

This PDF is a selection from an out-of-print volume from the National Bureau of Economic Research

Volume Title: Anatomy and Consequences of Exchange Control Regimes

Volume Author/Editor: Jagdish N. Bhagwati

Volume Publisher: NBER

Volume ISBN: 0-884-10487-7

Volume URL: <http://www.nber.org/books/bhag78-1>

Publication Date: 1978

Chapter Title: Front matter, "Anatomy and Consequences of Exchange Control Regimes"

Chapter Author: Jagdish N. Bhagwati

Chapter URL: <http://www.nber.org/chapters/c1017>

Chapter pages in book: (p. -19 - 0)

ANATOMY AND CONSEQUENCES OF EXCHANGE CONTROL REGIMES

by Jagdish Bhagwati

Ballinger Publishing Company • Cambridge, Massachusetts
A Subsidiary of J.B. Lippincott Company

NATIONAL BUREAU OF ECONOMIC RESEARCH

Studies in International Economic Relations

1. Problems of the United States as World Trader and Banker
Hal B. Lary
2. Price and Quantity Trends in the Foreign Trade of the United States
Robert E. Lipsey
3. Measuring Transactions Between World Areas *Herbert B. Woolley*
4. Imports of Manufactures from Less Developed Countries *Hal B. Lary*
5. The Responsiveness of Demand Policies to Balance of Payments: Postwar
Patterns *Michael Michaely*
6. Price Competitiveness in World Trade *Irving B. Kravis and
Robert E. Lipsey*
7. Money, Financial Flows, and Credit in the Soviet Union
George Garvy
8. Foreign Dollar Balances and the International Role of the Dollar
Raymond F. Mikesell and J. Herbert Furth
9. Foreign Trade Regimes and Economic Development: Liberalization
Attempts and Consequences *Anne O. Krueger*
10. Anatomy and Consequences of Exchange Control Regimes
Jagdish N. Bhagwati



This book is printed on recycled paper.

Copyright © 1978 by the National Bureau of Economic Research, Inc. All rights reserved.

Library of Congress Card Number: 78-18799

ISBN for the series: 0-87014-500-2

ISBN for this volume: 0-88410-487-7

Printed in the United States of America

Foreign Trade Regimes and Economic Development:

*A Special Conference Series
on Foreign Trade Regimes
and Economic Development*

VOLUME XI



NATIONAL BUREAU OF ECONOMIC RESEARCH
New York 1978

**Foreign Trade Regimes
and Economic Development:
ANATOMY AND CONSEQUENCES
OF EXCHANGE CONTROL REGIMES**

NATIONAL BUREAU OF ECONOMIC RESEARCH

Arthur F. Burns, *Honorary Chairman*
James J. O'Leary, *Chairman*
Eli Shapiro, *Vice Chairman*
Martin S. Feldstein, *President*
Victor R. Fuchs, *Vice President, Director,*
Palo Alto Office
Philip J. Sandmaier, Jr., *Treasurer*

Charles E. McLure, Jr., *Executive Director*
for Research
Douglas H. Eldridge, *Executive Secretary*
Sam Parker, *Director of Finance and Ad-*
ministration
Robert E. Lipsey, *Director, New York Office*
Joel Popkin, *Director, Washington Office*

DIRECTORS AT LARGE

Moses Abramovitz, *Stanford University*
Atherton Bean, *International Multifoods*
Corporation
Andrew F. Brimmer, *Brimmer & Company,*
Inc.
Otis F. Brubaker, *United Steelworkers of*
America
Arthur F. Burns, *Board of Governors of the*
Federal Reserve System
Wallace J. Campbell, *Foundation for Co-*
operative Housing
Solomon Fabricant, *New York University*
Martin S. Feldstein, *Harvard University*
Eugene P. Foley, *Pan American Building,*
York
Edward L. Ginzton, *Varian Associates*
David L. Grove, *International Business*
Machines Corporation
Walter W. Heller, *University of Minnesota*

