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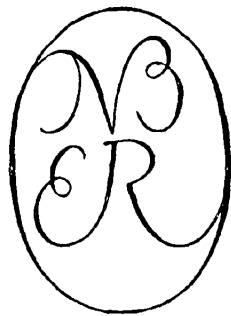
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*MEASURING TRANSACTIONS
BETWEEN WORLD AREAS*

BY HERBERT B. WOOLLEY



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BETWEEN WORLD AREAS*

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To Peggy for patience

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CONTENTS

<i>PREFACE</i>	xv	C. The Nature of Specialization in Trade: The Services Matrixes	42
<i>FOREWORD</i> , by Solomon Fabricant	xvii	1. The Nature of Trade in Services	42
1. INTRODUCTION	1	2. Further Comment on the Services Matrixes	43
A. Objectives of the Study	1	3. The Contrasting Patterns for Merchandise and Services	46
B. Nature of the Record and Plan of the Book	3	D. Concluding Observations	48
2. CONSTRUCTING THE RECORD	6	5. FINANCIAL FLOWS AND MULTILATERAL SETTLEMENTS	49
A. Design of the Record	6	A. The Pattern of Financial Flows, 1950-54	49
1. The Geographic Dimension	6	1. Unilateral Transfers, Capital, and Gold	49
2. The Item Dimension	14	2. Multilateral Settlements and Error	52
3. The Time Dimension	16	B. Bilateral Balances, Liquid Assets, and Multilateral Settlements	54
4. The Currency Dimension	17	1. Problem of Measuring Surpluses and Deficits	54
B. Preparing the Record	17	2. Over-All Deficits of the U.S. and the U.K.	55
1. Special Studies	18	3. Continental European Surpluses	57
2. Some Deficiencies in the Record	18	4. Main Multilateral Links	57
3. WORLD TOTALS	20	C. Multilateralism and the Measurement of Multilateral Settlements	59
A. The Course and Composition of World Trade in 1950-54	20	1. The Concept of Multilateralism	59
B. Discrepancy in Total Credits and Debits for Goods and Services	24	2. Components of the Final Matrix of Multilateral Settlements	61
C. Over-All Errors in the Financial Accounts	26	3. Amount of Multilateral Settlements	62
D. Distribution of Net Error by Country	32	4. Significance of the Multilateral Settlements Network	64
E. Concluding Observations	34	5. Statistical Limitations to the Multilateral Settlements Matrix	67
4. GOODS AND SERVICES TRADE	35	6. Three-Area, Four-Area, and Five-Area Consolidations of the Two-Valued Matrix	70
A. The Geographic Structure of Trading over the Five Years	35	D. Structure and Movement of Financial Flows: The Annual Record	70
1. Gross Transactions in the Two-Valued Matrix	35	1. Stability of Direction in Trade Balances and in Financial Flows Between Areas	71
2. The Effect of Redirecting Petroleum Trade and the Influence of Middlemen on the Trading Pattern	37		
3. Net Transactions in the Two-Valued Matrix	38		
B. The Annual Matrixes	41		

CONTENTS

2. Consistency of the Two-Valued Matrixes of Financial Flows	74	B. Two-Valued Matrixes, Annually, 1950-54	95
3. Systematic Variation in Multilateral Settlements	75	C. Effects on the Record of Redirecting Petroleum Trade	124
6. <i>CONCLUSION</i>	77	D. Divergence in the Two-Valued Record of Goods and Services Transactions	130
A. Summary	77	E. Valuing Imports F.O.B.	139
B. The U.S. Deficit and Multilateral Payments	79	F. Estimating Bunker Sales	148
<i>APPENDIXES</i>		<i>Glossary</i>	151
A. Two-Valued Matrixes for the Whole Five Years 1950-54	87	<i>Index</i>	153

