

ESSAYS ON LABOR
AND
INTERNATIONAL
TRADE

By Daniel J. B. Mitchell

INSTITUTE OF INDUSTRIAL RELATIONS
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Foreword

The Institute of Industrial Relations is pleased to offer *Essays on Labor and International Trade* as the fifteenth volume in its Monograph Series. Daniel J. B. Mitchell, the author of this work, is Assistant Professor of Industrial Relations at the Graduate School of Business Administration of the University of California, Los Angeles. Professor Mitchell took his Ph.D. at the Massachusetts Institute of Technology and has been especially interested in international trade problems as they relate to labor issues.

The Institute is grateful to Professors Walter Fogel, Bruce Herrick, and Michael Yoshino, who were the reading committee. Felicitas Hinman was the editor. The cover was designed by Marvin Rubin.

The viewpoint expressed is that of the author and is not necessarily that of the Institute of Industrial Relations or of the University of California.

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Introduction

The United States is a country in which international trade accounts for only a small portion of the total economic activity. Partly for this reason, the American labor economist often has not devoted much attention to international economics. His international research generally involves such topics as comparative labor movements and industrial relations systems. Problems of trade between countries, the balance of payments, tariffs, and exchange rates are left to other specialists.

In many cases, this isolation of the disciplines of labor economics and international economics represents a sound division of labor. However, there is a need for a bridge between the two fields. When the balance of payments worsens, attention is often turned toward labor costs as a possible explanation. When tariff adjustments are debated, interest is heightened in the labor market effects of trade restrictions. Surely, in such instances labor economics and international economics overlap.

This monograph is an attempt at bridge building. Two approaches are used. Chapter 1 is essentially a review of the labor aspects of international economics. Three topics have been chosen for discussion: (1) labor and the structure of international trade; (2) tariff protection, real wages, and labor development; (3) money wages, currency depreciation, and incomes policy. The first two are likely to be the least familiar to the American labor economist and are included for that reason. The third topic was chosen because the much-discussed trade-off between low unemployment and price stability is a subject well-known to labor economists. But, it is often in reality a conflict between low unemployment and balance-of-payments stability and ought to be discussed in those terms.

Chapters 2 through 5 represent an alternative approach. Rather than simply reviewing previous literature, these chapters present concrete examples of topics in which there is a definite overlap between labor economics and international economics. Chapter 2 explores the occupational structure of American exports and imports. The evidence for a skill explanation of the U.S. trade pattern is investigated. In chapter 3, the attitudes of American labor toward tariff protection are examined. A good deal of attention is devoted to the worker adjustment assistance features of the Trade Expansion Act of 1962 and the Automotive Products Trade Act of 1965. International fair labor standards

and internationally coordinated collective bargaining are the subject of chapter 4. The approach taken is both descriptive and analytical. Finally, chapter 5 is a case study of the use of incomes policy for balance-of-payments purposes in the British context. Labor economists have followed the development of British incomes policy with considerable interest. However, the balance-of-payments aspects of the program have not received sufficient attention.

All chapters are written on the assumption that the reader brings with him a background in economics. However, much of chapters 3 and 4 can be read without such background. A reader who has taken a graduate course in international economics will probably find chapter 1 to be a summary of already familiar material. Since most labor economists have not taken such courses, chapter 1 may be rough going. Hopefully, it will be worth the effort. Section I of chapter 1 provides a background for chapters 2, 3, and 4. In addition, section II on tariffs is useful for an understanding of chapter 3. Section III should be read before beginning chapter 5.

One topic, immigration, has not been included in this monograph. The reasons for this exclusion are twofold. First, the effects of migration from one country to another are not much different from the effects of internal migration within a single country. Labor economists can easily analyze the effect of an increase or decrease in labor supply in a particular country. Second, international economics is in large part based on the assumption that labor is immobile. Trade theory has been traditionally presented in a framework of complete immobility of factors of production, although this assumption has been relaxed in recent literature. Balance-of-payments theory has long recognized the existence of movements of financial capital. But, if all factors of production including labor are considered mobile, the distinction between national economics and international economics is largely eroded. The only aspect of an international nature which may distinguish internal migration from migration between countries is that, in the latter case, it is often asked whether a country benefits from in- or out-migration. This question has been discussed by others elsewhere, and little could be added by a treatment of it here.¹

¹ See Charles P. Kindleberger, *Europe's Postwar Growth: The Role of Labor Supply* (Cambridge, Mass.: Harvard University Press, 1967), chapter X.

Chapter I

Labor and International Trade: A Review of Selected Topics

When an author attempts to summarize a body of thought and its related literature, he faces a trade-off of objectives. On the one hand, he must be detailed enough so that important topics are not omitted or treated with such brevity as to be incomprehensible. On the other hand, he should not waste the reader's time by trying to substitute for an elementary course and textbook. Each statement need not be proved and each ramification need not be explored in a good review.

Hopefully, a proper balance has been struck in this chapter. It is assumed that the reader has a background in economics but not in international economics. This means that somewhere, in some introductory course, the reader will have learned about something called the theory of "comparative advantage," although he may not recall precisely how it worked. In addition, if the state of the balance of payments or the gold stock was in the newspapers at the time, a lecture or two might have been devoted to the "financial" side of international economics.

The reader should pace himself in reading this chapter according to the aptness of the above description. There are no proofs, equations, or fancy symbols included. The footnotes serve the usual academic purposes of giving credit where credit is due and of elaborating on particular points which would interrupt the flow of the text. They are not critical to an understanding of the discussion.

I. LABOR AND THE STRUCTURE OF TRADE

Introduction

The structure of trade has long been a central topic of international economics. A beginning student starts out by learning that countries export those products in which they have a comparative advantage and import those in which they are at a comparative disadvantage. The phrase "comparative advantage" was derived in the context of the labor theory of value associated with David Ricardo, the famous nineteenth-

century political economist. Without this theory, the phrase becomes rather ambiguous. As will be seen, once the labor theory of value was abandoned in western thinking, international economic theory began to look for a substitute concept that would explain trade structure. First, the labor content of production *relative* to the capital content was held to be the chief explanation. More recently, empirical work of the type presented in chapter 2 has concentrated on the quality of the labor input. Section I of this chapter traces the history of this branch of economic thought.

The Ricardian Model

When David Ricardo first demonstrated the principle of comparative advantage, he used a simple numerical example which assumed that labor was the only factor of production and that production functions differed internationally.¹ These were very convenient assumptions. If the quantity of labor contained in a unit of each product (labor productivity) is known, and if the price of labor is the same in all sectors, the relative prices of all commodities are known. Thus, if it takes ten man-hours to make a blanket and five man-hours to make a bushel of wheat, then a blanket must cost twice as much as a bushel of wheat. If the relative man-hour requirements differ internationally, so will the relative price of blankets in terms of wheat. In Ricardo's two country-two commodity model, each country exported that product which it could produce relatively cheaply and imported the other. The structure of trade was determined entirely by differences in production functions which appeared as variations in labor productivity.

In the long run, trade between the two countries must balance. Wages in the two countries must therefore be determined at levels which, given the exchange rate, permit each country to have lower unit labor costs in the commodity in which it has a comparative advantage. There are clearly configurations of exchange rates and wage levels which would make unit labor costs lower for both products in one country. At any exchange rate and wage level in country A, the wage in country B could be lowered to the point where no production in A could be competitively undertaken. But since such a configuration would imply that country A would export both products and import nothing while B would import both products and export nothing, some adjustments in the exchange rate and/or relative wage level would have to occur. Theoretically, the classical gold standard or a floating exchange rate leads to the necessary adjustment; each country ends up with an ab-

¹ David Ricardo, *The Principles of Political Economy and Taxation* (New York: E. P. Dutton & Co., 1962), pp. 77-93.

solute monetary cost advantage in the production of the good in which it has a comparative advantage.

The Heckscher-Ohlin Model

A new theory of the structure of trade did not come along for a century after Ricardo. By that time, the labor theory of value had been discarded in the west and, hence, labor requirements alone were no longer considered adequate to explain trade patterns. Moreover, the elucidation of the perfect competition model made differences in production functions difficult to justify in theoretical models. Perfect competition assumes that knowledge and technology are disseminated everywhere. Hence, by assumption, firms in different countries must use the same production functions, although, of course, these functions could allow for substitution between labor and other factors.

The new Heckscher-Ohlin theory of international trade (hereafter referred to as H-O) made the perfect competition assumption.² Like Ricardo's model, it assumed there were two countries and two commodities. Unlike Ricardo, it assumed two factors—labor and capital—available to each country in fixed supplies (no migration or capital movements allowed). Production functions were taken to be identical in the two countries and of the type which allows one good to be labeled "labor intensive" and the other "capital intensive" in both countries.³

² References are traditionally made to Bertil Ohlin, *Interregional and International Trade* (Cambridge, Mass.: Harvard University Press, 1935), pp. 9-49, and Eli Heckscher, "The Effect of Foreign Trade on the Distribution of National Income," translated and reprinted in American Economic Association, *Readings in the Theory of International Trade* (Philadelphia: Blakiston, 1950), pp. 272-300. All theories undergo reinterpretation as time passes and arguments eventually arise over what the originators meant. The exposition in the text follows the interpretation of J. L. Ford, "The Ohlin-Heckscher Theory of the Basis of Commodity Trade," *Economic Journal*, LXXXIII, September 1963, pp. 460-461.

³ A good is relatively labor intensive if, at any possible ratio of wages to the rental price of capital, a higher ratio of labor to capital is used in its production compared with another good. The H-O theory requires only that goods are unambiguously labor or capital intensive *within* the observed range of ratios of factor prices of the trading countries. One author, Minhas, claimed he had found empirical evidence that in the real world goods cannot be unambiguously labeled labor or capital intensive. That is, at observed wage-rental ratios, the goods switch roles and the labor intensive good becomes capital intensive and vice versa. See Bagicha S. Minhas, "The Homothallic Production Function, Factor-Intensity Reversals, and the Heckscher-Ohlin Theorem," *Journal of Political Economy*, LXX, April 1962, pp. 138-156. Criticism of Minhas' interpretation may be found in David Stafford Ball, "Factor-Intensity Reversals in International Comparison of Factor Cost and Factor Use," *Journal of Political Economy*, LXXIV, February 1966, pp. 77-80, and Wassily Leontief, "An International Comparison of Factor Costs and Factor Use," *American Economic Review*, LIV, June 1964, pp. 335-345. A theoretical analysis of the implications of factor-intensity reversals appears in Harry C. Johnson, "Factor Endowments, International Trade, and Factor Prices," *Manchester School*, XXV, September 1957, pp. 270-283.

Given certain assumptions about demand, the H-O theory implies that before trade begins, labor will be "cheap" in the country with the lower capital-labor ratio and capital will be "cheap" in the country with the higher capital-labor ratio. This gives the labor-abundant country an advantage in labor intensive goods and the capital-abundant country an advantage in capital-intensive goods. Hence, the theory predicts that labor-abundant countries will export labor-intensive goods and import capital-intensive goods. And the opposite will be true for the capital-rich country. From the H-O theory, it might be presumed on an *a priori* basis that India would export labor-intensive commodities to the United States in exchange for capital-intensive commodities.

The H-O model has an interesting corollary which will be utilized in the next section and in chapter 3. If wages differ between countries, unhindered migration would tend to equalize wages by allowing labor to move from low-wage to high-wage areas of the world. Such migration would tend to lower wage levels in high-wage countries, if permitted. For this reason, high-wage countries generally limit immigration. But, even if migration were completely blocked, H-O theorists believed that international trade could be a partial substitute for immigration. Labor-abundant countries export labor-intensive goods and import capital-intensive goods. This tends to raise the wage and lower the price of capital relative to the no-trade position in these countries.⁴ Similarly, the demand for labor is lessened in labor-scarce countries which "economize" on labor by importing labor-intensive products instead of making them domestically. Trade in the H-O model tends to equalize factor prices internationally, although the model's originators did not believe the prices would actually equalize. A theoretical nicety was added in 1948, when Paul A. Samuelson showed that under a variety of restrictive assumptions—often made in international trade theory—factor prices would in fact be equalized internationally by free trade. He suggested that his finding implied that migration from war-torn Europe to the United States was unnecessary. International trade would raise European wages.⁵

⁴ It is generally assumed that countries do not become completely specialized in the production of exports as a result of trade. That is, an import-competing industry remains in operation. Without this assumption, the discussion in the text must be qualified. See J. Black, "Foreign Trade and Real Wages," *Economic Journal*, LXXXIX, March 1969, pp. 184-185.

⁵ After publication of the factor-price equalization theorem, many authors—too numerous to cite here—explored the implications of relaxing the restrictive assumptions. The original citation is Paul A. Samuelson, "International Trade and Factor-Price Equalization," *Economic Journal*, LVIII, June 1948, pp. 163-184. A second, clarifying exposition appears in Paul A. Samuelson, "International Factor-Price Equalization. Once Again," *Economic Journal*, LIX, June 1949, pp. 181-197.

The H-O theory went untested until 1953, when Wassily Leontief computed the labor and capital requirements of American exports and import replacements using an input-output table.⁶ International economists were startled to discover that the United States, presumably the most capital-abundant country in the world, exported labor-intensive products and imported capital-intensive products. At present, the "Leontief paradox," so named because it contradicts the H-O theory, is still a subject of dispute. And the H-O theory remains in the textbooks.⁷

When confronted with an empirical result which contradicts a previously accepted theory, the researcher has various alternatives. One possibility is to accept the result as valid and look for some "perverse" factor which has upset the theory. An example of this type of reaction may be found in the work of William Travis. Travis suggested that tariffs, quotas, and other devices employed by industrialized countries have thwarted the pattern of trade dictated by the H-O model. The less developed nations "ought" to be world suppliers of labor-intensive light manufactures. Developed countries "ought" to supply the world with capital-intensive agricultural products and heavy manufacturers. But the developed countries protect their import-competing industries and keep out imports from the less developed nations other than raw materials. This barrier, according to Travis, forces the less developed world to devote most of its labor force to goods and services which would otherwise require large amounts of land, capital, and technology. If much of the labor force is inefficiently engaged in providing an agricultural subsistence, prospects for growth are limited because little "surplus" is left over for capital accumulation.⁸

However, the greatest impact of the Leontief findings was a questioning of the H-O theory rather than a search for some perverse man-made barrier to its operation. Naturally, once the assumptions underlying

⁶ Wassily Leontief, "Domestic Production and Foreign Trade: The American Capital Position Re-examined," Proceedings of the *American Philosophical Society*, vol. 97, pp. 332-349.

⁷ For example, see Charles P. Kindleberger, *International Economics*, 4th ed. (Homewood, Ill.: Richard D. Irwin, Inc. 1968). Kindleberger states (p. 31), "For the purpose of . . . this book, the Leontief claim is taken as not proven and the Ohlin explanation of U.S. trade, modified for technology . . . as presumptively true."

⁸ William P. Travis, *The Theory of Trade and Protection* (Cambridge, Mass.: Harvard University Press, 1964), pp. 242-248. It is widely recognized that tariffs in developed countries are biased against imports of manufactures from less developed countries. For an empirical study, see Bela Balassa, "The Impact of the Industrial Countries' Tariff Structure on their Imports of Manufactures from Less-Developed Countries," *Economica*, n.s. XXXIV, November 1967, pp. 372-383.

the theory are challenged, its predictions can be upset.⁹ For example, the assumption of identical production functions throughout the world is not necessarily valid. Intercountry "efficiency" differences can easily upset the H-O model. Suppose labor-abundant countries operate their labor-intensive industries inefficiently compared to the United States. Then it might be the case that these industries would be unable to compete with their American counterparts in the U.S. market. The United States might turn out to have a "comparative advantage" in labor-intensive products under this supposition.¹⁰

Leontief put forth a simple explanation of his paradox. His study indicated that the United States acted as though it were labor abundant. If American man-hours somehow embodied more labor units than foreign man-hours, the United States might be effectively labor abundant. Leontief suggested that if three foreign man-hours were equivalent to one American man-hour, the paradox would evaporate.¹¹

Without additional support, the Leontief explanation is an exercise in implicit theorizing. However, one observer did try to test the hypothesis through a survey of American firms operating abroad. The firms were asked to compare the effectiveness of American labor with foreign labor. They reported some superiority of American labor with the order of 1.2 to 1, a far cry from the 3 to 1 ratio needed to erase the paradox.¹² But this result cannot be taken as conclusive. It is possible that the alleged superiority of American labor is due to superior Ameri-

⁹ For example, adding a third good to the model can lead to indeterminate trade patterns. See James R. Melvin, "Production and Trade with Two Factors and Three Goods," *American Economic Review*, LVIII, December 1968, pp. 1249-68. Empirical work suggests that a third factor, natural resources, may help explain the Leontief paradox. See Jaroslav Vanek, "The Natural Resource Content of Foreign Trade, 1870-1955, and the Relative Abundance of Natural Resources in the United States," *Review of Economics and Statistics*, XLI, February 1959, pp. 146-153.

¹⁰ One study found that labor-intensive industries in Peru did not operate at lower costs than the corresponding U.S. industries because of greater American efficiency. See Christopher Claque, "An International Comparison of Industrial Efficiency: Peru and the United States," *Review of Economics and Statistics*, XLIX, November 1967, pp. 487-493. There has been some theoretical work on the effects of varying degrees of efficiency between nations on factor prices. See E. J. Mishan, "International Factor Price Determination with Neutral Technical Progress," *Economica*, n.s. XXXIII, August 1966, pp. 330-335, and Pranab Bardhan, "International Differences in Production Functions, Trade and Factor Prices," *Economic Journal*, LXXV, March 1965, pp. 81-87.