Walter E. Hoadley, *Bank of America*
Roy E. Moor, *Becker Securities Corporation*
Geoffrey H. Moore, *National Bureau of Eco-*
nomic Research
J. Wilson Newman, *Dun & Bradstreet Com-*
panies, Inc.
James J. O'Leary, *United States Trust Com-*
pany of New York
Peter G. Peterson, *Lehman Brothers*
Robert V. Roosa, *Brown Brothers Harriman &*
Co.
Richard N. Rosett, *University of Chicago*
Bert Seidman, *American Federation of Labor*
and Congress of Industrial Organizations
Eli Shapiro, *The Travelers Corporation*
Arnold M. Soloway, *Jamaicaway Tower, Bos-*
ton, Massachusetts
Lazare Teper, *International Ladies Garment*
Workers' Union

DIRECTORS BY UNIVERSITY APPOINTMENT

Gardner Ackley, *Michigan*
G. L. Bach, *Stanford*
Charles H. Berry, *Princeton*
Otto Eckstein, *Harvard*
Walter D. Fisher, *Northwestern*
John H. Kareken, *Minnesota*
J. C. LaForce, *California Los Angeles*
Robert J. Lampman, *Wisconsin*

Maurice W. Lee, *North Carolina*
James L. Pierce, *California, Berkeley*
Almarin Phillips, *Pennsylvania*
Lloyd G. Reynolds, *Yale*
Robert M. Solow, *Massachusetts Institute of*
Technology
Henri Theil, *Chicago*
William S. Vickrey, *Columbia*

DIRECTORS BY APPOINTMENT OF OTHER ORGANIZATIONS

Richard M. Bird, *Canadian Economics Asso-*
ciation
Eugene A. Birnbaum, *American Management*
Associations
Carl F. Christ, *American Economic Associa-*
tion
Robert G. Dederick, *National Association of*
Business Economists
Franklin A. Lindsay, *Committee for Eco-*
nomic Development
Paul W. McCracken, *American Statistical*
Association

Douglass C. North, *Economic History Associ-*
ation
Rudolph A. Oswald, *American Federation of*
Labor and Congress of Industrial Organi-
zations
Philip J. Sandmaier, Jr., *American Institute of*
Certified Public Accountants
G. Edward Schuh, *American Agricultural*
Economics Association
James C. Van Horne, *American Finance Asso-*
ciation

DIRECTORS EMERITI

Percival F. Brundage
Emilio G. Collado
Frank W. Fetter
Thomas D. Flynn

Gottfried Haberler
Albert J. Hettinger Jr.
George B. Roberts
Murray Shields

Boris Shishkin
Willard L. Thorp
Joseph H. Willits
Theodore O. Yntema

**RELATION OF THE DIRECTORS TO THE
WORK AND PUBLICATIONS OF THE
NATIONAL BUREAU OF ECONOMIC RESEARCH**

1. The object of the National Bureau of Economic Research is to ascertain and to present to the public important economic facts and their interpretation in a scientific and impartial manner. The Board of Directors is charged with the responsibility of ensuring that the work of the National Bureau is carried on in strict conformity with this object.

2. The President of the National Bureau shall submit to the Board of Directors, or to its Executive Committee, for their formal adoption all specific proposals for research to be instituted.

3. No research report shall be published by the National Bureau until the President has sent each member of the Board a notice that a manuscript is recommended for publication and that in the President's opinion it is suitable for publication in accordance with the principles of the National Bureau. Such notification will include an abstract or summary of the manuscript's content and a response form for use by those Directors who desire a copy of the manuscript for review. Each manuscript shall contain a summary drawing attention to the nature and treatment of the problem studied, the character of the data and their utilization in the report, and the main conclusions reached.

