological forms such as electronics, chemical engineering, and civil and mechanical engineering; (3) the use of existing 'scientometric' methods to measure the technological inequality between nations in different S and T fields; (4) a critical review of the use of bibliometric indicators in the context of developing countries; (5) an evaluation of links (and crucial differences) between science and technology, and their implications for the organisation of research; (6) historical lessons drawn from the initial emergence of 'social indicators' and later, STI's, with a focus on the need for: (a) STI's appropriate to the local social system, and (b) differentiating between the diverse affects of science and technology. Other topics include a broad assessment scheme of S and T for development and the conceptual difficulties faced in the formulation of STI's.

Throughout the book an effort is made to illustrate the relevance of STI's to the practical purposes of implementing and evaluating development projects. Some interesting evidence from Brazil and China, concerning their own scientific and technological programmes and policies, also helps to illustrate the importance of STI's in planning for economic and social development. As for the future, recommendations are made to further the advancement and application of STI's in development, both in terms of pilot projects, and training courses and workshops. Overall then this study represents a valuable collection of views, analyses, and evidence on the subject of science and technology indicators for developing countries.

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