¹¹ Leontief did not mean simply that labor productivity is higher in the United States than abroad. This could be expected in a capital-abundant country. His explanation can best be viewed as a production $Q = F(K, L)$, while abroad the same good is produced with the function $Q = F(K, L)$ where $a = 3$, $Q = \text{output}$, $K = \text{capital}$, $L = \text{labor}$.

¹² Mordechai E. Kreinin, "Comparative Labor Effectiveness and the Leontief Scarce-

can techniques of management and industrial relations. If that were the case—and if these techniques were utilized by U.S. firms with foreign operations—the survey would provide no useful information. However, the question of whether managerial practices are generally transplanted is an open one.¹³ Labor specialists could do a good turn for international economics by conducting further research on this topic.

Labor Quality and Trade Structure

In recent years labor economists have been interested in the concept of "human capital," the value of education and training embodied in the labor force. One author argued that if primary inputs to production are to be lumped under two headings, capital and labor, the human capital embodied in the labor force must be included under physical capital. He estimated that if this adjustment were made (valuing human capital at the appropriate discount rate), the Leontief paradox would evaporate.¹⁴

A second possibility suggests itself. Instead of trying to confine the analysis to two factors of production, why not try and disaggregate? In a second article on his paradoxical finding, Leontief experimented with the labor input by dividing it into five broad occupational classes. He found that U.S. exports were skill intensive relative to competitive imports.¹⁵ Subsequent work by Donald Keesing, although based on different computational procedures and a narrower group of industries,

Factor Paradox," *American Economic Review*, LV, March 1965, pp. 131-140.

¹³ Professor Frederic Meyers has brought to my attention a Ph.D. thesis which compared management practices of American and Indian firms operating in India and found some differences, but not striking ones. See Krishna Shetty, "A Comparative Study of Manpower Management Practices in American and Indian Industrial Enterprises," unpublished doctoral dissertation, Graduate School of Business Administration, University of California, Los Angeles, 1967. On the other hand, there are scattered pieces of evidence that American firms do carry their domestic practices abroad. For example, it has been reported that American-owned firms in Britain sometimes refuse to join local employer associations because of differing American and British attitudes toward collective bargaining. In France, American firms have been criticized for their "un-French" policies concerning layoffs. See, respectively, Lloyd Ulman, "Collective Bargaining and Industrial Efficiency" in Richard E. Caves and associates, *Britain's Economic Prospect* (Washington: Brookings, 1968), pp. 353-354, and Charles P. Kindleberger, *American Business Abroad: Six Lectures on Direct Investment* (New Haven: Yale University Press, 1969), pp. 79-80.

¹⁴ Peter B. Kenen, "Nature, Capital, and Trade," *Journal of Political Economy*, LXXIII, October 1965, pp. 456-458.

¹⁵ Wassily Leontief, "Factor Proportions and the Structure of American Trade: Further Theoretical and Empirical Analysis," *Review of Economics and Statistics*, XXXVIII, November 1956, pp. 398-399. "Competitive imports" are products which compete with U.S. industries. Leontief did not consider goods such as tea, which cannot be produced in the United States.

confirmed Leontief's result concerning the relative skill intensity of U.S. exports.¹⁸

The Keesing conclusions are quite interesting in that they imply that, empirically, trade structure can be explained by looking at the labor factor alone. Chapter 2 presents a further exploration of this topic. Using alternative computational methods, similar results are obtained. Continued work in this area may broaden the contacts between labor economics and international economics.

The Structure of Trade: Implications

Twenty years ago, the implications of the H-O model for the labor economist working in the context of an underdeveloped country would have been clear and encouraging. If the country appeared to be labor abundant, development resources ought to be directed towards labor-intensive industries. A growing labor-intensive sector would find ready markets for its products in the developed world and would raise the income of labor at home.

Subsequent empirical research requires modification of this prescription for starting new industries. A labor-intensive industry which requires mainly skilled labor is not a likely candidate for a less developed country. The *type* of labor needed must be considered. A likely prospect for growth will be an industry which requires mainly unskilled labor and not a great deal of capital or sophisticated technology.

It is here that the difficult problems of "international fair labor standards" are raised. In developed countries, unions, particularly those in import-competing manufacturing industries, are often adamant in their insistence that international trade should not be based on labor costs. They look towards unions in competitor countries or to agencies such as the International Labor Organization to "take wages out of competition" in world markets. But, chapter 4 notes that there is a danger that unrealistic standards, if enforced, can severely limit the competitive possibilities of countries whose chief resource is abundant unskilled labor.

II. Tariff Protection, Real Wages, and Labor Deployment

Effective Protection

The H-O theory suggests that U.S. import-competing industries ought to be labor intensive. If the Leontief findings are mistaken, and this is the case, the labor factor might provide a unifying summary of Amer-

¹⁸ See chapter 2 for citations of the Keesing articles.

ican tariff structure. A Brookings study by Beatrice Vaccara did uncover such a relationship. Industries with high coefficients of (direct) labor requirements per dollar of output were found to have high tariffs.¹⁷

Vaccara's methodology has been questioned, however. Recent tariff theory has pointed out that the nominal tariff rate is not a good index of the protection afforded an industry. An industry's output is stimulated by tariff protection of its product. But tariffs on the inputs used by the industry raise the costs of production and tend to discourage output. Somehow, the positive effect of the nominal tariff must be adjusted to take account of the negative effect of other tariffs on the industry's inputs. These adjusted rates, called "effective tariffs," were not used in Vaccara's study.

Effective tariffs have been defined as the percentage increase in value added per unit of output made possible by all tariffs affecting the industry under consideration.¹⁸ This definition suggested to one author that if just labor's share of value added were included in the calculation, a measure of the effective rate of protection of labor would be obtained. When these effective rates of labor protection were correlated with Vaccara's labor utilization coefficients, no association was found. Labor intensity did not appear to be a unifying theme of the American tariff structure after all.¹⁹

Although the concept of effective protection is now accepted in the literature of international economics, the method of estimating effective rates used is in empirical studies still a matter of controversy. Travis has argued that the current measures of effective rates are useless. In particular, he maintains that Basevi's calculations do not measure the degree of protection afforded to labor and that the Vaccara study came

¹⁷ Beatrice N. Vaccara, *Employment and Output in Protected Manufacturing Industries* (Washington: Brookings, 1960). Note that the measure of labor intensity used in the Vaccara study differs from the capital-labor ratio suggested by the H-O theory.

¹⁸ For a theoretical exposition, see W. M. Corden, "The Structure of a Tariff System and the Effective Protective Rate," *Journal of Political Economy*, LXXIV, June 1966, pp. 221-237. There have been a number of empirical studies using the effective protection concept. As examples, see Bela Balassa, "Tariff Protection in Industrial Countries: An Evaluation," *Journal of Political Economy*, LXXIII, December 1965, pp. 573-594, and H. G. Grubel and H. G. Johnson, "Nominal Tariffs, Indirect Taxes, and the Effective Rates of Protection: The Common Market Countries, 1959," *Economic Journal*, LXXVII, December 1967, pp. 761-776.

¹⁹ Giorgio Basevi, "The United States Tariff Structure: Estimates of the Effective Rates of Protection of United States Industries and Industrial Labor," *Review of Economics and Statistics*, XLVIII, May 1966, pp. 147-160. It has been noted that once labor is recognized to be a heterogeneous factor, the theoretical underpinnings of Basevi's calculations are weakened. See B. F. Massell, "The Resource-Allocative Effect of a Tariff and the Effective Protection of Individual Inputs," *Economic Record*, vol. 44, September 1968, p. 373.

closer to the truth.²⁰ However, the unsettled state of affairs in this area leaves the outcome of the controversy in doubt.

Labor's Welfare

Vaccara considered only the question of whether American tariffs tend to protect labor-intensive industries. A separate question is whether such tariffs benefit labor. One possible benefit for labor might take the form of decreased unemployment. In an import-competing industry characterized by significant structural unemployment, a tariff which stimulated production would certainly benefit those who find jobs as a result. But, structural unemployment implies that there is some defect in the labor market, which might be relieved through direct action (perhaps some sort of retraining for other industries) rather than by a tariff increase. In any case, the benefit to the workers involved must be weighed against the cost to other workers when the price of the imported product is raised, before the net benefit to labor can be assessed.

Standard macro-economic analysis indicates that tariffs could be used to stimulate employment in place of other forms of aggregate demand policy. The arithmetic difference between exports and imports is a component of aggregate demand along with consumption, investment, and government spending. Assuming that foreign governments do not retaliate, an increase in a country's tariffs which cut imports relative to exports would provide the same type of stimulus as an increase in government spending.²¹ However, economists would generally prefer the use of monetary and fiscal policy to control the level of employment rather than changes in tariff policy.

The pure theory of international trade usually assumes that full employment is maintained and that labor is mobile within a country. In short, assumptions are made which rule out problems of unemployment. Given this abstract setting, the only benefit a tariff might have for labor would be an increase in labor's real income. As described in chapter 3, the issue whether labor benefits from tariffs has been raised

²⁰ William P. Travis, "The Effective Rate of Protection and the Question of Labor Protection in the United States," *Journal of Political Economy*, vol. 76, May/June 1968, pp. 443-461. Another author critical of the current methodology of estimating effective rates is Roy J. Ruffin, "Tariffs, Intermediate Goods, and Domestic Protection," *American Economic Review*, LIX, June 1969, pp. 261-269. However, a recent study purports to find a positive correlation between both nominal and effective tariff rates and labor intensity in the United States and Common Market countries. See Gianni Zandano, "The Heckscher-Ohlin Model and the Tariff Structures of the Industrial Countries," *Banca Nazionale Del Lavoro Quarterly Review*, March 1969, pp. 46-65.

²¹ For a simple exposition, see Charles P. Kindleberger, *International Economics*, 4th ed. (Homewood, Ill.: Richard D. Irwin, 1968), chapter 16.

periodically in the history of American commercial policy. Hence, the results obtained even from highly theoretical models are of particular interest.

At first glance, it may seem clear that tariffs on labor-intensive products could raise real wages. Such tariffs would greatly increase the demand for labor and bid up the wage. But since the cost of living would also be raised by the tariffs, the net effect on the real wage (the wage deflated by prices) is not obvious. Economists, imbued with the doctrine of free trade, generally allowed their case against tariffs for labor to rest on the offsetting price effect until 1929. In that year, a comprehensive survey of the Australian economy, the *Brigden Report*, asserted that Australian tariffs raised real wages and thereby helped to attract immigrants.²² This claim led to renewed interest in the income redistribution effects of tariffs. Out of the resulting debate, a theoretical proof that tariffs could raise real wages was developed by Stolper and Samuelson.²³

Their demonstration was basically a matter of running in reverse the income corollary of the H-O model. Suppose the country under consideration is labor scarce and capital abundant relative to the rest of the world. If the country did not trade, labor would be expensive and capital cheap. But trade lowers the real wage and raises the real price of capital. A tariff tends to undo the effects of trade by bringing the country back towards the autarkic position.²⁴ It can therefore be shown that protection raises the real wage of the scarce factor (which is assumed here to be labor) in terms of both the export and the import good. More generally, even if the H-O model is not assumed to hold, protection will tend to raise the real wage of the factor used intensively in the production of the import good.²⁵ An increase in the real wage of labor brought

²² For a history of this report and the development of Australian tariff policy, see Crauford D. W. Goodwin, *Economic Enquiry in Australia* (Durham: Duke University Press, 1966), pp. 3-39, and A. J. Reitsma, *Trade Protection in Australia* (Leiden: H. D. Stenfert Kroese N. V.) pp. 1-29.

²³ W. Stolper and P. A. Samuelson, "Protection and Real Wages," *Review of Economic Studies*, IX, November 1941, pp. 58-73.

²⁴ Under certain conditions involving inelastic demand for the country's exports, a tariff can discourage rather than stimulate import-competing production. Under such circumstances, the Stolper-Samuelson conclusion is reversed. See Lloyd A. Metzler, "Tariffs, the Terms of Trade and the Distribution of National Income," *Journal of Political Economy*, LVII, February 1949, pp. 1-29. The next two sentences assume that the "Metzler effect" is not applicable to the country under consideration.

²⁵ A survey of the qualifications which must be made to the Stolper-Samuelson model may be found in Jagdish Bhagwati, "Protection, Real Wages, and Real Income," *Economic Journal*, LXXIX, December 1969, pp. 733-748. An earlier paper, by departing from the H-O framework, served to emphasize the importance of the H-O model to the Stolper-Samuelson result. See Kevin Lancaster, "Protection and Real Wages: A Restatement," *Economic Journal*, LXXVII, June 1967, pp. 199-210. Some

about by tariff protection will also increase labor's relative and absolute share of national income at the expense of capital.²⁸

In American economic history, the most common version of the debate over whether tariffs benefit labor has come in the form of the "cheap labor" argument for protection. The argument declared that tariffs were needed to defend the American workmen from competition with imports made from cheap foreign labor. Such imports, if not restricted, would depress American wage standards to the point where American costs would be comparable to foreign costs.²⁹ The traditional rejoinder has been that costs other than labor costs are involved in the production of a given good, and that lower foreign productivity often results in lower American labor costs despite higher wages in the United States. Nonetheless, the cheap labor argument is given a certain amount of intellectual respectability by the Stolper-Samuelson demonstration when combined with the H-O theory. The latter theory is crucial if the argument is to be applied to the United States since the relative abundance of American capital implies that U.S. imports should be labor intensive relative to exports.

It has already been noted that the H-O theory was contradicted by the Leontief findings. If Leontief's study is correct, then imports are relatively capital intensive. The cheap labor argument may be reversed. Tariff protection could hurt labor and benefit capitalists. But, it is safe to say that at the present time no one knows what net effect tariffs have had on American income distribution. In other countries economists have sometimes been willing to apply the Stolper-Samuelson result. For example, in Australia the original claim of the *Brigden Report* was reaffirmed in 1965 as part of a massive review of the Australian economy.³⁰ Canada, which appears to import labor-intensive products,³¹ is sometimes similarly viewed.³²

minor qualifications concerning the effect of increasing returns to scale in the production functions have been added recently to the literature. See Revencandra Batra, "Protection and Real Wages Under Conditions of Variable Returns to Scale," *Oxford Economic Papers*, vol. 20, November 1968, pp. 359-360. Given the Stolper-Samuelson assumptions, increasing returns in the export and import industry or just in the protected industry will not reverse the Stolper-Samuelson conclusions concerning the real wage of the scarce factor, so long as an import-competing industry remains in existence.

²⁸ If world prices are fixed, the welfare of the nation as a whole will be decreased by a tariff even though labor's share is improved. That is, capitalists could "bribe" labor to return to free trade and still be better off after the bribe than under the tariff. In technical language, distributing income to labor by means of a tariff results in a situation which is not "Pareto optimal."

²⁹ See chapter 3 for a history of the "cheap labor" argument.

³⁰ Australia, Committee of Economic Enquiry, *Report* (Canberra: Commonwealth of Australia, 1965), vol. I, p. 366.

A final point: The Stolper-Samuelson demonstration was meant to apply in the long run since it assumes capital is free to move from the export to the import-competing industry. It is not clear that in the case of protection, long-run class interests will be perceived even if the Stolper-Samuelson model is applicable. Presumably, the owners of import-competing industries will feel their welfare to be tied to the health of *their* industry, not to the eventual effect of tariffs on "capital." Similarly, since the "ability to pay" of import-competing industries can be enhanced by protection, union officials in such industries will also be concerned with the level of their industry's tariff, regardless of the long-run effect on "labor" as a group.³³ But, the Stolper-Samuelson paper has made two lasting contributions to the literature of protection and income distribution. First, it showed that the possibility of distributing income towards (or away from) labor through tariffs cannot be dismissed. Second, it demonstrated that, although in the short run tariffs may appear to benefit particular groups of workers and capitalists, the long-run effects of protection on labor and capital are not obvious.

Tariffs and Labor Deployment

Most arguments for tariffs in the context of traditional economic theory are suboptimal. That is, whatever the tariff can do, some other policy—theoretically at least—could accomplish at lower cost. One such second-best approach, advanced by Everett Hagen, suggested using tariffs to compensate for imperfections in the labor market, alleged to be common in less developed countries. Hagen proposed that manufacturing wages in such countries are apt to be "too" high relative to agricultural wages because labor mobility from the agricultural sector is impeded by a variety of factors. For example, it might be supposed that agricultural workers are fearful of changing their location and entering into an unknown new life style in the city. The resultant artificial wage premium needed to attract agricultural workers to urban areas prevents the manufacturing sector from competing as it should with foreign suppliers. A tariff on imports tends to compensate local manufacturers for their artificial disadvantage and helps draw labor into manufacturing where it "should" be.³⁴

³³ D. F. Wahl, "Capital and Labour Requirements for Canada's Foreign Trade," *Canadian Journal of Economics and Political Science*, vol. 27, August 1961, pp. 349-358.

³⁴ Clarence L. Barber, "Canadian Tariff Policy," *Canadian Journal of Economics and Political Science*, vol. 21, November 1955, pp. 515-516, 520-521.

³⁵ It is not unusual for unions in import-competing industries to demand tariff protection. See chapter 3.

³⁶ Everett E. Hagen, "An Economic Justification of Protectionism," *Quarterly Journal of Economics*, LXXII, November 1958, pp. 496-514. In the introduction to his article, Hagen reviews previous related literature not cited here.

