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# Price Competitiveness in World Trade

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*(Resolution adopted October 25, 1926, and revised February 6, 1933,  
February 24, 1941, and April 20, 1968)*

## Foreword

The project described by this report, the fifth in the National Bureau's Studies in International Economic Relations, had two purposes. One was the development of methods of measuring relative prices and price movements in international trade. The other was the calculation, using these methods, of international price measures for the main exporting countries, covering machinery, transport equipment, metals, and metal products.

This study combines two strands of the National Bureau's earlier work, one devoted to the improvement of price measures and the other to the analysis of changes in the international economic position of the United States. The study of price measurement at the Bureau has a long history, but the most recent related work was the report on *The Price Statistics of the Federal Government* (New York, NBER, 1961). This included an appendix on "Export and Import Price Indexes" which reviewed the unit value indexes of the U.S. Department of Commerce; a staff paper by Zvi Griliches on "Hedonic Price Indexes for Automobiles: An Econometric Analysis of Quality Change"; and several papers on U.S. wholesale price indexes. A closer examination of the accuracy of the official U.S. wholesale price data has been performed recently in a report on *The Behavior of Industrial Prices* (New York, NBER, 1970), by George J. Stigler and James K. Kindahl, which also followed the practice of using reports from buyers, as the present study does to a substantial degree.

The National Bureau's recent analyses of international trade and payments began with Hal B. Lary's book on *Problems of the United States as World Trader and Banker* (New York, NBER, 1963). The genesis of the present study was a discussion in that volume of the inadequacy of the measures of international price relationships then available and of the need for better measures to aid in the analysis of changes in trade balances. The results of an effort to improve and interpret the historical record on the export and import prices of the United States were presented in *Price and Quantity Trends in the Foreign Trade of the United States* (Princeton University Press for NBER, 1963), by Robert E. Lipsey. The relation of price and quantity changes in foreign trade to those of the domestic economy was discussed there, and some comparisons between wholesale price and unit value data were included.

This report consists of five parts. Part One is a description of the scope of the study and a summary of the findings on method (Chapter 1) and the empirical results (Chapter 2). Part Two gives a more extended presentation of the methods used and the reasons for choosing them. Part Three gives the general empirical findings on price-quantity relationships and other aspects of international competitiveness, and compares the international price indexes derived here with wholesale price and unit value indexes. Part Four consists of more detailed reports for the main product groups covered in the study, particularly those for which there was information on nonprice factors or for which the analysis in some way went beyond the price collection itself. The basic data for the study are set out in the appendixes, of which A and B give the trade data; C, D, and E, the detailed indexes computed for the study; and F and G, indexes calculated from wholesale prices for several countries and from U.S. export unit value data.

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ROBERT E. LIPSEY

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The collection of this large body of new price data required the assistance of many groups outside the National Bureau. Several hundred business firms, under a promise of anonymity, provided us with price data on products they bought or sold internationally and with insights into the peculiarities of individual markets. We are indebted to these companies and to the National Bureau directors, University of Pennsylvania trustees, and business organizations who arranged introductions to them. A number of American and foreign governmental and intergovernmental agencies and private groups supplied foreign data and particularly international bidding information which were a major source for us. Among those we can thank publicly are the U.S. Bureau of Labor Statistics, the Department of Defense, the Statistical Office of the Federal Republic of Germany, the IFO-Institut für Wirtschaftsforschung in Munich, and the Department of Economics of the Hebrew University in Jerusalem.

In the beginning of the study, Philip J. Bourque, of the University of Washington played a major role in the planning and data collection. Elizabeth Durbin, now of New York University, assisted in developing the price collection methods and was responsible for much of that work. At later stages, Marianne Tampier Lloris, Christine Mortensen, Doris Preston, and Zenaida Mata handled the major part of the assembly of data, machine calculation, and the checking of the manuscript. They were aided at various times, in the data collection and programing, by Jill Adler, Sultan Ahmad, Rita Bank, Betty Fishbein, Michelle Turnovsky, Lorenzo Perez, Joaquin Pujol, Jocelyn Coburn Whitmoyer, and Margot Zimmerman. Beatrice Grabiner managed the extensive data files and the other secretarial work of the project. Ester Moskowitz edited the volume, and H. Irving Forman drew the charts.

Among our colleagues, Hal Lary played a major part in initiating the study and in encouraging our efforts throughout its sometimes discouraging length. Ilse Mintz, Nancy Ruggles, and Raymond J. Struyk served on the staff reading committee, and David L. Grove, Douglass C. North, and Thomas A. Wilson were the directors' reading committee. We received numerous helpful comments from both groups and from other members of the staff and board of directors who read individual

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