TABLES

1. Transactions Between Four World Areas, 1954	4	Nonsterling EPU Area Subgroups, over the Five Years 1950-54	66
2. Comparison of Total Merchandise Credits in International Payments Statistics with <i>IFS</i> Export Totals, 1950-54	8	13. Balances of U.S., Canada, and International Organizations to Be Settled Multilaterally with the Sterling Area and Nonsterling EPU Area, over the Five Years 1950-54	67
3. The Course and Composition of World Trade in 1950-54	23	14. Three-Area, Four-Area, and Five-Area Consolidations of Two-Valued Matrixes over the Five Years 1950-54	69
4. Balances of All Areas with All Areas from the Two-Valued Matrixes and of Sixty-Eight Countries with All Areas, 1950-54	27	15. Stability of Direction of Trade and Financial Balances in Annual Matrixes, over the Five Years 1950-54	71
5. Balances of All Areas with All Areas Compared with Total Net Credits and Debits of Countries with All Areas, by Type of Transaction, over the Five Years 1950-54	29	16. Bilateral Balances and Multilateral Settlements in the U.S. Balance of Payments, 1950-62	82
6. Net Error in Country Accounts, 1950-54	30	A-1. Two-Valued Matrix of Gross Goods and Services Transactions Between World Areas, 1950-54	88
7. Summary of Error Term in Country Accounts over the Five-Years 1950-54	33	A-2. Two-Valued Matrix of Net Goods and Services Transactions Between World Areas, 1950-54	89
8. Balance of Payments of the United States and the United Kingdom, by Partner Area, over the Five Years 1950-54	56	A-3. Percentage Distribution of Gross Goods and Services Transactions Between World Areas, 1950-54	90
9. Offsetting of Credit and Debit Balances in Interarea Settlements over the Five Years 1950-54	63	A-4. Net Transactions Between World Areas, 1950-54, by Type	92
10. Distribution of Nonsterling EPU Countries by Pattern of Balances to Be Settled with Nonsterling EPU Area, U.S., and Sterling Area, over the Five Years 1950-54	64	B-1. Gross Goods and Services Transactions Between World Areas, Annually, 1950-54, as Reported by Area Credited	96
11. Balances to Be Settled Multilaterally by Nonsterling EPU Subgroups with the Sterling Area and Nonsterling EPU Area, over the Five Years 1950-54	65	B-2. Gross Goods and Services Transactions Between World Areas, Annually, 1950-54, as Reported by Area Debited	97
12. Balances of Sterling Area Subgroups to Be Settled Multilaterally with		B-3. Net Goods and Services Transactions Between World Areas, Annually, 1950-54	98
		B-4. Gross Merchandise Transactions Between World Areas, Annually, 1950-54, as Reported by Area Credited	99

B-5. Gross Merchandise Transactions Between World Areas, Annually, 1950-54, as Reported by Area Debited	100	B-22. Gross Miscellaneous Services Transactions Between World Areas, Annually, 1950-54, as Reported by Area Credited	117
B-6. Net Merchandise Transactions Between World Areas, Annually, 1950-54	101	B-23. Gross Miscellaneous Services Transactions Between World Areas, Annually, 1950-54, as Reported by Area Debited	118
B-7. Gross Services Transactions Between World Areas, Annually, 1950-54, as Reported by Area Credited	102	B-24. Net Miscellaneous Services Transactions Between World Areas, Annually, 1950-54	119
B-8. Gross Services Transactions Between World Areas, Annually, 1950-54, as Reported by Area Debited	103	B-25. Net Transfer Transactions Between World Areas, Annually, 1950-54	120
B-9. Net Services Transactions Between World Areas, Annually, 1950-54	104	B-26. Net Capital Transactions Between World Areas, Annually, 1950-54	121
B-10. Gross Transportation Transactions Between World Areas, Annually, 1950-54, as Reported by Area Credited	105	B-27. Net Gold Transactions Between World Areas, Annually, 1950-54	122
B-11. Gross Transportation Transactions Between World Areas, Annually, 1950-54, as Reported by Area Debited	106	B-28. Net Settlements Transactions Between World Areas, Annually, 1950-54	123
B-12. Net Transportation Transactions Between World Areas, Annually, 1950-54	107	C-1. Adjustments of Merchandise Matrix (Tables B-4 and B-5) to Channel Oil Purchases from Free World Sources Outside the United States, United Kingdom, and Continent Through the United States and United Kingdom, 1950-54	125
B-13. Gross Travel Transactions Between World Areas, Annually, 1950-54, as Reported by Area Credited	108	C-2. Two-Valued Matrix of Gross Goods and Services Transactions Between World Areas, Adjusted to Redirect Petroleum Transactions, 1950-54	126
B-14. Gross Travel Transactions Between World Areas, Annually, 1950-54, as Reported by Area Debited	109	C-3. Percentage Distribution of Unadjusted and Adjusted Goods and Services Transactions Between World Areas, 1950-54	127
B-15. Net Travel Transactions Between World Areas, Annually, 1950-54	110	D-1. Analysis of Divergence in Annual Gross Trade Flows Between Areas	131
B-16. Gross Investment Income Transactions Between World Areas, Annually, 1950-54, as Reported by Area Credited	111	D-2. Analysis of Divergence in Year-to-Year Changes in Gross Trade Flows Between Areas	132
B-17. Gross Investment Income Transactions Between World Areas, Annually, 1950-54, as Reported by Area Debited	112	D-3. Analysis of Divergence in Changes in Gross Trade Flows Between Areas from 1950 to 1954	134
B-18. Net Investment Income Transactions Between World Areas, Annually, 1950-54	113	D-4. Analysis of Divergence in Annual Trade Balances Between Areas	134
B-19. Gross Government Transactions Between World Areas, Annually, 1950-54, as Reported by Area Credited	114	D-5. Analysis of Divergence in Year-to-Year Changes in Trade Balances Between Areas	136
B-20. Gross Government Transactions Between World Areas, Annually, 1950-54, as Reported by Area Debited	115		
B-21. Net Government Transactions Between World Areas, Annually, 1950-54	116		