Three points should be made concerning the Hagen argument for protection. First, it is a "second-best" solution. Hagen recognized that wage subsidies in manufacturing would be preferable to tariffs. But even if such subsidies are not possible, manpower programs to stimulate mobility might be utilized.³³ Second, Hagen's tariff will not always provide a net gain to the economy. The gain from an improved deployment of labor may be more than offset by a loss from the distortion of consumption caused by the price-raising effect of the tariff.³⁴ Third, if the higher wage in manufacturing is due to real costs rather than artificial impediments to mobility, the case for protection evaporates. And the cause of the observed differential between manufacturing and agriculture is a matter of dispute.³⁵

Implications of Tariffs: Summary

Tariffs and similar devices affect the deployment of resources including labor. They may therefore be looked upon as an instrument of economic policy. Two goals have been distinguished above for this instrument. First, tariffs may be used to "distort" the influence of market forces and pull resources toward import-competing production. The result will be a change in the distribution of income. Whether such a redistribution is likely to benefit or hurt labor depends on the labor-intensity of exports relative to imports. Second, tariffs may be used to compensate (partially) for some preexisting distortion of market forces. This is the thrust of the Hagen argument when the distortion is assumed to be located in the labor market. The labor specialist should be aware that, theoretically, tariffs can be put to these uses. However, the practical problems of determining the effects of tariffs in real-world situations should leave him skeptical of such rationalizations.

III. MONEY WAGES, DEPRECIATION, AND INCOMES POLICY

The Importance of Wage Costs

Some aspects of the simple Ricardian model of international trade

³³ See Margaret G. De Vries, "Trade and Exchange Policy and Economic Development: Two Decades of Evolving Views," *Oxford Economic Papers*, n.s. vol. 18, March 1966, pp. 21-25.

³⁴ P. K. Bardhan, "Factor Market Disequilibrium and the Theory of Protection," *Oxford Economic Papers*, n.s. vol. 16, November 1964, pp. 375-388.

³⁵ See Anthony Y. C. Koo, "An Economic Justification of Protectionism: Comment" and Hagen's "Reply" in *Quarterly Journal of Economics*, LXXV, February 1961, pp. 133-151, and Alexandre Kafka, "A New Argument for Protectionism?", *Quarterly Journal of Economics*, LXXVI, February 1962, pp. 163-166. Kafka, although he doubts the real world relevance of the Hagen model, suggests a possible impediment to mobility not discussed by Hagen. If employers are unable to recapture training costs because workers are free to quit once trained, then the labor force in manufacturing will be smaller than it should be.

have been tested empirically and found to give good results.³⁶ According to that model, a country will export products for which domestic unit labor costs (wages ÷ labor productivity) are low relative to other countries. Once factors of production other than labor are brought into the model, this simple relationship need not hold, of course.

In the early 1950s, G. D. A. MacDougall published a study based on American and British exports to the world in 1937. He found that the ratio of American exports to British exports of particular goods could be explained by productivity differences between the two countries. In products where American labor productivity was more than twice the corresponding British figure, the export ratio tended to exceed unity. Where American productivity was less than twice the British figure, the opposite was true. Since American wage rates were roughly twice as high as British wage rates (converted at the 1937 exchange rate), the results appeared very reasonable. In order to cancel out the British wage advantage on world markets, the corresponding American industry required twice the level of British productivity.³⁷

The MacDougall findings were updated for the postwar year of 1950 by R. M. Stern. In that year, American wages averaged about 3.4 times the British level. And Stern found that the ratio of American to British exports tended to exceed unity when American productivity in an industry was greater than 3.4 times that of its British counterpart. MacDougall and his associates, working independently, broadly confirmed Stern's results.³⁸

³⁶ One observer has raised doubts as to whether the articles cited below actually test "the" Ricardian model. This issue need not be of concern here. See J. Bhagwati, "The Pure Theory of International Trade," *Economic Journal*, LXXIV, March 1964, pp. 10-17.

³⁷ G. D. A. MacDougall, "British and American Exports: A Study Suggested by the Theory of Comparative Costs," *Economic Journal*, LXI, December 1951, pp. 697-724. A second part of the MacDougall study appeared in the same journal in September 1952.

³⁸ See R. M. Stern, "British and American Productivity and Costs in International Trade," *Oxford Economic Papers*, n.s. vol. 14, October 1962, pp. 275-296, and Sir Donald MacDougall, Monica Dowley, Pauline Fox, and Senta Pugh, "British and American Productivity: an Addendum," *Oxford Economic Papers*, n.s. vol. 14, October 1962, pp. 297-304. When regression analysis is used to discover important variables which explain one country's export performance relative to another's, it may turn out that productivity differentials carry most of the explanatory load while relative wages are insignificant. See Bela Balassa, "An Empirical Demonstration of Classical Cost Theory," *Review of Economics and Statistics*, XLIV, August 1963, pp. 231-244. But this is what classical theory would predict. The wage differential between corresponding industries in the two countries would be relatively constant. Productivity differentials would determine the pattern of trade and the econometrician would find wages to be an "insignificant" independent variable. But should wages rise in one country relative to the other, the former would experience balance-of-payments difficulties. Wages are a crucial variable although they may appear to be statistically unimportant.

The MacDougall-Stern empirical evidence on the importance of unit labor costs to a country's export ability has implications for the issue of "international fair labor standards" discussed in chapter 4. As noted in that chapter, supporters of taking wages out of international competition have sometimes used unit labor costs as a measure of the "fairness" of competition. They argue that countries should take steps to see that unit labor costs are equalized among trading partners, so that costs other than labor will determine a country's competitive advantage. If the MacDougall-Stern results are valid, they imply that a major change in the pattern of trade would occur if this version of fair competition were actually enforced.

In another context—balance-of-payments theory—the wage-productivity relation has often been considered to play a major role. Observers sometimes look for rapid growth of productivity relative to wages in countries experiencing balance-of-payments surpluses. They interpret these surpluses as the result of the increased cost competitiveness of the country under consideration. Rapid increases in wages relative to productivity are expected to lead to deficits.³⁰ Under this interpretation, for example, the French devaluation after the large wage increases of the 1968 disturbances was simply a way of restoring French labor costs in terms of other currencies to a level consistent with balance-of-payments equilibrium.³⁰

The Control of Wage Costs

Traditional balance-of-payments theory called for deflationary policy in the event of a deficit. Through deflation, misaligned wages and other domestic costs could be lowered in terms of foreign prices. Alternatively, a devaluation could make the same adjustment. Since the current system of international finance requires countries to avoid devaluation where possible and since deflationary programs are likely to increase unem-

³⁰ This type of explanation was fashionable in the "dollar shortage" literature of the early 1950s, although it met with considerable criticism. See Svend Laursen, "Productivity, Wages, and the Balance of Payments," *Review of Economics and Statistics*, XXXVII, May 1955, pp. 180-188. When the dollar shortage turned to dollar glut, the argument was reversed. It was said that European and Japanese productivity had risen relative to American productivity. See Paul A. Samuelson, "Theoretical Notes on Trade Problems," *Review of Economics and Statistics*, XLVI, May 1964, p. 153.

³¹ Modern observers might cite cuts in national expenditure or, perhaps, import restrictions as alternatives to devaluation. See T. W. Swan, "Longer-Run Problems of the Balance of Payments" in H. W. Arndt and W. M. Corden, eds., *The Australian Economy: A Volume of Readings* (Melbourne: F. W. Cheshire, 1963), pp. 384-395. Swan formalizes the relation between the ratio of domestic wages to foreign prices and aggregate demand policy in a simple model.

ployment, several nations have tried incomes policy as a method of controlling costs.³¹

It would be inappropriate here to attempt to review the many arguments for and against the use of incomes policy.³² But, one point should be made. In a formal sense incomes policy and devaluation appear to be substitutes. Devaluation adjusts the domestic wage in terms of foreign prices by altering the exchange rate. Incomes policy exerts direct pressure on wages while the exchange rate remains unchanged. The two instruments of policy seem to be alternative ways of doing the same thing.³³ But, as chapter 5 demonstrates in the British context, the most that can be expected from actual incomes policies is a slowing of the rate of *increase* in wages.³⁴ In contrast, devaluation on impact *cuts* domestic wages in terms of foreign currency. Devaluation is likely to be a more powerful force.

To operate an incomes policy, the authorities must specify rules of behavior for wages and prices. Suppose the authorities have observed that in the past labor's relative share of the national product was more or less constant. In that case, simple algebra reveals that *real* wages must have been rising at the same rate as national productivity.³⁵ The authorities might conclude that they had only to direct money wages (w) to rise at the same rate as real wages (w/p) to make prices (p) stable.³⁶ They might decide that the best guide to the growth in real

³² A recent review of European incomes policies can be found in Lloyd Ulman, "Wage-Price Policies: Some Lessons from Abroad," *Industrial Relations*, vol. 8, May 1969, pp. 195-218.

³³ The author's views on the uses of incomes policy may be found in Daniel J. B. Mitchell, "A Simplified Approach to Incomes Policy," *Industrial and Labor Relations Review*, vol. 22, July 1969, pp. 512-527.

³⁴ This view is expressed in H. Peter Gray, "Depreciation or Incomes Policy?," *Manchester School*, XXXVI, March 1968, pp. 54-55.

³⁵ Similar evidence on the American wage-price guideposts, a form of incomes policy, can be found in G. L. Perry, "Wages and the Guideposts," *American Economic Review*, LVII, September 1967, pp. 897-904. See also comments on this article and a reply by Perry appearing in the June 1969 issue of the same journal, pp. 351-370.

³⁶ Let Y = money national product, s = labor's relative share of Y , L = labor force, w = money wage, p = price level. Then $wL = sY$. This identity can be rewritten $w/p = s[(Y/p)/L]$

or real wages = s times productivity. If s is a constant, the real wage must rise with productivity. If p is kept constant and the money wage is made to rise with productivity by an incomes policy, then s must be constant. If the money wage is made to rise with productivity and s is held constant by some mechanism, then prices will be stable.

³⁷ There is no guarantee that stable prices will ensure balance-of-payments equilibrium for open economies. Some countries seem to be prone to a secular worsening of their trade balances due to foreign demand patterns. For such countries, stable prices are better than rising prices, but they are not sufficient. It has been suggested

wages was productivity. The most common version of the wage rule of incomes policies is in fact that money wages and productivity ought to rise at the same rate.

In a closed economy with competitively determined prices and a constant relative share of labor, a productivity-geared wages policy might be sufficient to stabilize prices. Even in closed economies, some sectors of price determination may not be competitive. For this reason, countries generally add some sort of prices rule to their incomes policy. But in open economies, even if domestic prices are competitively determined, some elements of the price level will be largely determined in world markets. These elements will not be responsive to domestic wage developments.

If some important prices are determined abroad, the task of operating an incomes policy is complicated. Holding back wages will not stem an inflation which has its root in external markets. An attempt to do so will succeed only in lowering labor's share.⁴⁹ Therefore, in an open economy a case can be made for modifying the standard productivity rule to take account of world price developments.

Recognition of this problem has been centered in Australia. Some observers have argued that an Australian wages policy should gear wages to the rate of increase in domestic productivity plus the rise in export prices. Others have argued that domestic productivity is a sufficient guide.⁵⁰ And there have been efforts to calculate what would have happened in the postwar period had a productivity rule been in that both the United States and Britain suffer from this problem. See H. S. Houtakker and Stephen P. Magee, "Income and Price Elasticities in World Trade," *Review of Economics and Statistics*, LI, May 1969, pp. 111-125.

⁴⁹ There has been some empirical work on the effects of changes in world prices and labor's share of national income. One author found an inverse relationship between the terms of trade (the ratio of export to import prices) and labor's share in a number of countries. His evidence was based only on the Korean period, and a critic pointed out that over a longer period no clear relation emerges. See C. Maynard, "Inflation, the Terms of Trade, and the Share of Wages in National Income," *Economic Journal*, LXVIII, December 1958, pp. 797-746, and D. T. Healey, "Note on the Relation Between Share of Wages in National Income and Terms of Trade," *Economic Journal*, LXIX, December 1959, pp. 823-826.

⁵⁰ Arguments for an export price adjustment may be found in Keith Hancock, "Wages Policy and Price Stability in Australia, 1953-60," *Economic Journal*, LXX, September 1960, pp. 550-551, and P. H. Karmel, "A Wages Policy for Australia" in J. E. Isaac and G. W. Ford, eds., *Australian Labour Economics*, Readings (Melbourne: Sun Books, 1967), pp. 158-161. Arguments for using domestic productivity alone appear in Malcolm Cockburn and Donald Whitehead, "Wages in Australia: Practices and Prescriptions," *Bulletin of the Oxford Institute of Statistics*, XXIV, May 1962, pp. 235-256, and R. I. Downing and J. E. Isaac, "The 1961 Basic Wage Judgment and Wage Policy," in Isaac and Ford, *op. cit.*, p. 268.

effect.⁴⁹ But no clear conclusions have emerged from the debate.

The outside observer comes away with the impression that at the root of the controversy are two possible contradictory goals: balance-of-payments equilibrium and "equity" for labor. Australia's highly centralized system of judicial wage determination must take account of the claim that labor "ought" to share in the good fortune of the primary sector when export prices rise. Balanced against this claim is the proposition that estimates of the "capacity to pay" of the economy must consider balance-of-payments consequences.⁵⁰

Cost-of-Living Adjustments in Open Economies

Unions and wage-setting authorities have sometimes responded to inflation with "escalator clauses," which automatically adjust the wage for changes in the price level. But policy-makers charged with the control of inflation tend to frown on such adjustments on the grounds that they can contribute to a wage spiral.⁵¹ International economics suggests another adverse effect of such adjustments applicable to certain open economies. Again, the Australian literature leads the way on this topic.

Australia in the early 1950s was faced with rising export prices as part of the Korean boom. The centralized wage-determination authorities followed the practice of making quarterly adjustments to wages to compensate for cost-of-living increases, including those stemming from rising export prices. At the same time, Australia found itself being progressively saddled with import restrictions due to balance-of-payments difficulties. An interesting paper by Meade and Russell suggested that the three events were not unrelated.⁵²

The Meade-Russell paper starts from the assumption that Australia

⁴⁹ E. A. Russell, "Wages Policy in Australia," *Australian Economic Papers*, IV, June-December 1965, pp. 19-23, estimated that a productivity rule using real GNP as the measure of output would have resulted in inflation and a decline in labor's share. However, another author showed that a different measure of output would give better results. See D. H. Whitehead, "Professor Russell on Wages Policy: A Comment," *Australian Economic Papers*, V, December 1966, pp. 224-229.

⁵⁰ The clearest indication that the wage authorities considered the state of the external balance as evidence of the "capacity to pay" came in 1931 when the basic wage was cut by 10 percent because of balance-of-payments developments. See William R. MacLaurin, *Economic Planning in Australia 1929-1936* (London: P. S. King and Son, 1937), pp. 140-146.

⁵¹ See the statement of the Council of Economic Advisors in U. S. President, *Economic Report of the President* (Washington: U. S. Government Printing Office, 1967), pp. 128-129.

⁵² J. E. Meade and E. A. Russell, "Wage Rates, the Cost of Living, and the Balance of Payments," *Economic Record*, XXXIII, April 1957, pp. 23-28.

Income Redistribution and Balance-of-Payments Adjustment

European discussions of incomes policy often emphasize its effect on the distribution of income rather than its impact on costs. As already noted, the evidence in chapter 5 and other sources indicates that the overall influence on wages of an incomes policy is not likely to be substantial. Hence, any income redistribution resulting from it will be small. Whether large or small, governments trying to "sell" incomes policy to trade unions commonly neglect to inform them of the direction of the redistribution. The sad fact is that an incomes policy which succeeds in improving the balance of payments may have a depressing effect on labor's real income.

It was noted earlier that incomes policy could be viewed as an alternative to devaluation. If the two policies are similar, the literature of the income redistribution effects of devaluation should be relevant. Formal models of devaluation generally omit explicit discussion of these effects, but there has been recognition that they might play a role.⁵⁴

One observer, Carlos F. Díaz, presented a model of devaluation in which income redistribution played a major role. The model, formulated for application to a less developed country, assumed that world prices were fixed exogenously and that the initial impact of a devaluation was to lower the real wage and redistribute income from workers to capitalists. The balance of trade will tend to improve as a result of this redistribution if capitalists have a higher marginal savings propensity than workers, so that more of the national product is left aside for export and import-competing production. It will also tend to improve if capitalists have a higher marginal propensity to spend on home goods than workers, again because more resources are left aside for export and import-competing uses.⁵⁵

The Díaz article does not demonstrate that the income redistribution effect of devaluation (or incomes policy) must be adverse to workers. But it does make the important point that *some* alteration of income distribution can be expected in an open economy. Proponents of incomes policy sometimes argue that wage restraint does labor no harm and that "wage-push" does labor no good. If wages are not restrained, according to this view, prices will rise leaving real wages unchanged

⁵⁴ Discussions of the redistribution effects of devaluation may be found in S. S. Alexander, "The Effects of a Devaluation on a Trade Balance," *IMF Staff Papers*, II, April 1952, p. 273, and E. M. Bernstein, "Strategic Factors in Balance of Payments Adjustment," *IMF Staff Papers*, V, August 1955, p. 159.

⁵⁵ Carlos F. Díaz Alejandro, "A Note on the Impact of Devaluation and the Redistributive Effect," *Journal of Political Economy*, LXXI, December 1963, pp. 577-580.

is a labor-scarce country, which imports labor-intensive goods (the H-O model). An improvement in the export price relative to the import price stimulates the capital-intensive export industry and discourages import-competing production. The decline of the labor-intensive, import-competing sector leads to a lowering of the equilibrium real wage in terms of *both* the export and the import good. Essentially, the Meade-Russell argument follows directly from the Stolper-Samuelson paper. A tariff raises the real wage by raising the relative price of imports. A relative increase in the price of exports is equivalent to a lowering of the tariff.