4. For each manuscript so submitted, a special committee of the Directors (including Directors Emeriti) shall be appointed by majority agreement of the President and Vice Presidents (or by the Executive Committee in case of inability to decide on the part of the President and Vice Presidents), consisting of three Directors selected as nearly as may be one from each general division of the Board. The names of the special manuscript committee shall be stated to each Director when notice of the proposed publication is submitted to him. It shall be the duty of each member of the special manuscript committee to read the manuscript. If each member of the manuscript committee signifies his approval within thirty days of the transmittal of the manuscript, the report may be published. If at the end of that period any member of the manuscript committee withholds his approval, the President shall then notify each member of the Board, requesting approval or disapproval of publication, and thirty days additional shall be granted for this purpose. The manuscript shall then not be published unless at least a majority of the entire Board who shall have voted on the proposal within the time fixed for the receipt of votes shall have approved.

5. No manuscript may be published, though approved by each member of the special manuscript committee, until forty-five days have elapsed from the transmittal of the report in manuscript form. The interval is allowed for the receipt of any memorandum of dissent or reservation, together with a brief statement of his reasons, that any member may wish to express; and such memorandum of dissent or reservation shall be published with the manuscript if he so desires. Publication does not, however, imply that each member of the Board has read the manuscript, or that either members of the Board in general or the special committee have passed on its validity in every detail.

6. Publications of the National Bureau issued for informational purposes concerning the work of the Bureau and its staff, or issued to inform the public of activities of Bureau staff, and volumes issued as a result of various conferences involving the National Bureau shall contain a specific disclaimer noting that such publication has not passed through the normal review procedures required in this resolution. The Executive Committee of the Board is charged with review of all such publications from time to time to ensure that they do not take on the character of formal research reports of the National Bureau, requiring formal Board approval.

7. Unless otherwise determined by the Board or exempted by the terms of paragraph 6, a copy of this resolution shall be printed in each National Bureau publication.

(Resolution adopted October 25, 1926, as revised through September 30, 1974)

Dedication

For
Alex and Rachel
Erlich

Contents

<i>Foreword</i>	xiv
<i>Preface</i>	xvii
<i>PART I. Introduction</i>	1
Chapter 1: Scope of the Study	2
<i>PART II. Anatomy of Exchange Control Regimes: Patterns and Sequences</i>	7
Chapter 2: Anatomy of Exchange Control Regimes	8
Conventional Theory	8
Regulating Imports	12
Regulating Exports	38
Regulating Services	40
Regulating Capital Flows	40
Overall Setting	41
Price Instruments: Imports	41
Price Instruments: Exports	46

Chapter 3: Sequential Phases and Contrasting Structures in Exchange Control Regimes	53
General Propositions	53
Sequential Patterns and Phases	56
Phase Evolution and Patterns in Countries in the Project	59
 <i>PART III. The Consequences of Exchange Control Regimes</i>	 64
Chapter 4: Illegal Transactions and Exchange Control	65
Illegality in Awarding, Claiming, and Disposing of Licenses	65
Faked Invoicing and Smuggling	67
Capital Flight	71
Reverse Links between QRs and Illegal Transactions	77
Appendix	77
 Chapter 5: Allocative Efficiency	 82
Some Overall Indicators	83
Interactivity Allocation of Resources: DRCs et al.	85
Underutilization of Capacity	101
Excess Holdings of Inventories	110
Effects of Cheap Imports of Capital Goods and Raw Materials	113
Miscellaneous Effects	117
 Chapter 6: Saving: Domestic and Foreign	 127
Possible Links Between Domestic Saving and Foreign Trade Regimes	128
Empirical Evidence on Links Between Domestic Saving and Foreign Trade Regimes	138
Overall Phase Relationships	160
Possible Links Between Foreign Capital Flows and Foreign Trade Regimes	161
Concluding Remarks	174

