

FOREWORD

World economic models are employed to conduct quantitative analyses of the growth and trends of national economies. Trade relations models make it possible to analyze the mutual links between countries and regions. World trade matrices form the foundation of these models. To enable international comparisons to be made, it is essential that world trade matrices utilize common standards for national, regional and product categories. However, the standards utilized in statistics formulated by different international organizations are not always consistent, and there are sometimes continuity problems caused by factors such as the revision of categories and the formation of new countries and regions, or the division or unification of previously existing countries and regions when these statistics are utilized in time series analyses. Despite these problems, world trade matrices remain essential to the ability to construct world economic models.

In addition to examining, from the perspective of the basic data, the problems associated with formulating trade relations models, which play such an important role in constructing world economic models, one of the current research project in IDE: Institute of Developing Economies “Compilation and Application of Trade Indices (III) ” evaluated international trade statistics, compiled trade indexes and conducted international comparisons, comparisons between individual countries and regions, and comparisons between world trade indexes and the trade indexes of individual countries and regions. This research project has conducted practical research in addi-

tion to methodological studies, including studies of the use of trade statistics and trade indexes in economic analyses of international competitiveness.

This research projects, was a two-year project focusing on the preparation and employment of world trade statistics which commenced its first fiscal year in April 2005. The focus of this project was the formulation of trade indices and their employment in international comparisons. This research project continued the research on the compilation, evaluation and analysis of trade statistics and indices conducted by the former IDE research projects “Compilation and Application of Trade Indices (II) ” commenced in 2003.

In outline, the methodological approach of this project is as follows:

- (1) Consideration of the use of international trade statistics with particular reference to problems in the estimation of trade matrices, which form the framework for trade relations models, together with evaluation of the consistency of trade statistics and their correction to the extent feasible.
- (2) Compilation of consistent trade matrices and trade statistics with a focus on East Asian countries and regions and the US, using the classification codes of the Standard International Trade Classification (SITC) (upper level classification code), the 24 sectors of the International Input-Output Table (IO24) and the International Standard Industrial Classification of all Economic Activities (ISIC).
- (3) Calculation of Laspeyres and Paasche indices and chain-weighted versions of both for each classification code for each country. In addition, study of these different forms of index, in particular their

usefulness in the case of problems arising from changes in quality.

(4) International comparison, comparison between countries and comparison of world trade indices and national trade indices for each classification code.

(5) In addition to methodological considerations, the implementation of a variety of empirical studies applying economic analysis to trade indices, including study of the relation between trade indices and international competitiveness.

This research project was comprised of organizer: **NODA Yosuke** (Senior Researcher, Macroeconomic Analysis Group in Development Studies Center, IDE), secretary: **KUROKO Masato** (Macroeconomic Analysis Group in Development Studies Center, IDE), co-researchers: **KINOSHITA Soshichi** (Professor, School of Modern Management, Sugiyama Jogakuen University), **FUKAO Kyoji** (Professor, Institute of Economic Research, Hitotsubashi University), **KAJIWARA Hirokazu** (Professor, Faculty of International Development, Takushoku University), **KUMAKURA Masanaga** (Associate Professor of International Economics, Graduate School of Economics, Osaka City University), **YOSHINO Hisao** (International Economics Studies Group, Development Studies Center, IDE), **NAKAMURA Jun** (Microeconomic Analysis Group, Development Studies Center, IDE), Observers: **UEMURA Jinichi** (Director, Macroeconomic Analysis Group in Development Studies Center, IDE), **FUKUMOTO Mayumi** (Macroeconomic Analysis Group in Development Studies Center, IDE), **EBIHARA Etsuo** (Director in

charge of Information Systems Division, Planning Department, JETRO).

The papers in the Statistical Data Series No.91 titled *Trade-related Indices and Trade Structure* represent part of the outcome of this research project, and take up various issues associated with world trade statistics emerging from the compilation and evaluation of trade indexes to enable analyses of the trade structures of East Asian countries and regions, USA and a part of the countries in East Europe. The authors wish to take this opportunity to acknowledge the tremendous assistance provided by Ms. **HIGAKI Michi** in Development Studies Center, IDE on the compilation of this volume.

The investigation presented in this volume is focused on compilation and application of trade statistics and trade indices, however the results on this study in this volume offer suggestions on a number of fronts for analyses of trade structure and industrial structure employing more general trade statistics and industrial statistics.

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