Under these circumstances, a cost-of-living adjustment, which maintains the wage in terms of some average of export and import prices instead of allowing it to fall, sets the real wage too high; the labor market cannot clear. Unemployment and balance-of-payments deterioration are the result unless increased import restrictions are used to prevent these unfortunate consequences.

As with any simple model, the Meade-Russell analysis can be criticized on the ground that adding more complications to the model will upset its conclusions. For example, in the short run when capital is fixed in place, a relative export-price increase will probably cause the market-clearing wage to move in the general direction of a cost-of-living adjustment. That is, in order to accomplish a transfer of labor from import-competing to export production, the money wage must rise relative to the import price and fall relative to the export price. Only this type of wage adjustment will stimulate export production (and the demand for labor in that sector) and discourage import-competing production. If the money wage rises relative to the import price but falls relative to the export price, the real wage is constant in terms of *some* average of the two prices. Since a cost-of-living adjustment produces exactly this type of result, such adjustments in the short run will probably not create the type of disequilibrium predicted by Meade and Russell. The Meade-Russell conclusion applies only to the long run when capital is mobile.⁵⁶

Nevertheless, the possibility of perverse effects from cost-of-living adjustments is a definite contribution to the literature. The model could be applied to labor-abundant underdeveloped countries during a period of rising *import* prices. Efforts to adapt the model to countries other than Australia would be most useful.

⁵⁶ Limitations of the Meade-Russell model are discussed in J.D. Pitchford, "Real Wages, Money Wages, and the Terms of Trade," *Economic Record*, XXXIX, September 1963, pp. 282-291.

despite increases in money wages. In open-economy models of the Díaz type, this conclusion is not warranted.

The essential difference between an open economy and a closed economy is that some elements of the price level are determined in world rather than in domestic markets. Suppose the Díaz assumption of exogenous world prices set outside the economy is made. It is obvious that in terms of world-traded goods a money wage increase is also a real wage increase. Of course, the prices of goods produced solely for domestic markets may be affected by the wage increase. Whether they rise faster than wages depends on the model under consideration. But it is not at all difficult to create simple models in which the money wage rises relative to domestic as well as world prices. In such models, an incomes policy which restrains wages will improve the balance of payments, but at a cost to labor's welfare. At any rate, the larger world-traded goods loom in labor's consumption, the more likely will labor be hurt by wage restraint.⁸⁵

It might be objected that a country cannot continue to run an external deficit indefinitely, and that in the long run there must be either wage restraint through incomes policy or devaluation. However, the long run might be far in the future and the horizon of union leaders may be short. Chapter 5 suggests that Britain may suffer from this dilemma.

Wage Rigidity and Devaluation

Incomes policy operates on wages directly while devaluation changes the exchange rate between currencies. Both incomes policy and devaluation must alter the wage from what it would have been in terms of foreign prices if they are to have any impact on the balance of payments. A *successful* incomes policy by definition makes the needed alteration. But since devaluation is strictly a monetary phenomenon, what guarantee is there that wage changes will not occur which nullify the change in exchange rates? For example, if a currency devalues by 10 percent, might not unions demand a compensatory 10 percent wage increase? An increase in all costs and prices of 10 percent would leave

⁸⁵ A simple model of the type described in the text may be found in Daniel J. B. Mitchell, "Incomes Policy, Costs, and the Balance of Payments: The Cases of Britain and Australia," unpublished doctoral dissertation, Department of Economics, Massachusetts Institute of Technology, 1968, pp. 494-501. Aside from the importance of world-traded goods to labor consumption, there are other factors which help to determine the eventual outcome of wage restraint. It is necessary to specify whether the government would follow a full-employment demand policy if wage restraint were not observed, as well as a number of technical conditions which influence the elasticity of demand in the domestic and world-trading sectors.

the balance of payments unchanged at its predevaluation level; the devaluation would have accomplished nothing.

Devaluation theory is still at a primitive state despite the real-world importance of the topic. The textbooks present a few simple formulas which gloss over a great deal and are widely held to be inadequate. It has been recognized for some time that assumptions concerning aggregate demand policy must be made before the effects of a devaluation can be ascertained.⁸⁷ But even in models where monetary policy is specified explicitly, an assumption of wage rigidity in terms of domestic currency is sometimes made.⁸⁸

The assumption that money wages do not rise after a devaluation sufficiently to nullify the change in the exchange rate could be justified by supposing that aggregate demand policy is operating so as to keep the labor market loose enough to achieve this result. Alternatively, it might be assumed that some type of "money illusion" is at work. In instances where the real wage is lowered by devaluation, there may be a considerable lag before the effect is felt and reflected in wage rate adjustments. Empirical research is needed in this area on a case-by-case basis in order to determine the role played by "money illusion," particularly where wages are determined by collective bargaining.⁸⁹

The Balance of Payments and the Labor Economist: Summary

Several key points emerge from the discussion above which deserve reiteration. (1) Increases in wages will have adverse balance-of-payments repercussions *unless* offset by some compensating force, such as rising productivity. Countries which need to adjust their wage levels in terms of foreign prices may do so via devaluation or incomes policy. The former is likely to have a larger impact. (2) Movements in world prices can influence the size of labor's share of the national product. This influence must be considered in formulating productivity rules as part of incomes policy or in attempting to compensate labor for cost-of-living changes. (3) In some countries, an incomes policy or devaluation which succeeds in improving the balance of payments may also have an adverse effect on labor's welfare. Under these circumstances, governments will find it progressively difficult to obtain union cooperation with some form of incomes policy. Devaluation may be the only available means of achieving external balance.

⁸⁷ A review of this literature can be found in Anne O. Krueger, "Balance-of-Payments Theory," *Journal of Economic Literature*, VII, March 1969, pp. 4-12.

⁸⁸ S. C. Tsiang, "The Role of Money in Trade-Balance Stability: Synthesis of the Elasticity and Absorption Approaches," *American Economic Review*, LI, December 1961, p. 921.

⁸⁹ Criticism of the 1969 French devaluation by French union officials indicates that unions may have a fairly clear notion of the effects of currency depreciation in some cases. See "French Left Sharpens its Opposition," *New York Times*, August 10, 1969, Sec. 1, p. 3.

techniques. A broader range of industries than just manufacturing is included. Indirect labor requirements of these industries are considered. And the labor force is disaggregated into detailed occupations. The emphasis is on determining what differences these changes of method make. In addition, the data assembled to explore the pattern of U.S. exports and imports are used to analyze the difficulties in the labor market which an attempt to improve the balance of trade might create.

The next two sections deal with the method underlying the conclusions presented below. Much of the emphasis is on the contrast between the techniques employed here and those employed in the Keesing and Leontief investigations. A reader who is not familiar with the earlier literature may find it preferable to skip to section IV at this point. However, since this chapter is intended to further existing knowledge, its significance lies in the differences in method as compared with previous research. The reader is urged to return to sections II and III once the basic results are understood.

II. METHOD²

Data Sources

Export and import data for this study are taken from the 1958 American input-output tables.³ These tables include in exports and imports both goods and services. Keesing, in contrast, limited himself to data referring to goods only. Thus, the coverage provided in this study is more complete.⁴

American skill requirements for this paper were estimated using data from a study by Horowitz, Zymelma, and Herrnstadt (hereinafter denoted HZH), which was in turn based on the 1960 census.⁵ In contrast, Keesing used 1950 and 1960 census data directly.⁶ The HZH study was used because it divides the labor force into a manageable number of occupations which are suited for this study.

² More detail on method may be found in the appendix to this chapter.

³ "The Transactions Table of the 1958 Input-Output Study and Revised Direct and Total Requirements Data," *Survey of Current Business*, September 1966, pp. 33-49, 56.

⁴ It was generally possible to eliminate payments for the "services" of capital (dividends, interest, etc.) from the input-output data. Such services have no direct labor component and would therefore be unaffected by the relative availability of skilled labor in the United States.

⁵ Morris A. Horowitz, Manuel Zymelma, Irwin L. Herrnstadt, *Manpower Requirements for Planning: An International Comparison Approach*, Department of Economics, Northeastern University, Boston, 1966. All statistics are drawn from volume II of the HZH study.

⁶ 1950 data were used in Keesing-I. Keesing-II and Keesing-III were based on 1960 occupational data.

Chapter 2 The Occupational Structure of American Exports and Imports

I. INTRODUCTION

Section I of chapter 1 described the role of labor in various theories of the structure of international trade. It was noted that under the Heckscher-Ohlin analysis, a capital-abundant country such as the United States "ought" to export capital-intensive products and import labor-intensive products. However, the Leontief empirical input-output studies of U.S. exports and imports which compete with American industries contradicted this anticipated pattern. Leontief also noted evidence of a relative skill intensity of the labor embodied in exports when compared with competitive imports.

Donald B. Keesing, in three articles, expanded on the Leontief skill-intensity conclusions.¹ He also found that the relative abundance of skilled labor in the United States offered a possible explanation of why this country exports certain goods and imports others. But, Keesing's work was limited to certain industries in the manufacturing sector and was based on the assumption that indirect labor requirements could be ignored. In addition, Keesing did not disaggregate the labor force in great detail. His measures of skill are therefore crude.

In order to advance the discussion, this chapter employs different

¹ See his "Labor Skills and International Trade: Evaluating Many Trade Flows with a Single Measuring Device," *Review of Economics and Statistics*, XLVII, August 1965, pp. 287-294; "Labor Skills and Comparative Advantage," *American Economic Review*, LVI, May 1966, pp. 249-258; "Labor Skills and the Structure of Trade in Manufacturers" in Peter B. Kenen and Roger Lawrence, eds., *The Open Economy* (New York: Columbia University Press, 1968). Hereinafter, these papers will be denoted Keesing-I, Keesing-II, Keesing-III, respectively. Alternative evidence in support of a skill-intensity explanation of U.S. trade is reported by Hal B. Lary. Lary cites previous work by Helen Waehrer indicating that the higher wage paid in American export industries relative to import-competing industries is due largely to greater inputs of "human capital." See his *Imports of Manufactures from Less Developed Countries* (New York: Columbia University Press, 1968), pp. 35-40. A summary of Waehrer's evidence can be found in her "Wage Rates, Labor Skills, and United States Foreign Trade," in Kenen and Lawrence.

Industries Included

In his first study, Keesing limited his analysis to manufacturing industries with low natural resource requirements.⁷ Later remaining within the manufacturing sector, he added such resource-oriented industries as petroleum refining. Leontief included all sectors when he examined skill requirements, not just manufacturing. His method is followed here, although the effect of excluding resource-oriented industries is also explored. However, certain sectors where it proved impossible to match the input-output and HZH definitions were excluded. These sectors were government, education, and medical, business, personal, recreational, and miscellaneous services. Fortunately, they are not heavily engaged in trade. The exclusion left twenty-nine HZH industries for which production data could be obtained from the input-output table by aggregating among its seventy-nine "nondummy" industries.⁸

Direct Versus Total Labor Requirements

As noted above, Keesing, unlike Leontief, excluded indirect labor requirements. That is, when the labor content of "motor vehicles" was calculated, the labor embodied in the "rubber products" used as intermediate inputs to production was ignored. Keesing justified this exclusion on the grounds that industries always have the option of importing intermediate goods rather than purchasing from local suppliers. Suppose, for example, that an industry with "high" direct skill requirements is considering setting up shop in a skill-abundant country. Suppose further that the industry uses intermediate goods which require "much" unskilled labor. The fact that the skill-abundant country has a disadvantage in producing low-skill goods need not deter the industry, according to Keesing. It can import the required intermediate goods from countries with abundant supplies of unskilled labor, and export its product from the skill-abundant country. The resulting trade

⁷ A broad definition of "natural resource" was used in Keesing-I. For example, "printing and publishing" was excluded because of the language barrier between most countries. Hence, the domestic industry had the "natural" advantage of "speaking" the domestic language. See p. 288, footnote 7.

⁸ Over 80 industries were used to compile the input-output table. However, some of these were "dummy" industries, artificially extracted from others. (Example: Business travel, entertainment, and gifts.) The dummy industries represent secondary activities of "real" industries, which were obviously separable from their major functions. Naturally, no separate occupational structure could be found for dummy industries. In calculating labor requirements, production in dummy industries (and those listed as excluded in the text) was ignored.

pattern fits nicely into a skill-oriented version of the Heckscher-Ohlin theory.⁹

Some "practical" objections can be raised against this reasoning. Note first that Keesing's initial rationale for excluding industries with high natural resource requirements is somewhat inconsistent with his neglect of input-output relationships. It could be argued that natural resource availability need not play an important role in determining *manufacturing* trade patterns because raw materials can always be imported. A country with abundant natural resources may simply export them in raw form. The conversion of these products into goods for final demand or export can be accomplished in the importing countries.

Second, if pushed, the argument for excluding indirect requirements calls into question the usefulness of input-output analysis. An increase in the production of automobiles would require increased purchases of steel by the auto industry. But, if no prediction can be made about what proportion of this steel will be imported and what proportion will be produced domestically, the direct and total coefficients derived from an input-output table are unstable and therefore unreliable.

Since input-output analysis is generally thought to be a helpful tool, it is worthwhile suggesting some reasons why input-output relationships might tend to be stable. Product differentiation may play a role. It is plausible to suppose that local producers are better equipped to turn out products especially suited to local needs. Imports may not be a perfect substitute for home-produced goods. Transport costs, import quotas, and other trade restrictions may also limit the possibility of deviating from domestic channels of supply. Finally, information costs and lack of knowledge may prevent local firms from using potential foreign sources.

None of these reasons prove that it is incorrect to consider only direct labor requirements. Rather, a case has been made for making the calculations both ways—with and without indirect requirements. If similar results are obtained, this particular question becomes less important.

Measures of the Diversity of Skill Mix

It is desirable to have some sort of index with which to contrast the occupational structures of exports and imports. Keesing used a number of easy to compute ratios to measure skill intensity. An alternative approach, using disaggregated data, is presented in this chapter. In addition, an experiment with educational attainment data is reported.

⁹ See Keesing-I, p. 288.

Aggregation of Occupations

Keesing began with the 5 broad occupational classifications previously used by Leontief. Later, he disaggregated to 8 classifications. Using the HZH data, this chapter is able to make use of 131 separate occupations.³⁰

Comparisons Made

Three types of comparisons of occupational structures are made in this chapter. The occupational structures of American exports and competitive imports are examined for differences. In addition, the structures of exports and competitive imports are compared with the occupational composition of the overall U.S. economy. Unlike the Keesing studies, the analysis in this chapter is limited to U.S. trade flows.

III. COMPUTATIONS

Calculations of Labor Requirements

Labor requirements for particular bills of exports or import-substitutes were estimated by assuming that fixed coefficients were applicable to each occupation. If total (direct plus indirect) labor requirements were needed, the 1958 input-output total coefficients were applied to these bills.³¹

Export and Import Bills

Two types of export and import-substitute bills of goods were used to generate labor requirements. The "broad industry" export bill is composed of the actual 1958 exports for each of the industries listed in the input-output study. However, labor requirements for certain industries had to be excluded because of incompatibility between the industrial classification used in the HZH and input-output studies. The "narrow industry" export bill is the broad industries bill minus exports in those industries which were considered natural-resource oriented by

³⁰ The HZH study uses 224 occupational titles. Of these, 36 are aggregate headings, not unique occupations. In the 1960 HZH table for the United States, 45 occupations were not recorded as containing any employees (example: midwife). This leaves 143 occupations. Using census data, "farmers" were separated from the "proprietors" category, creating an additional occupation or a total of 144. Thirteen occupations were employed only in excluded industries, leaving 131.

³¹ The input-output table does not report labor coefficients. However, HZH data allow computation of the number of workers in each industry by occupation. The assumption of fixed labor coefficients implies that the labor input of each occupation moves proportionately with the output of the industry. It might be noted that the industries excluded from this study happen to contain a large proportion of the employees in occupations where the fixed coefficient assumption is least realistic.

Keesing in his first article or which were not in the manufacturing sector.³² Competitive import bills follow the same definitions. They consist only of those imports listed as competitive with American industries in the input-output study.³³

IV. RESULTS

Broad Occupational Classifications

In his first article, Keesing used the five broad occupational classes previously used by Leontief.³⁴ These were: I. Professional, technical, managerial employees; II. Craftsmen and foremen; III. Clerical, sales, and service workers; IV. Operatives; V. Laborers.

In his later papers, Keesing disaggregated further and broke the labor force into eight categories. However, the results to be presented below turned out to be qualitatively the same, no matter which classification scheme was used. For convenience, Keesing's initial method is followed in this section to see if his results are changed when alternative export and competitive import bills are used, and when indirect labor is included.

The proportions of the labor force required to produce the various export and import-substitute bills are shown on tables 1A and 1B. Table 1A includes indirect labor requirements; table 1B excludes these requirements. In addition, table 1B presents the proportion of the labor force used for total production of goods and services in 1958 in "broad industries." This allows comparison of the export and import employed labor forces with the overall employed labor force.³⁵

Because of the aggregate nature of the five classifications, it is hard to rank them according to skill. In Class I, for example, occupations range from physicists to strip teasers. It is difficult to compare the skills of Class I with those of Class II. Class II occupations are clearly more skilled than Class IV or V occupations, but Class III is especially difficult to rank. Class III contains everything from janitors to stenographers, jobs which

³² Keesing used a different classification of products from that used to compile the 1958 input-output tables. The industries included as "narrow industries" were determined by matching the two systems of classification as closely as possible.