Chapter 7: Export Performance and Other Effects	182
Export Performance	182
Export Performance and Growth Performance	191
Other Growth Effects	192
Income Distributional Effects	197
<i>PART IV. Conclusions</i>	205
Chapter 8: Foreign Trade Regimes: Overall Conclusions	206
Export-Promoting vs. Import-Substituting Strategy and Relationship to Phase Analysis	207
Reasons for Superiority of Export-Promoting Strategy: Some Hypotheses	209
Concluding Observations	215
<i>Appendix</i>	219
<i>Author Index</i>	222
<i>Subject Index</i>	224
<i>About the Author</i>	232

Figures

2-1	The Equivalence of Tariffs and Quotas Under Perfect Competition	9
2-2	The Foreign Exchange Market and Overvaluation	10
3-1	<i>Phases of Exchange Control Regimes</i>	61
8-1	Definition of Import-Substituting and Export-Promoting Strategies	208
8-2	Welfare Effect of Successive Inflows of Capital in Presence of Tariff Distortion	213

Tables

2-1	Transition Matrices, 100-Commodity Samples: Turkey	19
2-2	Comparison of the Shifts in the Import Structures in LDCs and DCs	22
2-3	Effectiveness of Import Restrictions in Israel, 1956	44
4-1	Exports of LDCs to OECD Countries Compared with Corresponding Imports by OECD Countries from LDCs and Black Market Premium of U.S. Dollars, for 28 LDCs: 1966	73
4-2	Imports of LDCs from OECD Countries Compared with Corresponding Exports by OECD Countries to LDCs: 1966	75
5-1	Summary Information on DRCs and ERPs in Country Studies	92
5-2	Ranking of Crops in 1963 According to ERP, DRC, and Alternative Measures of Acreage Misallocation: Egypt	97
5-3	Ratio of Investment in Stocks to Fixed Investment, Various Countries, 1966-1968	111
6-1	Summary of Results of Regressions of Gross Domestic Saving on GDP and Exports: Several Countries and Periods	143
6-2	Corporate Saving Regressions in Selected Industries: India	145
6-3	Real Consumption-Saving Functions for Chilean Households and Non-profit Institutions, Business, and the Government: 1945-1965	148
6-4	Estimated Shares of Government, Corporate, and Personal Saving in Total Domestic Saving in Countries in the Project	152
6-5	Effect of Exchange Rate on the Development Budget, 1951-1968: Israel	157
6-6	Saving Regressions for India: 1951-1952 to 1959-1960 and 1960-1961 to 1969-1970	161

6-7	Results of Major Analyses Regressing Saving on Foreign Capital Flows	168
6-8	Alternative Saving Regressions for India: 1951-1970	171
6-9	Private and Government Saving Regressions for India: 1951-1952 to 1965-1966	173
7-1	Principal Project Results on Time Series Regressions of Exports	185

Foreword

This volume by Jagdish Bhagwati, together with Anne Krueger's *Foreign Trade Regimes and Economic Development: Liberalization Attempts and Consequences*, published earlier, brings to a conclusion the National Bureau of Economic Research Project on Foreign Trade Regimes and Economic Development, directed by Professors Bhagwati and Krueger. Professor Bhagwati's synthesis volume concentrates on the exchange control regimes themselves, while Professor Krueger's focused on attempts at liberalization. The syntheses draw on the previously published studies of Turkey, Ghana, Israel, Egypt, the Philippines, India, South Korea, Chile, and Colombia, as well as the two studies that were begun but not completed on Brazil and Pakistan. The Project, which began in 1970, is being followed up under the National Bureau's program on International Economic Relations by a study of Alternative Trade Strategies and Employment under Professor Krueger's direction. Both of these studies have been financed under research contracts with the Agency for International Development of the U.S. Department of State.

Perhaps the outstanding point of both syntheses is the conclusion that an export-promoting strategy is superior to an import-substitution strategy for the promotion of economic growth in developing countries. Professor Bhagwati defines export promotion policy as one which removes import bias, and in fact he finds that what are called export promotion policies usually do not involve a bias toward exporting but something closer to neutrality and therefore to a free-trade position.