TABLES

xiii

D-6. Analysis of Divergence in Changes in Trade Balances Between Areas from 1950 to 1954	137	for Twenty-Seven Countries, by Partner Area, Annually, 1950-54	143
E-1. Share of Freight and Insurance in C.I.F. Value of Merchandise Imports		F-1. Estimated Value of Sales to Ships' Bunkers, 1950-54	149

CHARTS

1. The Course of World Trade: Goods and Services Credits and Debits by Type of Transaction, Annually, 1950-54	21	Consolidation of the Two-Valued Matrix	47
2. Over-All Discrepancies in Trade and Financial Accounts, Annually, 1950-54	28	5. Financial Balances Between World Areas over the Five Years 1950-54: Six-Area Consolidation of the Two-Valued Matrix	50
3. Combined Goods and Services Balances Between World Areas over the Five Years 1950-54: Six-Area Consolidation of the Two-Valued Matrix	39	6. The Circular Flow of Multilateral Settlements over the Five Years 1950-54	53
4. A Comparison of Merchandise and Services Balances Between World Areas over the Five Years 1950-54: Six-Area		7. Annual Financial Balances Between World Areas, 1950-54: Six-Area Consolidation of the Two-Valued Matrix	72
		8. Multilateral Settlements of the U.S. with Partner Areas, 1950-62	81

PREFACE

The origins of this study go back to Walrasian general equilibrium theory, the *Tableau Economique* of Quesnay, and the circular flow of Say. Like analyses of money flows and input-output studies, it explores the interrelations between parts of a whole—in this case, the whole world economy. It is best described as a kind of input-output analysis, but between countries instead of industries and for all types of transactions not simply current production; for an earlier generation it was the other way round. Leontief himself, in presenting his input-output analysis, described it as like an international trade table, but between industries within a country rather than between countries.¹

Analyses of trade between countries have long been made, and when the ideas for the present study were forming, *The Network of World Trade* study of the League of Nations and a trade matrix analysis by Frisch were the subject of current interest. My interest in working on trade and payments relations between world areas crystallized in the early postwar years in the course of my work at the Department of State on the international trade and payments aspects of the U.S. foreign aid program. After making a series of efforts to relate the international payments prospects of the European countries to the prospects for world trade and payments generally, I came to the conclusion that a methodological study covering a period of years was needed.

Many officials of the U.S. government, foreign governments, and international agencies aided in preparing the records, but a prime debt is owed to the Balance of Payments Division of the International Monetary Fund, which made space and files available and spent much time discussing methodology and

details of particular accounts. A conference of more than a dozen specialists in trade and payments advised on the project; and particularly helpful comments were received from Walther Lederer of the Commerce Department and Poul Høst-Madsen of the International Monetary Fund on a preliminary progress report given to a Universities-National Bureau Conference on International Economics.

The National Bureau's Director of Research, Solomon Fabricant, provided the continuing support, interest, general guidance, and stimulation so necessary for a prolonged project. The Associate Director of Research, Hal B. Lary, brought to bear the fresh perspective of an informed outsider. I wish to thank the Directors' reading committee: Lester V. Chandler, Gottfried Haberler, and Willard L. Thorp. I also benefited from the useful comments of Ilse Mintz, Robert Lipsey, and Zvi Griliches, who served on the Bureau's staff reading committee.

Besides the collaborators on the project—Cornelius Dwyer, Herman Karreman, Robert Lichtenberg, and Walther Michael—the work depended heavily upon the often tedious labors of many research assistants; Deborah Schoen Becker, Dianne Silverman, and the late Carmellah Moneta made particularly noteworthy contributions. Virginia Crowley, Bureau librarian, helped greatly in securing specialized materials from all over the world. Louise Smith was for a number of years secretary for the project. I am grateful to Rosa Lechner for work on the preliminary charts and to H. I. Forman for drawing the final charts. The book has gained greatly in readability and brevity from editing by Marie-Christine Culbert.