³³ Row 80B of table 1 of the input-output study.

³⁴ The five classes are used in the U.S. *Census of Population*. Although the HZH data were drawn from the census, they were regrouped according to another classification system. Census and HZH definitions were matched as closely as possible to make the reconversion to the five classes for this paper.

³⁵ As noted above, the "broad industry" classification excludes some industries. Thus, the "overall" labor force is not completely represented. For purposes of this paper, no harm will be done by treating the total production, broad industry labor force as if it represented the total employed labor force.

TABLE 1A
OCCUPATIONAL COMPOSITION OF U.S. EXPORT AND COMPETITIVE IMPORT LABOR FORCES INCLUDING SECONDARY LABOR REQUIREMENTS

	Broad Industries		Narrow Industries	
	Exports	Imports	Exports	Imports
I. Professional, technical, managerial.....	13.6	12.0	15.2	13.6
II. Craftsmen & foremen.....	18.3	18.0	23.8	21.2
III. Clerical, sales, service.....	23.3	19.1	21.5	20.3
IV. Operatives.....	27.7	31.5	33.6	37.5
V. Laborers.....	17.2	19.3	5.9	7.3
Total.....	100.0	100.0	100.0	100.0

Percent in Export or Competitive Import Labor Forces by Occupational Class

	Broad Industries		Narrow Industries		Total Production
	Exports	Imports	Exports	Imports	
I. Professional, technical, managerial.....	13.3	11.1	15.5	13.1	14.8
II. Craftsmen & foremen.....	18.0	19.5	26.5	22.9	18.4
III. Clerical, sales, service.....	22.3	14.4	17.3	15.7	29.4
IV. Operatives.....	29.1	38.0	36.8	44.2	22.9
V. Laborers.....	17.3	17.0	3.7	4.2	14.4
Total.....	100.0	100.0	100.0	100.0	100.0

Percent in Export, Competitive Import, or Total Production Labor Forces by Occupational Class

Occupational mismatch between exports and imports.....	8.7	7.8
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Occupational mismatch between exports or imports and "broad industry" total production.....	13.9	19.3	29.8	28.5
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Note: Definitions of export and import labor forces appear in text. Details need not add to total due to rounding.

vary considerably in skill and which are hard to compare with occupations in the other groups.

It seems reasonable to consider Class I and II occupations to be more skilled than those in Class IV or V. Given this assumption, the export labor forces appear skill intensive relative to their corresponding competitive import labor forces, no matter what definitions are used. That is, there is a greater proportion of skilled workers in the export than in the competitive import labor forces. Similarly, the proportion of the labor force in Classes IV and V (summed) is greater in the competitive import than in the export labor forces. But, of course, this comparison omits consideration of the ambiguous Class III, a group Keesing was forced to ignore in all his articles.

TABLE 1B

OCCUPATIONAL COMPOSITION OF U.S. EXPORT AND COMPETITIVE IMPORT LABOR FORCES EXCLUDING SECONDARY LABOR REQUIREMENTS, AND TOTAL PRODUCTION "BROAD INDUSTRY" LABOR FORCE

	Broad Industries		Narrow Industries		Total Production
	Exports	Imports	Exports	Imports	
I. Professional, technical, managerial.....	13.3	11.1	15.5	13.1	14.8
II. Craftsmen & foremen.....	18.0	19.5	26.5	22.9	18.4
III. Clerical, sales, service.....	22.3	14.4	17.3	15.7	29.4
IV. Operatives.....	29.1	38.0	36.8	44.2	22.9
V. Laborers.....	17.3	17.0	3.7	4.2	14.4
Total.....	100.0	100.0	100.0	100.0	100.0

Percent in Export, Competitive Import, or Total Production Labor Forces by Occupational Class

Occupational mismatch between exports and imports.....	15.1	11.6
--	------	------

Occupational mismatch between exports or imports and "broad industry" total production.....	16.3	26.3	41.9	42.1
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Note: Definitions of export and import labor forces appear in text. Details need not add to total due to rounding.

Alternative indexes of skill intensity can be computed from the data. Keesing first chose a ratio indicator to measure this intensity.¹⁸ His index consisted of the ratio of labor factor proportions (skilled workers -- unskilled workers or Class I + II -- Classes IV + V) in exports relative to import-substitutes. If exports are skill intensive relative to competitive imports, the index should be greater than unity. Table 2A shows that this is in fact the case. The index is greater than one, no matter which

¹⁸ Keesing-I, table 3, p. 291.

method is used to compute the labor requirements of exports or competitive imports.³⁷

At best, these calculations show only that if imported goods which compete with American products were actually made in the United States, the required labor input would be less skill intensive than the export labor input. It was noted in chapter 1 that the Heckscher-Ohlin theory depended on the assumption that goods could be unambiguously

TABLE 2A

RATIO INDICATOR FOR VARIOUS U.S. EXPORT AND COMPETITIVE IMPORT LABOR FORCES BASED ON AMERICAN OCCUPATIONAL STRUCTURE

	Classes I & II Over Classes IV & V	Class I Over Classes IV & V	Class II Over Classes IV & V
Labor forces including secondary requirements			
Broad industries.....	1.203	1.279	1.153
Narrow industries.....	1.277	1.275	1.278
Labor forces excluding secondary requirements			
Broad industries.....	1.216	1.426	1.096
Narrow industries.....	1.404	1.438	1.385

labeled "capital intensive" or "labor intensive" wherever in the world they are produced. Similarly, if skill intensity is hypothesized to be a major factor "explaining" trade structure, it is necessary for goods to be produced under conditions which allow them to be labeled intensive in either skilled or unskilled labor throughout the world.³⁸

Although the HZH study provides occupational statistics for many countries, differences in definition and the fact that many of the reported countries do not have the same range of industries as the United States

³⁷ In Keesing-III, an alternative index was proposed based on an eight-way occupational classification. An index was defined as follows:

$$\text{Index} = \frac{\text{VIII}}{2(\text{I} + \text{III}) + \text{V}}$$

In the eight-way classification, Class I = scientists and engineers, Class II = technicians and draftsmen, Class III = other nonmanagerial professionals, Class V = machinists, electricians, tool and die makers, Class VIII = semiskilled and unskilled workers. Note that this index ignores most skilled workers, clerical, sales, and service workers, and managers. Keesing found that the index took on higher values for exports relative to competitive imports in manufacturing. Thus, the calculation confirmed the relative skill intensity of exports. Our computations, based on this index, reveal the same qualitative results for the "broad" and "narrow" industry calculations. It appears that any plausible skill index will yield similar results.

³⁸ For references on this point, see chapter 1, footnote 3.

make it impossible to make any statements on ambiguity of intensity with certainty. However, as a limited test the occupational requirements of West Germany were applied to the American export and competitive import bills. It was assumed that the labor forces of each U.S. industry were divided according to West German rather than American proportions. Then, Keesing's ratio indicators were recalculated on that basis. Table 2B presents the results. Despite differences in the occupational

TABLE 2B

RATIO INDICATOR FOR VARIOUS U.S. EXPORT AND COMPETITIVE IMPORT LABOR FORCES BASED ON WEST GERMAN OCCUPATIONAL STRUCTURE

Labor forces including secondary requirements			
Broad industries.....	1.156	1.276	1.117
Narrow industries.....	1.312	1.319	1.309
Labor forces excluding secondary requirements			
Broad industries.....	1.139	1.424	1.052
Narrow industries.....	1.419	1.522	1.393

Note: Definitions of export and import labor forces appear in text. See text for definition of ratio indicator.

definitions used for the two countries in the HZH study, similar results occur no matter which of the two countries' occupational requirements are used. In one case, therefore, no evidence of intensity-reversal was found.³⁹

Comparisons of the various labor forces of tables 1A and 1B lead to two observations. First, when the analysis is confined to "narrow industries," the contrast between the skill requirements of exports relative to competitive imports becomes greater. Thus, Keesing's initial assumption that manufacturing industries with low natural resource requirements would be especially sensitive to the occupational composition of the labor force is supported. In his later work, Keesing found that exports were skill intensive relative to imports even if natural-resource oriented manufacturing industries were added.⁴⁰ Here it is shown that when non-

³⁹ The statement in the text depends, of course, on what measure of "reversal" is being used. The West German-based figures do differ in some ways from the exclusively American figures. For example, when secondary labor is included, the "broad industry" export labor force based on West German requirements has a smaller proportion of workers in the "craftsmen and foremen" category than the corresponding competitive import labor force. The opposite is true in the American data, as can be seen in table 1A.

⁴⁰ Keesing-III, p. 10, footnote 14.

manufacturing industries are also included, the relative skill intensity of exports still exists.

A second observation is that when indirect labor requirements are considered, the skill intensity of exports relative to competitive imports declines. However, this decline could be anticipated from the method used. When indirect labor is included, the occupational structures of both exports and competitive imports tend to become more like the overall employed labor force. Each export industry and each competitive import industry requires secondary production from all other industries in the economy, and this makes their labor requirements resemble those of the economy as a whole. Hence, the export and competitive import labor forces also tend to become similar to each other. The interesting point is that even when secondary labor requirements are included, exports remain skill intensive relative to competitive imports. Therefore, the question of whether or not input-output analysis is appropriate to these calculations becomes less important.

Educational Classes

The five-way occupational breakdown used above represents only one of many ways in which the labor force could be divided. It had the disadvantage of having one group (Class III) which could not be placed on the skill spectrum. One alternative approach to the skill or "human capital" embodied in the labor force is to look at educational attainments of each occupation. This approach has the obvious disadvantage of failing to recognize on-the-job training. However, since educational data are easily available in the HZH study, the approach was tried as an experiment. Hopefully, educational attainment is a crude proxy for skill.

The HZH study provides data on the proportion of workers in each occupation who have completed 0-4 years, 5-8 years, 9-11 years, 12 years, 13-15 years, and 16 or more years of education. In principle, it would be possible to rate each occupation by the lowest level of education observed, under the assumption that this was a minimum required attainment. Unfortunately, if the data are taken literally, it would be concluded that almost all occupations, including professions, could be entered with little formal education.²¹ Because of this difficulty, occupations were classified by median educational attainments rather than minimum attainments.

²¹ This problem is not unique to the HZH study. It is found in the census figures from which the HZH data were drawn. Presumably, census takers have some difficulty in determining whether a person who claims to belong to a particular occupation despite an inappropriate educational background should be so classified.

TABLE 3A

COMPOSITION OF U.S. EXPORT AND COMPETITIVE IMPORT LABOR FORCES BY OCCUPATIONAL MEDIAN EDUCATIONAL ATTAINMENT INCLUDING SECONDARY LABOR REQUIREMENTS

	Broad Industries		Narrow Industries	
	Exports	Imports	Exports	Imports
A) 5-8 years.....	23.0	27.5	11.9	15.9
B) 9-11 years.....	42.9	42.9	52.8	51.8
C) 12 years.....	29.8	25.8	29.2	27.0
D) 13-15 years.....	2.2	1.9	2.9	2.5
E) 16 or more years.....	2.1	1.9	3.2	2.8
Total.....	100.0	100.0	100.0	100.0

Note: Details need not add to totals due to rounding.

TABLE 3B

COMPOSITION OF U.S. EXPORT, COMPETITIVE IMPORT, AND TOTAL PRODUCTION LABOR FORCES BY OCCUPATIONAL MEDIAN EDUCATIONAL ATTAINMENT EXCLUDING SECONDARY LABOR REQUIREMENTS

	Broad Industries		Narrow Industries		Total Production
	Exports	Imports	Exports	Imports	
A) 5-8 years.....	22.8	27.6	8.9	13.9	20.0
B) 9-11 years.....	44.8	47.1	58.2	57.9	40.2
C) 12 years.....	28.3	21.2	25.6	22.2	36.2
D) 13-15 years.....	2.1	2.0	3.2	2.7	1.9
E) 16 or more years.....	2.1	2.1	4.0	3.3	1.7
Total.....	100.0	100.0	100.0	100.0	100.0

Note: Details need not add to totals due to rounding.

Tables 3A and 3B present the results of this calculation. In all cases, the competitive import labor forces turned out to have a higher proportion of employees in the occupations characterized by 5-8 years median attainment.²² At the top of the educational scale, the "broad industry" definitions do not show significant differences between the two labor

²² There were no occupations with a median attainment of less than 5-8 years.

forces. Nevertheless, if a line is drawn between occupations where more than half of the workers completed high school (12 years or more median attainment) and occupations whose work force is less educated, exports appear more skill intensive than competitive imports. As was the case when the five-way occupational grouping was used, differences between exports and competitive imports are widened if the analysis is confined to direct labor requirements and to manufacturing industries which are not natural-resource oriented.

Disaggregated Occupations

The general conclusion reached so far, that U.S. exports are skill intensive relative to U.S. competitive imports, appears to have significance for the analysis of future adjustments of the American balance of payments. Suppose the United States devalued or followed deflationary policy to improve its external position. Presumably, a successful adjustment would require reallocating resources including labor away from "domestic" uses and towards export and import-competing industries. At first glance, it seems that the export industries and the import-competing industries would make complementary (noncompeting) demands on the labor market. The export industries would demand relatively skilled labor, while the import-competing industries would demand relatively unskilled labor. It is tempting to conclude that the skilled and the unskilled labor released from "domestic" uses would be smoothly reallocated without "bottle-necks" or increased structural unemployment because of this complementarity of demand. But, of course, such a conclusion neglects supply. Such neglect could lead to an underestimate of the costs of the transition.

An exploration of this question requires a disaggregated look at the occupational composition of the various labor forces used in this study. For convenience, an index of the differences between labor forces is derived below. The index is based on the 131 occupations drawn from the HZH study and requires only that the proportion of employees in each occupation of the labor forces under consideration be calculated.

As an illustration, consider the export and total production labor forces obtained from the "broad industry" classification, including secondary labor requirements. It happens that "bookkeepers" represent 2.2 percent of the export labor force and 2.9 percent of the total production labor force. The difference between these two figures, 0.7 percentage points, can be given an interesting interpretation. Suppose export production was increased to the point where 1,000 "typical" vacancies were created. Twenty-two of these vacancies would be for bookkeepers

(2.2 percent of 1,000). In addition, suppose total production was depressed sufficiently to release 1,000 "typical" employees. Twenty-nine of these would be bookkeepers. If the 1,000 released workers were transferred to the exporting sector, there would be 7 bookkeepers left over or "unemployed" after the transfer. In other occupations, of course, there would be net vacancies remaining rather than net unemployment. Simple arithmetic reveals that after the transfer the total number of unemployed workers in *all* occupations will be exactly equal to the total number of remaining vacancies.²³

As a measure of the difference between the structures of the two labor forces involved in the transfer, an index of "occupational mismatch" can be defined as equal to the proportion of all those transferred who remain "unemployed."²⁴ If the two labor forces had identical occupational structures, the index would take on a value of zero since the increased supply of labor in each occupation would be just equal to the increase in demand for that occupation. At the other extreme, if total production and export production required entirely different occupations so that a worker displaced from one sector could never hope to find a vacancy in the other, the index would have a value of 100 percent. Between these two limits, the higher the index, the greater is the difference between the occupational structures of the two sectors.

Tables 1A and 1B (pp. 32-33) present mismatch calculations that can be made using the various labor forces. It can be seen, for example, that when secondary labor is included, a transfer of 1,000 typical workers from the "broad industry" export labor force to the corresponding competitive import labor force results in an increase in unemployment

²³ The calculation starts with 1,000 vacancies and 1,000 unemployed job-seekers. Each occupational transfer is a netting process leading to an equal reduction from both totals. Thus, in the example in the text, 22 bookkeepers were successfully transferred from one sector to the other. After the transfer, there were 978 vacancies and 978 job-seekers. As the process is repeated for each occupation, vacancies and job-seekers decline in equal steps. At the end, unemployment = net vacancies.

²⁴ Note the analogy between occupational mismatch and "structural" unemployment. Labor economists generally interpret a simultaneous rise of vacancies and unemployment as a "structural" difficulty. The occupational mismatch index is a projection of the structural unemployment that would occur as a result of the transfer described in the text. Naturally, the assumption of fixed coefficient relationships between output and labor leads to an exaggeration of the impact. In addition, the value of the index is not independent of the degree of disaggregation. As an extreme case, if all jobs were aggregated into a single occupation, the mismatch index would take on a value of zero. If occupations are disaggregated into extremely fine classifications, the index will tend to increase. In principle, the index should be applied only to an "ideal" occupational classification, one which defined jobs in terms of the difficulty of mobility between them. For a previous use of the occupational mismatch index, see Daniel J. B. Mitchell, "Some Aspects of Labour Mobility and Recent Policy in Britain," *British Journal of Industrial Relations*, VII, November 1969, pp. 353-367.

(and unfilled vacancies) of 87 (8.7 percent of 1,000). The degree of mismatch is higher when indirect requirements are excluded, another reflection of the tendency of industry labor forces to become more similar when input-output relationships are considered.

In absolute terms, it is difficult to say whether the mismatches of tables 1A and 1B are high or low. It is not surprising that when the "narrow industry" labor forces are compared with the "broad industry" total production labor force, the mismatch turns out to be higher than the other calculations. This serves to emphasize the contrast between the industries Keesing first isolated and the economy as a whole. But the most interesting contrasts are between labor forces computed under the "broad industry" definitions. It is apparent that the competitive import labor force is noticeably different in occupational structure from both the export and total production labor forces. If the United States were faced with a need to improve the balance of trade, it appears that export stimulation would lead to less of a "structural" problem in the labor market than import substitution. That is, if labor were diverted towards export and import-competing production, the demands of the export industries would more closely match occupational availabilities than the demands of import-competing industries.