The very isolation from world markets fostered by an import-substitution strategy leads to "chaotic" incentives, so that the strategy is far from an "ideal" one that might be theoretically constructed. Export-promoting strategy, on the other hand, seems to lead to incentives that are less chaotic—more neutral among industries—and on this ground alone should contribute to economic growth. One reason why export-promotion policies do not involve large biases toward exports is that export subsidies, the main possible source of export bias, are an open cost in national budgets. An import-substitution policy, operating typically through quantitative restrictions, does not involve any budgetary cost for the Treasury, and inadvertent major distortions are therefore much more likely.

Given the way an import-substitution regime actually works, including the fact that it typically operates largely through physical measures (quotas) rather than price measures (tariffs), many aspects of the regime seem to be at best irrelevant for development and often clearly injurious in ways that are barely touched on by the theoretical literature Professor Bhagwati reviews. As in Professor Krueger's volume, there is strong evidence here not only of the effects of domestic political considerations but also of that appears to have been sheer inadvertence. Quantitative controls became so complex that governments did not realize their impact, as in the case cited for India in which ". . . the import control regime seems to have provided the private sector with incentives to add to capacity in the face of excess capacity."

The gains from an export-promotion strategy are thus largely in the removal of such unintended consequences of import substitution as excess capacity, excess inventories, and bottlenecks. These effects are reinforced by the apparent success of export promotion in inducing greater capital inflows, despite the high profits for local production offered by import-substitution policies. Professor Bhagwati's explanation is, first, that foreign capital inflow is encouraged by the prospect of higher exports, which can finance the servicing and repatriation of the debt. His second point is that the type of "tariff-jumping" direct investment induced by import substitution may lower real income in the receiving country, while under an export-promotion strategy the investment is more likely to take advantage of the country's abundant resources, particularly labor, and thus raise the country's (and the world's) real income.

Professor Bhagwati points out that both tariffs and quantitative restrictions give rise to opportunities for illegal transactions, favoritism, and corruption. However, quantitative restrictions, by producing larger deviations from free market prices than do tariffs, offer larger temptations to illegal behavior. The awarding of import licenses has produced the most flagrant examples, but quantitative restrictions also offer greater incentives to smuggling and false invoicing than tariffs because the implicit tariffs resulting from quantitative

restrictions are so high. Explicit tariffs of over 100 percent are rare, but implicit tariffs over 100 percent resulting from quantitative controls are numerous.

Even where the quantitative restrictions do not give rise to illegal transactions or corruption, the effort to avoid favoritism in awarding licenses often leads to mechanical methods of allocation on the basis of "fairness," or "equality of treatment." The result of such efforts is to ignore efficiency in favor of rules of thumb that seem "fair" such as allocation by past shares, capacity, employment, and so on, all of which shelter and thus preserve the least efficient firms.

Professor Bhagwati examines each aspect of the anatomy of exchange controls theoretically and points out the often severe limitations that the required assumptions place on the applicability of the theory. He then combs the country studies and related literature for examples, counter-examples, and statistical tests of the nature and consequences of exchange control regimes. He carefully points out the difficulties in tracing clear effects of exchange controls and calls attention to the exceptions and ambiguous cases.

In a sense, by examining the anatomy of exchange control regimes, Professor Bhagwati opens up an area beyond the usual theory of optimum development policy. What is needed is a theory of how policy will actually be made and administered under different trade regimes given the incentives for the policy-makers, the administrators of the policy within the government, and the firms that must live with or evade the policy. It may be irrelevant to any actual problem whether a quantitative restriction program can be imagined that would maximize real income or growth. A policy of import substitution, particularly under quantitative restrictions, may involve so many opportunities to secure private profits in ways that defeat the ostensible purpose of the restrictions that it is bound to be manipulated to that end. Even if an export promotion policy were not theoretically superior, it might be superior in fact because it offered fewer opportunities for exploitation.