Finally, I wish to express my appreciation for the freedom which the Bureau has provided me to develop a set of ideas and a program of research circumscribed only by the available resources.

May 1965

H. B. W.

¹ Wassily W. Leontief, *The Structure of American Economy, 1919–1929*, Cambridge, Mass., 1941, pp. 4 and 12.

FOREWORD

During the years following the Second World War widespread concern with foreign exchange problems and currency inconvertibility prompted many countries to develop their international payments accounts with some regional elaboration, and the International Monetary Fund sought in its *Balance of Payments Manual* to set guidelines for reporting transactions regionally. The opportunity therefore existed for someone to try to bring together the payments accounts of all countries and to fit them into a comprehensive, interlocking scheme showing trade and payments flows between world areas.

This was the task Herbert B. Woolley set for himself in a study begun at the National Bureau in 1953 with the financial support of the Ford Foundation. The results of Woolley's investigation are given here. (As mentioned elsewhere in this book, preliminary reports on parts of the study appeared in 1957, 1958, 1959, and 1961.) This book presents the first detailed matrixes ever made of transactions (other than merchandise trade) between major world areas and provides essential background on the problems encountered in moving from the balance of payments estimates of individual countries to a world system of regionally integrated accounts. This experimental work has been performed for each of the years 1950 to 1954 and covers the following main types of transactions—merchandise, services, unilateral transfers, capital and gold movements, and multilateral settlements. The study describes the statistical methods used to construct the record, evaluates the limitations of the data for descriptive and analytic uses, and considers the implications of the results for the concept and measurement of multilateral settlements.

The significance of this investigation is perhaps even greater now than when it was started, as indicated most recently by the Review Committee for Balance of Payments Statistics in its report to the Bureau of the Budget. "The importance of viewing

balance of payments problems in a world context," the report states, "is becoming more widely recognized." Two reasons may be distinguished for this growing interest in the regional dimensions of international payments, one concerning policy formation and the other the underlying statistical basis. On the first, the Review Committee's report observes, among other things, that:

The initial impact of any measures taken by the United States to strengthen its balance of payments will not necessarily fall entirely on the surplus countries, but will be felt most quickly in countries with which the United States has the closest relations in trade and investment. Some of these may be countries whose own payments positions may be precarious. Similarly, measures taken in other countries to strengthen their balances of payments may have an adverse effect on the U.S. balance of payments.

With respect to the compilation of the statistics, the Review Committee stresses the advantages of cooperation between national statistical authorities and adds:

It might be supposed that some balance of payments transactions of a given country could be measured more reliably on the basis of the statistical information on those same transactions as compiled in other countries. . . .

It is [however] extraordinarily difficult to judge the comparative reliability of estimates for purportedly the same items which are prepared in different countries according to different statistical approaches and methods. . . .

International reconciliation and mutual use of the data collected by different countries are difficult, time consuming, and often frustrating. . . .

Woolley's project was a pioneering effort to face up to these problems, and his report will help in evaluating both the cost and the usefulness of devising solutions. One basic and simple point that emerges is that successful international collaboration in this area requires that the various national statistical of-

fices be willing to prepare their estimates in appropriate detail by regions and by major countries.

Even if this elementary condition is, in time, more adequately met than at present, the experience gained in executing this project suggests that the preparation of regionally integrated accounts on a regular and systematic basis is likely to prove costly in terms of the skilled manpower required and likely also to yield current statistics only with a delay determined by the most laggard among the reporting countries.

Another difficulty highlighted by this study is that the consolidated payments network will, at best, still be subject to the well-known "errors and omissions" which beset national balance of payments statisticians. For this reason, and perhaps also on conceptual grounds, there may be questions concerning the meaning of Woolley's residual calculation of net multilateral settlements. Without diminishing the importance of multilateralism as an objective of policy, one may conclude that the statistical expression of

this concept in the form of data on multilateral settlements encounters greater difficulties and presents more ambiguous results than seems to have been generally supposed.

Woolley's study explores these and related questions more systematically, I believe, than anything hitherto available and provides comprehensive statistics on the network of international payments where previously scholars have had to work only with very partial data and abstract models. It is hoped that, in addition, this report will contribute to an understanding of the possibilities and the problems of developing better information on the pattern of international economic and financial relations and thereby ultimately help also to strengthen the basis for policy formation in this area.

SOLOMON FABRICANT
Director of Research

May 1965