Typically, improvements in the balance of trade are brought about by a combination of export stimulation and import substitution, rather than one or the other. Devaluation (or upward valuation of other currencies) is supposed to lead to both effects. So is internal deflationary policy. Examination of the underlying data reveals that if both export and import-competing production were stimulated, the two sectors would tend to compete in the labor market for similar occupations instead of making complementary demands. In other words, in qualitative terms the same type of mismatch occurs whether labor is diverted toward either sector from total production.²⁸

The similarity of mismatch can be seen on table 4. This table presents the data for occupations with a mismatch of 0.5 percentage points or greater under at least one "broad industry" calculation.²⁹ It can readily

²⁸ Let $XMIS$ = the mismatch between the export labor force and the total production labor force in occupation i . $MMIS$ = the mismatch occurring between the competitive import labor force and the total production labor force in occupation i . A simple bivariate correlation using direct and indirect labor requirements results in the equation:

$$(1) XMIS_i = 0 + .59MMIS_i, R^2 = .87$$

If only direct labor requirements are included, the resulting equation is:

$$(2) XMIS_i = 0 + .40MMIS_i, R^2 = .68$$

²⁹ The use of this arbitrary criterion tends to exclude occupations which represent only a small proportion of the labor forces under consideration. However, the oc-

be seen that the signs of the mismatch are identical. A larger proportion of the total production "broad industry" labor force is engaged in managerial, clerical, construction, and transportation oriented occupations than is the case for both the export and competitive import labor forces.

Because of the relatively high degree of industry aggregation, a number of occupational mismatches which appear on table 4 are distorted.³⁰ The numbers should be taken as suggestive rather than as accurate estimates for this reason. But it seems unlikely that further disaggregation would change the two basic conclusions. First, the export labor force is more like the total production labor force than is the competitive import labor force. Second, both the export and the competitive import labor forces tend to differ from the total production labor force in the same way. The second conclusion holds despite the broad generalization that exports are skill oriented while competitive imports tend to require relatively more unskilled labor.

V. SUMMARY

United States exports are skill intensive relative to competitive imports. This generalization is confirmed whether skill is measured by broad occupational groupings or by educational attainments, and whether or not secondary labor is included. The contrast in skill intensity is increased if the analysis is confined to manufacturing industries which are not oriented towards natural resources, and to direct requirements.

A skill availability interpretation of the U.S. trade structure depends on a similarity of labor requirements for particular products in different countries. Skill intensity reversals could upset any such theory. A test with West German occupational requirements applied to American import and export figures did not indicate a reversal under one type of test. But the experiment presented here is quite limited and cannot be taken as conclusive.

Exports tend to be more like the overall labor force in their occupational composition than competitive imports. But both exports and occupations of table 4 account for most of the mismatch. Their dominant effect compared to other occupations can be seen by recomputing the regression equations of the previous footnote using only the occupations of that table. The results are virtually identical to the regressions using all occupations, that is:

$$(1') XMIS_i = 0 + .58MMIS_i, R^2 = .88$$

$$(2') XMIS_i = 0 + .39MMIS_i, R^2 = .69$$

³⁰ For example, "bus drivers" appear with a negative sign because of the importance of "transportation and warehousing" to international trade.

TABLE 4
SELECTED OCCUPATIONAL MISMATCHES (BROAD INDUSTRY DEFINITIONS)

HZH Occupational Title ¹	Mismatch ² between total production and export labor force		Mismatch ² between total production and competitive import labor force	
	Including secondary labor	Excluding secondary labor	Including secondary labor	Excluding secondary labor
Nonfarm proprietors.....	1.4	1.5	1.9	2.7
Employed managers.....	1.0	1.2	1.5	2.0
Bookkeepers.....	.7	.8	1.1	1.6
Misc. clerical workers.....	0.0	.3	.6	.9
Sales reps. & brokers.....	.6	1.0	.6	1.0
Salesmen & assistants.....	2.9	2.7	4.7	6.6
Misc. sales workers.....	.5	.7	.8	1.2
Foremen & supervisors.....	-.6	-.7	-.9	-1.4
Inspectors & graders.....	-.4	-.5	-.4	-.7
Miners & quarrymen.....	-1.1	-.9	-2.5	-4.3
Misc. clothing & related wks.....	.7	.7	.6	.5
Machine & tool setters.....	-1.1	-1.4	-.5	-.7
Tool & diemakers.....	-.4	-.5	-.1	-.2
Stationary engineers.....	-1.1	-0.0	-.4	-.6
Carpenters & joiners.....	1.3	1.4	1.2	1.3
Painters & paperhangers.....	.5	.6	.5	.6
Truck drivers.....	-.5	-1.2	-.7	-1.2
Bus drivers ³	-.4	-.7	-.4	-.5
Misc. mechanics & repairmen.....	-.5	-.5	-.5	-.8
Assemblers.....	-.7	-1.0	-.2	-.4
Laborers.....	-.4	-.3	-1.5	-.8
Misc. manual workers.....	-1.5	-1.5	-3.7	-6.6
Farmers.....	-2.2	-2.3	-3.1	-1.6
Waiters & bartenders.....	.9	.8	1.5	2.1
Cooks & chefs.....	.3	.3	.5	.7
Servants & cleaners.....	.3	.2	.4	.6

¹ Occupational titles follow HZH usage except that the word "misc." has been substituted for the word "other."
² Percent in total production labor force minus percent in export labor force or competitive import labor force. Positive mismatch can be interpreted as the number of unemployed workers per 100 workers transferred from total production to exports or import substitutes. Negative mismatch indicates vacancies.
³ Appears with negative sign due to industry aggregation.

petitive imports tend to differ from the overall labor force in the same ways. They compete rather than complement each other in the labor market. An attempt to improve the U.S. balance of trade through devaluation or deflation is more likely to lead to "structural" labor market problems due to the occupational mix of exports and competitive imports than might otherwise be the case. However, it should be noted

that there are few occupations which are heavily involved in trade because of the small magnitude of U.S. exports and imports compared with overall activity. Thus, substantial structural difficulties would be unlikely.²⁸ In any case, the use of fixed input-output coefficients obscures the tendency of the classical market mechanisms to clear the labor market through variations in wage differentials.

²⁸ A recent estimate by the Bureau of Labor Statistics indicates that in 1966 only 3.1 million employees (including secondary labor) out of a total employment of 72.9 million could be said to be employed in export production. See Charles T. Bowman, "Report on Employment Related to Exports," *Monthly Labor Review*, June 1969, pp. 16-20.

ports represented the same proportion of output as they did when compared with overall output. This amount was subtracted from the export and import bills industry by industry. If labor requirements for each industry of the input-output study had been available, it would have been possible to neglect these adjustments because of the proportionality assumption. However, the industries had to be aggregated to match the occupational data before the proportion of the workers in each occupation required by exports or imports could be calculated. The adjustment for transferred imports, therefore, did have some effect on the labor forces computed.

Production requirements for total final demand, exports, and competitive imports were aggregated to conform as closely as possible to HZH definitions. The resulting twenty-nine industry titles are listed below. Figures in parentheses refer to the corresponding industry numbers used in the input-output study.

- 1) Agriculture, forestry, fishing (1-4)
- 2) Coal mining (7)
- 3) Metal mining (5-6)
- 4) Petroleum and natural gas (8)
- 5) Quarrying and other (9-10)
- 6) Construction (11-12)
- 7) Food and beverages (14)
- 8) Tobacco and tobacco products (15)
- 9) Textile mill products (16-17)
- 10) Clothing and other fabricated textiles (18-19)
- 11) Leather and its products including footwear (33-34)
- 12) Lumber and wood including furniture (20-23)
- 13) Paper and paper products (24-25)
- 14) Printing and publishing (26)
- 15) Rubber products (32)
- 16) Chemicals and chemical products (27-30)
- 17) Petroleum and coal products (31)
- 18) Glass, stone, and clay products (35-36)
- 19) Metal and metal products (13, 37-42)
- 20) Machinery except electrical (43-52)
- 21) Electrical machinery and equipment (53-58)
- 22) Transportation equipment (59-61, 75)
- 23) Professional and scientific instruments (62-63)
- 24) Miscellaneous manufacturing (64)
- 25) Transportation and warehousing (65)
- 26) Communications (66)

APPENDIX TO CHAPTER 2

I. COMPUTATIONS OF EXPORT AND IMPORT LABOR FORCES INCLUDING SECONDARY REQUIREMENTS

Production data used in this chapter were drawn from the Department of Commerce's 1958 input-output study cited in the text.¹ Export bills were based on the export component of final demand appearing on table 1 of that study. Import bills were drawn from row 80B of table 1. The export and import figures are for goods and services but do not include profits and interest or royalties from direct investment. These payments for the "services" of capital are reported in the "rest of the world" and "real estate and rental" industries, which are excluded from the computations of the export and import labor forces. Unfortunately, some payments for patent rights, trademark use, etc. which did not arise from direct investment could not be excluded.

In order to calculate the labor requirements of the various export and import bills, the total input-output coefficients were used to determine the dollar gross production from each industry required to produce these bills. This production was expressed as a proportion of actual 1958 gross production of the industry and multiplied by the number of employees in each occupation in the industry. The occupational requirements of each industry were then summed to produce the desired export or import labor force.

The 1958 gross production figures needed for this calculation are available directly from table 1 of the input-output study. However, in some cases the overall gross outputs obtained by applying the final demand figures to the total coefficients differed from the gross outputs reported on table 1 by amounts greater than could be explained by rounding error. This appeared to be due to late revisions which are reported in the commentary supplied with the tables. In order to make the export and import production requirements consistent with the overall 1958 production data, overall production figures were calculated from the total coefficients rather than drawn from table 1.

The Department of Commerce treated "transferred imports" as inputs to the American import-competing industry rather than as inputs to the actual importing industry. Output of the import-competing industry was then increased to reflect this transferred input. To obtain actual U.S. production, it was necessary to adjust the gross output figures for each industry by subtracting transferred imports. In computing the export or import bills, the assumption was made that transferred im-

¹ See footnotes 3 and 5, chapter 2.

27) Utilities (68)

- 28) Wholesale and retail trade
29) Finance and insurance (70)²

The HZH study presents data on the proportion of each industry's labor force represented by each occupation. These proportions were applied to the labor force data for each industry presented in the 1960 *Census of Population*. Thus, it was possible to calculate the absolute number in each occupation by industry. In the case of the occupation "proprietors" used in the HZH study, 1960 Census data were used to remove agricultural proprietors (farmers) from this group. Farmers were treated as a separate occupation falling into the category "laborers" on tables 1A and 1B, and into educational class "A" on tables 3A and 3B. Workers who could not be classified in any occupation were omitted from all calculations.

II. COMPUTATIONS OF EXPORT AND IMPORT LABOR FORCES EXCLUDING SECONDARY REQUIREMENTS

The methodology used to estimate the export and import forces which exclude secondary labor requirements was the same as that described above, with one exception. Total input-output coefficients were not used to estimate the increase in output of each industry which would be required to produce a given bill of exports or imports. Instead, it was assumed that the increase in production required of each industry would be exactly equal to the amount of exports or transferred imports corresponding to that industry. Thus, if an industry produced \$1,000,000 worth of gross output in 1958 and exports of that industry amounted to \$54,000,000, it was assumed that 5.4 percent of the number of workers in each occupation of that industry were required for export production.

² Because the input-output study and the HZH study used different industrial classification systems, a perfect match between the two studies was not possible. The HZH study gives occupational data for "finance, insurance, and real estate." However, it was decided to exclude real estate from the production and international trade data because payments for the services of capital were included in the international trade figures applying to that industry. Nevertheless, the "finance, insurance, and real estate" industry's occupational data were applied to industry 29, which excludes real estate. The error involved did not appear to be severe. The main result is a slight overstatement of certain building and construction workers in the various labor forces.

Chapter 3

American Labor and the Tariff Issue

"The conception of imports being beneficial to United States business and employment is valid only to the extent that free trade must be highly selective and should exclude woven fabrics and other products...."

Excerpt from Resolution 129 of 1953 A.F. of L. Convention

"There is a greater economic and political need than ever before for the U.S. as a nation to vigorously pursue a course of trade liberalization...."

Excerpt from Resolution 147 of 1961 AFL-CIO Convention

The history of tariffs in the United States has traditionally concentrated on the regional and industrial interests involved and how they were affected. In high school history courses the student studying the roots of the Civil War learns that the South favored free trade, and the North favored protection. The effects of protection on the development of particular industries are often an object of research. Elementary economics courses review rationalizations for protection such as the "infant industry" and national defense arguments. But little is said about the views on protection held by labor unions.

It would be surprising if union leaders had not expressed themselves on the tariff question. As noted in chapter 1, there are in fact theoretical arguments which, under certain circumstances, indicate that labor as a whole might benefit from tariffs. Second—and more important—an individual union with bargaining power in a particular import-competing industry might benefit from any increase in the industry's "ability to pay" which accompanies an increase in protection. Third, public interest in the tariff question has occasionally been strong. Organized labor generally takes positions on major political issues.

This chapter is an investigation of labor's attitude toward protection in the United States. Three periods have been selected for discussion. The first period, ending with World War I, was marked by the establishment of a "neutral" policy on the tariff question by the A.F. of L. During the interwar period, protectionist elements within the A.F. of L. became strong, but the official policy remained one of neutrality. Finally, in the postwar period, organized labor came to support trade

liberalization with qualifications, and supported aid to workers injured by imports. Considerable attention is devoted to legislative developments in the 1960s because labor played an active role in trade policy, and because recent developments may give some clue to future labor attitudes.

I. THE PERIOD UP TO WORLD WAR I

Worker interest in protection goes back to the Tariff of 1789 and probably before that. Workers and manufacturers together supported the tariff provisions of the Constitution and petitioned Congress for protection after its adoption.¹ However, at this early stage of economic development, many of the "mechanics" who supported tariff legislation were undoubtedly small entrepreneurs themselves and not workers in the modern sense. Of course, there were no national labor organizations which might have made official statements or formulated policies.

In the 1820s and 1830s, associations of "workmen and mechanics" were established to support protective measures. However, there is some question as to whether these organizations were "true" labor groups. Some observers believe that the associations were established by protectionist interests hoping to attract the newly enfranchised worker to their cause. According to this view, "genuine" Workingman's Parties of the period opposed tariffs.² Apparently, protectionists did become aware of the importance of labor support during the Jacksonian era and began to use the "cheap labor" argument for tariffs.³ Tariff protection was said to be needed to compensate for the higher cost of labor in the United States relative to European (and later Asian) wages. Without protection, the argument ran, imports would have a competitive advantage and American wages would be driven down to foreign levels.

When nineteenth-century labor leaders viewed the tariff question, they were faced with an immediate dilemma. If labor supported the tariff under the "cheap labor" rationale, it placed itself on the same side of the issue with import-competing manufacturers. But, would these manufacturers really favor tariffs if they thought protection meant

¹ Richard B. Morris, *Government and Labor in Early America* (New York: Columbia University Press, 1946), pp. 203-204; Mary Beard, *A Short History of the American Labor Movement* (New York: Harcourt, Brace and Howe, 1929), pp. 14-15.

² Edward Pessen, *Most Uncommon Jacksonians: The Radical Leaders of the Early Labor Movement* (Albany, N.Y.: State University of New York Press, 1967), pp. 13-14; John R. Commons and associates, *History of Labor in the United States* (New York: The Macmillan Co., 1936), vol. 1, pp. 294-296; Alden Whitman, *Labor Parties 1827-1834* (New York: International Publishers, 1943), p. 32.

³ William L. Cheney, *Industry and Human Welfare* (New York: The Macmillan Co., 1922), pp. 33-36.

higher American labor costs? As Knights of Labor leader Terence Powderly observed, the employers who enlisted labor's backing for high tariffs also favored an open immigration of the cheap labor whose products the tariffs were supposed to keep out.⁴ Prominent figures of the day such as Henry George debunked the protectionist claim that tariffs would benefit labor. George argued that the tax system was a better tool to ensure an equitable income distribution and stressed the price-raising effect of tariffs.⁵

The contradictory pressures on worker organizations are reflected in the early actions of the American Federation of Labor. In 1881, at its first convention, the A.F. of L. (then the Federation of Organized Trade and Labor Unions) passed a platform resolution favoring continued tariff protection "from the cheap labor of foreign countries."⁶ But the following year, the second annual convention removed this clause from the platform after hearing a delegate read a paper attacking the previous resolution as "monopoly-nurturing" and "freedom-restricting." The paper described tariffs as a manifestation of the corrupt system by which manufacturers obtained favors from government, claimed that protected industries did not pay high wages, and argued that tariffs were an "artificial" stimulation of demand, which eventually led to oversupply and shutdowns.⁷

From 1882 until the late 1940s, the A.F. of L. followed what President Samuel Compers termed a "neutral" policy on the general issue of whether tariffs benefited labor.⁸ In 1913, for example, protectionists appealed for labor support to defeat the trade-liberalizing Underwood Tariff. In response, A.F. of L. General Secretary Frank Morrison denied that protection raised wages. Repeating the anti-tariff debate of 1882, he noted that protected industries were not necessarily high-wage industries. Labor could improve its condition only through organization.⁹ Despite Morrison's statement, individual unions, under the A.F. of L.'s neutral policy, were free to pursue their own interests concerning tariffs.

⁴ Terence V. Powderly, *Thirty Years of Labor 1859-1889* (New York: Augustus M. Kelley, 1967), pp. 221-222.