The success of Professors Bhagwati and Krueger in drawing substantial conclusions about trade policy from such intractable materials testifies to the value of this type of large-scale comparative study that could draw on the experience of many countries and expert contributors. In a study of any single country the complexities and national peculiarities would obscure the lessons. A series of studies, in a well-designed common framework, can bring out the major common themes of each country's experience and provide conclusions for scholars and policy-makers.

Robert E. Lipsey
Director, International Studies

Preface

This volume is designed to be a partial synthesis of the major findings of the National Bureau of Economic Research Project directed by me and Professor Anne Krueger. It is meant to be a complement to the more substantial synthesis written by Professor Krueger and therefore is deliberately kept extremely brief in regard to both the description of the country studies and its overall size, the former so as to avoid undue repetition and the latter so as not to strain the patience of the reader who seeks to gain a total view of the Project's findings.

Two caveats must be entered. First, the two synthesis volumes complement each other in focusing on different aspects of the Project. This volume is addressed to the static efficiency and dynamic effects of exchange control regimes whereas the Krueger volume is addressed principally to the causes and consequences of liberalization attempts. Nevertheless, inevitably, several overlaps of topics do exist. In these instances, no attempt has been made to impose uniformity of views. This is, in fact, in the spirit of the Project, and we hope that it also encourages the readers of the synthesis volumes to refer to the original country studies and attempt their own syntheses! Nonetheless, the reader of both volumes should find a substantial conformity in the overall conclusions reached by Professor Krueger and myself, especially in regard to the major questions addressed by the Project.

Second, the syntheses cannot expect to, and in fact do not, capture the full complexities and subtleties that the reader will find in many of the country studies. At least this volume should therefore be treated as a guide to certain key contributions in the country studies rather than as a perfect substitute to reading them for their many insights.

In the course of reflecting over the questions posed in the Project and interacting with the many distinguished collaborators in the Project, I have chalked up a number of intellectual debts. I should particularly like to thank Hal Lary of the National Bureau of Economic Research who oversaw the Project over its long life. Although he is an economist with distinguished contributions of his own, he selflessly gave an immense amount of time, energy, and intellectual ability to the Project. While therefore no volume bears his name, the stamp of his meticulousness, carefulness with data and interpretation, and insightfulness is evident in all the volumes published under the Project, and none of them has failed to improve from his generous input. I should also like to add that I have profited much from the collaboration with Anne Krueger in co-directing the Project. Over the several years that we have worked on the Project, we have discussed many things, and it is now impossible to take the partial derivatives and assign marginal product to either of us. But it is evident to me that, without her many contributions, the Project would have been much the poorer. Next, all the country authors have freely placed at our disposal their ideas, in penciled comments on early drafts, through their excellent studies, and at the on-the-way conferences that were held to discuss the progress of the Project. The penultimate draft in particular has profited immensely from the detailed and careful comments of Bent Hansen, Clark Leith, Larry Westphal, Jere Behrman, Anne Krueger, Hal Lary, T.N. Srinivasan, Padma Desai, and Gideon Fishelson.

Finally, the reader should be warned that, except for minor revisions, the writing of this volume was substantially finished by June 1977.

Cambridge
March 1978

Jagdish N. Bhagwati

Other Books by the Author

The Economics of Underdeveloped Countries
Trade, Tariffs and Growth
The Theory and Practice of Commercial Policy
The Amount and Sharing of Aid
India: Planning for Industrialization (with Padma Desai)
India in the International Economy
Contributions to Indian Economic Analysis (with S. Chakravarty)
Foreign Trade Regimes and Economic Development: India (with T.N. Srinivasan)

International Trade (editor)
Foreign Aid (co-editor with R.S. Eckaus)
Economics and World Order (editor)
Development and Planning (co-editor with R.S. Eckaus)
Trade, Balance of Payments, and Growth (co-editor with R. Jones, *et al.*)
Illegal Transactions in International Trade (editor)
Taxing the Brain Drain: A Proposal (co-editor with M. Partington)
The Brain Drain and Taxation (editor)
The New International Economic Order: The North-South Debate (editor)