⁵ George made this suggestion in a debate with a noted protectionist over whether tariffs were of benefit to labor. See *Labor: Its Rights and Wrongs. Statements and Comments by the Leading Men of Our Nation on the Labor Question of Today* (Washington: The Labor Publishing Co., 1886), pp. 273-288.

⁶ *Report of the First Annual Session of the Federation of Organized Trades and Labor Unions of the United States and Canada*, Pittsburgh, Pennsylvania, December 15, 16, 17, and 18, 1881, pp. 4, 10. Hereinafter, all convention reports will be cited as "A.F. of L. Convention."

⁷ A.F. of L. Convention, 1882, p. 11.

⁸ Samuel Compers, *Seventy Years of Life and Labor* (New York: E. P. Dutton & Co., 1943), vol. 1, p. 232.

⁹ Cited in *Congressional Record*, 1913, p. 1012.

II. THE INTERWAR YEARS

During the period between the two world wars, the official position of the A.F. of L. continued to be one of neutrality. However, within the Federation protectionist influences gained strength. In 1917, a convention resolution was passed asking Congress for protection against any flood of imports that might occur after the war ended.¹⁰ The resolution reflected a fear of losing the gains made by organized labor in both membership and wage rates during the war.

Protection-oriented unions, primarily those in import-competing industries, found a spokesman for their interests in the late 1920s and 1930s within the A.F. of L. Under the leadership of Matthew Woll, a vice-president of the Federation, they formed "America's Wage-Earners' Protective Conference" to support the efforts to enact the Smoot-Hawley Tariff (1929-1930) and similar measures.¹¹ Woll was president and later vice-president of the International Photo Engravers Union. He remained a vice-president of the A.F. of L. and AFL-CIO until his death in 1956. During his career he became noted for his "conservative" philosophy and strong anticommunist attitude. He was, for example, one of the major forces in the A.F. of L.'s opposition to unemployment insurance in the early 1930s. Some considered him to be Gompers' chosen successor. As chairman of the resolutions committee, he was a powerful influence on all official policies.¹²

Woll began by agitating for tariffs based on American rather than foreign costs, a labor representative on the Tariff Commission, and a prohibition of imports enjoying American trademark and patent protection.¹³ American foreign investment first reached significant proportions in the twenties, and Woll was particularly incensed at Henry

¹⁰ A.F. of L. Convention, 1917, p. 365.

¹¹ The unions affiliated with the Conference were listed during a debate over a tariff resolution at the 1929 A.F. of L. Convention, pp. 374-377. They include unions in the glass, apparel, textile, cigar, and printing industries as well as Woll's Photo Engravers. A discussion of the conference may be found in Lyle W. Cooper, "The Tariff and Organized Labor," *American Economic Review*, XX, June 1930, pp. 215-217.

¹² John L. Lewis opposed Woll and was instrumental in picking Green instead as Gompers' successor. See Clyde E. Dankert, *Contemporary Unionism in the United States* (New York: Prentice-Hall, Inc., 1948), p. 84. Reference to Woll's opposition to unemployment insurance may be found in Norman J. Ware, *Labor in Modern Industrial Society* (New York: D. C. Heath and Co., 1935), p. 501. Woll was chairman of the resolutions committee of the A.F. of L. from 1927 until the merger with the C.I.O.

¹³ "Labor Asks Place on Tariff Commission," *New York Times*, April 9, 1929, p. 2; "Ask Domestic Price for Tariff Basis," *New York Times*, June 13, 1929, p. 4; "Woll Would Curb Factories Abroad," *New York Times*, July 30, 1929, p. 40.

Ford's decision to produce tractors in Ireland for import into the U.S. market.¹⁴ Woll argued that American workers could not compete with the products of cheap foreign labor without a lowering of U.S. wage standards, and that imports meant reduced domestic consumption and reduced employment. In contrast, high wages protected by tariffs would lead to increased demand in the domestic market and increased employment.¹⁵ In Woll's opinion, economists and college professors who advocated free trade were consumers, not producers. It was natural that they selfishly supported the consumer interest.¹⁶

In 1929, Congress was not ready for the Smoot-Hawley bill. Opponents of the bill launched an investigation of the tariff lobby which, they charged, had tried to have an "unfriendly" official in the Tariff Commission dismissed. Woll himself was accused by Senator Thomas Walsh of conferring about the bill over dinner with a manufacturer's representative, a charge denied by Woll.¹⁷ By 1930, with the onslaught of the depression, the investigation was forgotten and the Smoot-Hawley Tariff sailed through Congress. It is interesting to note, however, that despite the efforts of Woll to persuade the public that tariffs benefited the workingman, friends of labor in Congress, such as Representative La Guardia and Senators Norris and Wagner, voted against it. Some union leaders denounced Woll's actions. And President Green emphasized the neutral policy of the A.F. of L. when the question of Woll's activities was raised.¹⁸ But the A.F. of L. passed a continual stream of resolutions calling for protection of *particular* industries, and Woll's influence on these as chairman of the resolutions committee must have been marked.¹⁹

Part of the New Deal recovery program was the Reciprocal Trade

¹⁴ See the statement by Woll reprinted in the 1930 *Congressional Record*, pp. 10378-10382.

¹⁵ Matthew Woll, "High-Wage Tariff Favored by Labor," *New York Times*, November 24, 1929, section III, p. 1.

¹⁶ See the statement by Woll reprinted in the 1930 *Congressional Record*, pp. 9703-9704.

¹⁷ "Woll Denies Confering with Grundy," *New York Times* October 16, 1929, p. 2; "Union Head Decries Tariff," *New York Times*, June 15, 1930, p. 26. Green's statement appears in the tariff debate at the 1929 A.F. of L. Convention, pp. 374-377.

¹⁸ After passage of the Smoot-Hawley Tariff, Woll turned his attention to imports of lumber and other products from Russia, which he claimed were made with convict labor. See "Oppose Admitting Russian Lumber," *New York Times*, July 17, 1930, p. 14. The A.F. of L. traditionally opposed the entrance of goods produced by prisoners into commercial markets. In 1930, legislative representatives of the A.F. of L. supported efforts to amend the tariff act to prohibit imports of goods made by convict or forced labor. Thus, Woll had picked a popular cause within the labor movement. See AFL-CIO, *History Encyclopedia Reference Book* (Washington: 1960), vol. III, part II, pp. 1902-1915, especially p. 1911.

Agreements Act of 1934. Under the Act, the President was empowered to conduct negotiations with foreign countries for mutual reduction of tariff barriers. It was hoped that such agreements would stimulate a revival of international trade, which had been severely limited by protectionist measures undertaken in many countries. The administration apparently felt that American recovery should be part of a general world recovery.

Woll actively opposed the new plan. He argued that it gave too much power to the President and might aggravate unemployment. The United States was not responsible for stimulating world prosperity. In fact, he argued, Roosevelt's stated desire to raise domestic purchasing power could not be achieved without tariff increases.²⁰ However, the A.F. of L. did not oppose the plan, and in the postwar period came to support it with qualifications. After the war, Woll himself became involved in international labor affairs, and his interest in protection seems to have diminished.²¹

III. THE POSTWAR PERIOD

It is not surprising that the A.F. of L. should have endorsed the reciprocal trade program in the late 1940s and early 1950s. Competition from European and Japanese industry was at a low due to the after-effects of war. The United States was running an export surplus financed in part by the Marshall Plan and other aid. As a result of the so-called "dollar shortage," an apparent undervaluation of the dollar relative to other currencies, several countries restricted imports from the United States to aid their balances of payments. Liberalized trade meant more U.S. exports, not increased imports. Even the United Textile Workers, a union adversely affected by Asian import competition a few years later, warmly endorsed mutual tariff reductions in the early 1950s.²² Not all unions were quite so enthusiastic, of course. The A.F. of L. continued to pass resolutions favoring protection for particular industries. In the postwar period, the A.F. of L. endorsed trade restrictions for leather goods, cut granite, certain fabrics, stained glass, phonograph records, motorcycles, alcoholic beverages, mirrors, dinnerware, and

²⁰ Matthew Woll and William English Walling, *Our Next Step—A National Economic Policy* (New York: Harper & Brothers Publishers, 1934), pp. 188-190; Matthew Woll, *Labor, Industry and Government* (New York: D. Appleton-Century Co., 1935), pp. 289-304.

²¹ Woll did continue some activities on behalf of his Wage-Earners' Protective Conference after the war. See "Fight Tariff Cuts as Competing Aid," *New York Times*, January 13, 1947, p. 13.

²² See Resolution 21 at the 1950 A.F. of L. Convention, pp. 27-28, 474, and "U.I.W.A. Holds Fine Convention," *American Federationist*, April 1948, p. 27.

other products.²³ The official position by the time of the AFL-CIO merger had changed from one of neutrality toward general policy to support for tariff reductions *except* where individual member unions felt threatened.

The C.I.O. had less to say about tariffs than the A.F. of L. Its conventions never adopted resolutions favoring protection for specific industries. On the general question, the official policy was one of support for trade liberalization. In fact, in 1954, C.I.O. President Reuther charged the Eisenhower administration with following an isolationist trade policy.²⁴

At first glance, the differences between A.F. of L. and C.I.O. policies on tariff matters may be surprising. It might be expected that A.F. of L. unions, organized on a craft basis, would be less concerned with the health of particular industries than C.I.O. industrial unions. However, several unions in the A.F. of L., such as the Granite Cutters, consisted of crafts which were closely tied to particular industries. Others were true industrial unions. The large heavy industries organized by the C.I.O. were not threatened by imports in most cases and were, if anything, export oriented.

The two labor federations both qualified their support for trade liberalization with the proviso that trade should be carried on in accordance with "international fair labor standards." This concept is discussed in detail in chapter 4. Basically, the idea is a projection onto world trade of the domestic idea of "taking wages out of competition." Union officials have long recognized that bargaining power is greatly enhanced if they can organize all firms in the industry. But, in import-competing industries this goal cannot be achieved. American unions in import-competing industries would therefore like foreign governments or unions to see to it that foreign wages are, in some sense, adjusted in coordination with American wages. Since it has been recognized that productivity differentials play a part in determining relative labor costs, current usage of the phrase "international fair labor standards" is not intended to mean wage parity between all countries at the American level. The present tendency is to compare unit labor

²³ See Resolutions 86, 135 of the 1954 A.F. of L. Convention; Resolutions 42, 53, 129 of the 1953 Convention; Resolutions 51, 59, 141 of the 1952 Convention; Resolutions 13, 16, 21, 83 of the 1951 Convention; and Resolutions 11, 12, 126 of the 1950 Convention.

²⁴ See the report by Reuther at the C.I.O. Convention, 1954, pp. 214-215. An officers' report endorsed the Reciprocal Trade Agreements Program at the C.I.O. Convention, 1949, pp. 118-119.

costs and look for signs of "exploitation" in foreign exporting industries.²⁵

When the A.F. of L. and the C.I.O. merged, their policies concerning protection had to be fused. In general terms, the policies were in agreement, and the AFL-CIO could continue endorsing reciprocal tariff agreements and international fair labor standards. But there was the problem of the individual A.F. of L. unions that had been accustomed to receiving official endorsement for their particular protective measures. To deal with the demands of these unions, a new policy was established. Delegates continued to introduce protective resolutions for specific industries at the biennial conventions. However, a substitute resolution for these would be passed which endorsed trade liberalization, international fair labor standards, and a new idea: government-sponsored assistance to those injured by trade policy.²⁶

Aside from the need to harmonize A.F. of L. and C.I.O. policy, it is difficult to say what other factors may have been involved in this change of procedure. The death of Matthew Woll in 1956 may have removed a powerful protectionist voice from the labor movement. In addition, in the late 1950s and early 1960s business representatives and some economists charged that "wage-push" inflation was responsible for the deterioration of the American balance of payments. It was said that wage increases were raising costs for U.S. export and import-competing industries and, thus, were pricing them out of world markets. Organized labor never accepted this charge, but the convention leadership may have felt embarrassed by resolutions which tied the difficulties of particular industries to the American-foreign wage differential.²⁷ Technically, the wage-push charge involved international differences in the rates of increase of wages, not the absolute differential. But the leadership may have felt that it was safer to let resolutions tying wages and imports die in committee.

Labor's new proposal, that government provide assistance to workers and firms injured by national trade policy, represented an important departure from traditional thinking on tariff matters. Economists, in theoretical contexts, had discussed the possibility of the "gainers" from

²⁵ References to the current AFL-CIO position may be found in chapter 4.

²⁶ Resolution 111 at the 1959 AFL-CIO Convention; Resolution 147 at the 1961 Convention.

²⁷ Concern over the charge that wage-push inflation was damaging the balance of payments can be seen in a number of official AFL-CIO publications. See Bert Seidman, "Prices, Labor Standards and Trade," *American Federationist*, April 1959, pp. 8-10; "The Truth About Trade," *Economic Trends and Outlook*, January 1960, pp. 1-3; "A Fear Symbol to Fight Progress," *American Federationist*, February 1961, pp. 4-5.

international trade compensating the "losers."²⁸ But the idea had not been incorporated into actual programs. Instead, those injured by trade concessions could seek only increased or continued protection through procedures provided in the tariff law.

The concept of government assistance in cases of injury from imports was first brought to public attention in 1954 by David J. McDonald, president of the Steelworkers. McDonald suggested that workers, firms, and communities injured because of Presidential decisions to reduce tariffs should receive compensation from the government. For workers, this would mean special unemployment benefits, retraining and relocation allowances, job counseling, and early retirement under social security. Firms would receive technical and financial assistance including tax benefits. Communities would be given special consideration for government contracts.²⁹

McDonald made his suggestion as a member of the Commission on Foreign Economic Policy, a group established to investigate American trade policy. Other members of the Commission rejected the recommendation as inconsistent with a "free economy." They pointed out that people were continually injured by such developments as changes in technology and public tastes. Why should only those who were injured by imports be compensated? If accepted, where would the idea stop? Even the Harvard economist on the Commission felt he could not endorse the proposal without further investigation.

Despite the initial resistance, McDonald's suggestion took hold. Legislation was introduced to make readjustment assistance a feature of American tariff policy. Senator John F. Kennedy sponsored the proposal in 1957. Subsequent efforts were made by other liberal senators, such as Humphrey and Douglas. But it was the establishment of the European Common Market that led to its adoption.

When the New Frontier arrived in 1961, there was widespread expectation that Britain would soon enter the Common Market. (De Gaulle's opposition was thought to be temporary.) Once Britain entered, the other six members of the European Free Trade Association would follow. Much of Western Europe would be encircled by a common tariff wall, behind which relatively free trade would prevail. The re-

²⁸ It was suggested that international trade could be shown to improve the welfare of a nation because, in theory, the "gainers" from trade could always "buy off" the opposition of the "losers." See P. A. Samuelson, "The Gains from International Trade," reprinted in American Economic Association, *Readings in the Theory of International Trade* (Philadelphia: Blakiston, 1950), p. 251.

²⁹ Commission on Foreign Economic Policy, *Report to the President and the Congress* (Washington: U.S. Government Printing Office, 1954), pp. 54-58.

sult would be the creation of new trade within Europe but a diversion of trade away from outside suppliers, such as the United States. Fear of a reduction of American exports to Europe, particularly agricultural products, led the Kennedy administration to propose the bill which eventually became the Trade Expansion Act of 1962 (TEA).

The administration's bill gave the President broad authority to negotiate across-the-board tariff reductions with the Common Market. In order to increase support for the bill, readjustment assistance to workers and firms was included. The political arithmetic of the McDonald plan was appealing. Critics of the original McDonald proposal were correct in pointing to the inconsistency in compensating for injuries due to imports but not for injuries caused by, say, technological change. But the political process demanded that opposition from groups fearing injury from imports be blunted. Readjustment assistance, even if it did not calm the fears of traditionally protectionist interests, gave the administration a counterargument. It could admit that injury to some might result from tariff negotiations, but point out that such injury was to be compensated at government expense.

The readjustment features of the TEA are still in effect. They follow the McDonald proposal, omitting only aid to communities and early retirement. Groups of workers (including unions) or firms can petition the Tariff Commission for a finding of eligibility for aid. Such finding is based on "whether, as a result in major part of concessions granted under trade agreements, an article . . . is being imported . . . in such quantities as to cause, or threaten to cause, serious injury" to petitioners. (Italics added.) In the case of a worker petition, the Tariff Commission is instructed to look for evidence of unemployment or underemployment affecting a "significant number or proportion" of the workers in the affected plant or firm. If injury within the meaning of the TEA is found, the Secretary of Labor certifies the workers and determines whether any of them meet the specific requirements for special readjustment assistance.³⁰ Workers found to meet requirements for assistance can receive weekly cash benefits, training, and relocation allowances.³¹

³⁰ To qualify for assistance workers must have been employed 26 weeks of the 52 weeks immediately preceding their injury in the certified workplace at a wage of at least \$15 per week. In addition, they must have been members of the employed labor force (anywhere) for 78 of the 156 weeks preceding injury at a wage of at least \$15 per week. (Section 322(b) of the TEA.)

³¹ Eligible workers can receive weekly cash benefits equal to 65 percent of their average weekly wage or 65 percent of the average weekly manufacturing wage, whichever is less. Underemployed workers can receive the same cash benefits except that the weekly allowance is reduced by 50 percent of earnings, a type of "negative income tax." Payments which raise a worker's income above 75 percent of his average weekly wage will not be made, however. The payments can continue for 52 weeks, with an

During the hearings on the proposed TEA, the Kennedy trade program was endorsed by AFL-CIO leaders Meany and Reuther. Both made it clear that their support was conditional on the readjustment provisions of the bill, and both urged that readjustment benefits be made more generous.³² The Steelworkers, still headed by McDonald, naturally endorsed the plan. So did the (then) export-oriented Electrical Workers.³³

The largest union opposed to the bill was the Teamsters. Since most members of the Teamsters are not directly involved in either export or import-competing jobs, this opposition is somewhat surprising. However, relations between the Kennedy administration and Teamster leader James Hoffa were hardly cordial during this period. The Teamsters charged that the bill gave the President too much power since it provided for no Congressional veto over tariff cuts that he might negotiate. Other reasons for their opposition were the failure of the bill to provide for international fair labor standards and the inadequacy of the readjustment benefits.³⁴

As might be expected, most of the labor opposition came from unions in import-competing industries. The glass and ceramics unions, the Operative Potters, the Furniture Workers (regarding musical instruments), the leather workers, Wire Weavers, furriers, and Hatters opposed the bill.³⁵ They contended that tariff cuts would result in unemployment, that the readjustment provisions were inadequate, and that their membership contained substantial numbers of older workers who could not be retrained. Numerous local unions also expressed opposition.

additional 26 weeks if the worker is engaged in retraining or an additional 13 weeks if he is sixty years old or over. Transportation allowances are provided for commuting to training centers. If distance makes such travel impossible, a subsistence allowance of up to \$5 per day is provided to enable the worker to live near the center. In addition, should it be determined that a worker is unlikely to find reemployment in his locality and if he obtains a job offer somewhere else, he becomes eligible for a moving expense allowance and a lump-sum cash grant equal to 2½ times the average weekly manufacturing wage.

³² *Trade Expansion Act of 1962: Hearings Before the Committee on Ways and Means, House of Representatives* (Washington: U.S. Government Printing Office, 1962), pp. 1145-1213, 1506-1534; *Trade Expansion Act of 1962: Hearings Before the Committee on Finance, United States Senate* (Washington: U.S. Government Printing Office, 1962), pp. 239-281. The hearings volumes will hereinafter be denoted "House TEA Hearings" and "Senate TEA Hearings," respectively. A description of the position of organized labor during this period may be found in Solomon Barkin, "Labor's Position on Tariff Reduction," *Industrial Relations*, vol. 1, May 1962, pp. 49-63.

³³ House TEA Hearings, pp. 3081-3096, 2392-2409; Senate TEA Hearings, pp. 1619-1627.

³⁴ House TEA Hearings, pp. 2210-2258; Senate TEA Hearings, pp. 362-382.

³⁵ House TEA Hearings, pp. 2314-2332, 2301-2309, 1986-2000, 2178-2188; Senate TEA Hearings, pp. 1074-1081, 970-974, 652-655.

The Kennedy administration, in a move to calm the fears of senators and congressmen from textile areas, managed to obtain an international agreement under which textile and apparel exporters to the United States, "voluntarily" limited such shipments. As a result, when the president of the United Textile Workers testified, he did not oppose the bill directly although he complained of Japanese competition. The textile agreement appealed to Shoeworkers' President George Fecteau. He supported the TEA but asked for a similar arrangement to control shoe imports.³⁵ His testimony before the House Ways and Means Committee foreshadowed the efforts of many industries to obtain quantitative import restrictions after the conclusion of the "Kennedy Round" tariff negotiations in 1967.

Protectionist forces focused much of their attention on the readjustment provisions of the administration's bill. A number of state directors of unemployment insurance were brought forth to charge that these provisions were a step toward "federalization" of the unemployment compensation system. To counteract these charges, unemployment insurance officials from other states testified in support of the new program.³⁷ The issue became particularly heated when it was charged that the readjustment payments were a form of federal "unemployment compensation" benefits.³⁸ It was claimed that this interpretation would make it illegal for many state unemployment insurance agencies to administer the TEA's readjustment provisions for the Secretary of Labor.³⁹ The debate was never really resolved and can best be viewed as a disguised skirmish between those favoring and those opposing other features of the bill.

The official estimate of the Department of Labor was that over the five-year period following the anticipated enactment of the bill, about 90,000 workers would be injured due to import competition. Exactly how such a figure could be determined is not clear. No one could predict how rapidly the negotiations with the Common Market would progress, or what products would ultimately be affected. Nevertheless, the 90,000 figure was compared with the approximately 4 million workers the Department of Labor estimated were currently engaged in export production and the handling of imports. By implication, Congress was told that 4 million jobs were threatened if the bill were not passed, as opposed to only 90,000 if it were.⁴⁰

³⁵ House TEA Hearings, pp. 2821-2838, 3169-3174.

³⁶ House TEA Hearings, pp. 3229-3233, 3405-3411.

³⁷ Senate TEA Hearings, pp. 1648-1699.

³⁸ Senate TEA Hearings, pp. 2066-2126 especially p. 2102.

³⁹ House TEA Hearings, pp. 690-698, 726, 3888.

This type of argument tended to obscure the issues involved, although it was probably politically effective. If international trade were curtailed, the proportion of the 4 million workers in the "international trade labor force" who would be injured would depend on such factors as their occupations, education levels, the age characteristics, and locations. If these workers were a highly mobile group, few of them would be severely injured by trade restrictions (assuming that the government followed full employment aggregate demand policies). In any case, the implication that 4 million workers were threatened if Congress did not pass the TEA was misleading.

Up to this writing, a total of about 600 workers had been declared eligible for aid under the TEA. These workers, all in the steel industry, received aid as the result of petitions filed in 1969.⁴¹ Prior to that time, all worker and firm petitions were unsuccessful. Before the 1969 steel cases, 7 investigations of worker petitions were carried to completion by the Tariff Commission. In 6 of these, the Commission rendered an opinion of "no injury" without dissent among any Commissioners. In a seventh case, the Commission split evenly in its opinion resulting in no "affirmation" of injury. (No eligibility for aid.) An additional worker petition was withdrawn before the investigation was completed. Of 6 rejected firm cases, dissent among the Commissioners occurred in 2 instances.⁴²

Whether this failure to find injury can be ascribed to carelessly drawn language by the Tariff Commission is open to dispute. The Commission noted that the law stated injury had to be caused "in major part" by tariff "concessions." Thus, injury from imports that cannot be shown to stem from specific concessions does not qualify for compensation.⁴³

If there is evidence that other factors played an important role in the

⁴¹ The number of workers declared eligible is reported in "Steelworkers Hit by Imports Eligible for Aid," *AFL-CIO News*, December 13, 1969, p. 9. Strong dissent was recorded in the 1969 steel decisions. Commissioner Leonard claimed that previous decision-making criteria were ignored. See his opinion in TC Publication 297 and TC Publication 298. As will be seen below in the text, organized labor had been highly critical of the Tariff Commission because of its decisions on TEA assistance prior to the steel cases. In addition, demands for trade restrictions to protect jobs were becoming stronger. The degree to which these pressures may have influenced the decisions is hard to estimate.

⁴² Summaries of these cases may be found in the Tariff Commission's *Annual Report*, as well as in its "TC Publication" series.

⁴³ For example, a petition of iron ore miners was rejected on the grounds that iron ore had not been subject to tariffs for 50 years and hence no "concessions" were involved. See TC Publication 96.

injury, the phrase "in major part" can be invoked to deny relief.⁴⁴ A problem also arose in determining the appropriate base period with which to compare existing levels of employment in an affected firm or plant. Petitioners naturally pointed to periods when employment was high for comparisons, but the Commission did not always accept their selection as appropriate.⁴⁵

At one point, Commission Chairman Dorfman rejected the contention of a petitioner that the TEA should be liberally interpreted in worker cases to avoid loss of labor support for trade liberalization. All cases must be handled according to the same rules, replied Mr. Dorfman.⁴⁶ But, in the view of the AFL-CIO Executive Council, the Commission was employing a "rigidly technical interpretation" of the law. AFL-CIO President Meany indicated in May 1965 that organized labor would press the administration and Congress for amendments to the TEA.⁴⁷

Bills were introduced in Congress as early as 1963 to ease the requirements for proofs of injury under the TEA. However, none of these bills were passed. In a related move, a number of traditionally protection-oriented unions supported a bill introduced in 1967 by Representative John Dent of Pennsylvania.⁴⁸ The Dent bill was worded as an amendment to the Fair Labor Standards Act rather than as a piece of tariff legislation. It thereby avoided the House Ways and Means Committee, which normally considers tariff bills. Instead, the bill was sent to the House Committee on Education and Labor where it received a friendly

⁴⁴ In a case involving textile workers, the Commission cited the high domestic support price for cotton as a contributing factor to the injury. The higher price in the United States relative to foreign markets made U.S. mills less competitive. See TC Publication 100. One problem that arises in attempting to determine the major cause of injury is that even if an *industry* can be shown to be injured, the most efficient firms in the industry may survive. The failure of other firms can always be ascribed to "inefficiency" rather than to trade concessions.

⁴⁵ The Commission rejected a petition on behalf of workers in a ceramic tile plant on the grounds that the base period selected by the petitioners was one of abnormally high employment. During this period, the firm had reallocated production to the petitioners' plant because of a strike in another plant owned by the firm. See TC Publication 115. In a case involving workers in a plant producing transistor radios, the Commission ruled that in the appropriate base period such radios had not been invented. Therefore, American employment could not be said to have declined due to Japanese competition. See TC Publication 91.

⁴⁶ TC Publication 100.

⁴⁷ See "Labor Body Critical of U.S. on Payments," *New York Times*, August 14, 1963, p. 15; and "Meany Charges Witch-Hunting in U.S. Studies of Union Funds," *New York Times*, May 21, 1965, p. 16.

⁴⁸ The Dent bill was numbered H.R. 478 in 1967. Dent had introduced a similar bill in 1966 which died in committee. H.R. 478 was supported by unions in the textile, apparel, leather goods, and glass industries, the ever-present Operative Potters, and others. See 1967 *Congressional Record*, pp. 27183-27215, especially p. 27190.

reception. Under Dent's plan, the Secretary of Labor on his own initiative or on request from the President, House, or Senate, could investigate injuries (broadly defined) due to imports from low-wage countries. A finding of injury would be reported to the President who could "take such action as he deems appropriate." Since such an injury finding would not entitle anyone to aid under the TEA's readjustment provisions, the only action the President might take would be to increase import restrictions. Dent's bill passed the House in September 1967, but died in committee in the Senate.

The Johnson administration promised in 1966 that it would "soon" submit a trade bill to Congress which would, among other things, liberalize the injury definition applicable to readjustment assistance. However, protectionist pressure grew as the Kennedy Round tariff negotiations neared conclusion, and led the administration to avoid filing any new tariff legislation for the next two years. In 1968, the administration submitted a bill which eliminated the requirement that "concessions" had to be the cause "in major part" of injury. Instead, it was necessary to show only that imports were "a substantial cause of injury." In addition, the Tariff Commission was to be limited to a fact-finding role with decisions on readjustment assistance made by the President. But the bill was not passed.

It is reasonable to ask whether the 1968 amendments, if they had been enacted, would have made a difference. The answer, based on actual experience, seems to be that they would. These amendments had been copied from another law passed in 1965 in connection with an agreement with Canada on trade in automobiles and automotive parts. The Automotive Products Trade Act (APTA) provided for TEA assistance to workers and firms injured (under a broad definition) by the agreement. It worked to the satisfaction of the AFL-CIO and the United Automobile Workers.

Congress passed the APTA on the urging of the administration to avoid a tariff war with Canada. The Canadian government, partly out of a desire to improve its balance of payments and partly to encourage the Canadian auto industry, had announced a rebate scheme for exporters of automobiles and automotive parts to counteract American tariff duties.⁴⁹ Such a step would probably have caused the United States to levy still higher "anti-dumping" duties. To avoid this action and reaction, an agreement was reached whereby tariffs on autos and original equipment parts shipped between the two countries would be elimi-

⁴⁹ The Canadian government's program was endorsed by Canadian organized labor. See Canadian Labour Congress, *Memorandum to the Government of Canada*, December 11, 1963, p. 15.

nated. The industry would be allowed to "rationalize" productive facilities in both countries subject to certain commitments for increased production in Canada, which the auto makers were asked to make with the Canadian government.

Because the major automobile manufacturers operated on both sides of the border, there was little opposition to the plan from the industry except from certain independent parts suppliers. On the union side, however, opposition might have developed despite the fact that the United Automobile Workers represented American and Canadian workers in the industry. "Rationalization" of the industry meant that certain work would be reallocated from one country to the other. Some workers would be adversely affected. The U.A.W. demanded—and the administration included in its bill—readjustment assistance provisions which went beyond those included in the TEA. It wanted decision-making authority in the hands of the President, not the Tariff Commission. It wanted public access to information turned up during readjustment investigations.⁵⁹ Finally, since the TEA provisions compensated only for injury due to *imports*, it wanted the new law expanded to include, in addition, injuries caused by decreased exports and reallocation of work to Canada which might occur under the agreement.

The original administration bill gave the President complete investigatory and decision-making power on readjustment assistance matters. No involvement for the Tariff Commission was contemplated. However, complaints were heard that Presidential decision-making might lead to "political" judgments.⁶⁰ In addition, industry spokesmen opposed the public disclosure provisions. Eventually, a new bill was introduced which gave the Tariff Commission a fact-finding role but left decisions on whether or not injury had occurred within the meaning of the APTA to the President. The strong public disclosure requirements were eliminated from the new bill.

Aside from these alterations, the bill's readjustment provisions were designed to meet the requirements of the U.A.W. Unlike the earlier debate over the TEA, no great controversy arose from the inclusion of readjustment assistance. For example, the union expressed concern that the weekly cash payments would have to be deducted from benefits

⁵⁹ *United States-Canada Automobile Products Agreement: Hearings Before the Committee on Ways and Means, House of Representatives* (Washington: U.S. Government Printing Office, 1965); pp. 255-268; *United States-Canada Automobile Agreement: Hearings Before the Committee on Finance, United States Senate* (Washington: U.S. Government Printing Office, 1965), pp. 246-259. Hearings volumes are denoted below as "House APTA Hearings" and "Senate APTA Hearings," respectively.

⁶⁰ This question was raised by the Committee for a National Trade Policy. See House APTA Hearings, p. 238.

provided by the industry's Supplemental Unemployment Benefits plan if such payments were considered to be unemployment compensation. The House Ways and Means Committee and the Labor Department reached an agreement under which the extra income provided by the weekly cash payments above normal unemployment compensation levels would not be considered to be unemployment insurance.⁶²

As finally passed, the APTA laid out more specific guidelines for determining injury than the TEA, although it provided identical cash benefits.⁶³ But the President had the power to override the guidelines and, despite what they indicated, decide that injury had or had not occurred. The President did not actually make these determinations. He appointed an "Automotive Agreement Adjustment Assistance Board," a group consisting of the Secretaries of Labor, Commerce, and the Treasury, to exercise his power. In turn, the Board delegated its powers to an "Automotive Assistance Committee" composed of Assistant Secretaries of the three departments. Actual administration of the APTA was left in the hands of the Committee, although it must be assumed that the apparent Presidential desire that the readjustment provisions should actually provide benefits influenced the Committee's operation.

At least one member of the Tariff Commission was unhappy with the relegation of the Commission to a fact-finding role, an arrangement he termed "inefficient and unrealistic." In the first fact-finding report, the Commission found that the petitioners had been or were likely to be injured. According to an official of the Commission, this finding was "a statement of fact, and not a statement of opinion."⁶⁴ Nevertheless, it is clear that the line between fact and opinion is hard to draw. Subsequent reports of the Tariff Commission were confined to statistical

⁶² The House Ways and Means Committee suggested in its report on the APTA that it would be reasonable to consider only that portion of the readjustment allowance representing 50 percent of the worker's average weekly wage or the weighted average maximum state unemployment benefits, whichever is less, to be a substitute for unemployment insurance. Secretary of Labor Wirtz concurred with this recommendation. In effect, computation of SUB benefits would ignore the increment by which readjustment benefits exceeded normal unemployment compensation. See Senate APTA Hearings, p. 137.

⁶³ The President was to look for evidence of actual or impending dislocation, decreases in American production of the article in question, increases in imports from Canada of the article, and decreases in American exports of the article to Canada relative to Canadian production. (Section 302(b) of the APTA.)

⁶⁴ The Commission member quoted in the text is James W. Culliton. His statement appears in *Fifty-First Annual Report of the United States Tariff Commission* (Washington: U.S. Government Printing Office, 1968), p. 12, footnote 25. The comment on the first fact-finding investigation appears in a letter to the author from the Acting Secretary of the Commission, Willard W. Kane.

analysis of the plants and products involved. All cases processed under the APTA involved alleged injury to workers; there were no firm petitions.

The APTA expired in June 1968 despite requests for extension by the President and the U.A.W. During the life of the Act, 21 cases were processed on behalf of 5,684 workers. Of these, 7 were rejected. Almost 2,500 workers were certified as belonging to an injured group. Slightly more than 2,000 of these were found eligible for benefits and 1,850 actually received payments. Total payments under the APTA readjustment assistance amounted to \$3.1 million. Almost all of this money went for weekly cash allowances. A very small proportion was expended on training and other benefits.

As of January 1, 1968, 325 certified workers remained unemployed. About half of the 1,200 workers declared eligible for benefits during 1967 had found new jobs or left the labor force. Another third were recalled to their old jobs. A few had enrolled in training programs.⁵⁵ Clearly, the high demand for labor during the period in which the APTA operated helped to keep the cost of the program down and eased the burdens of adjustment. Nonetheless, experience with the APTA showed that a readjustment assistance program could be made to work to the satisfaction of the interest groups involved, especially when there was a sympathetic President in the White House.

Recent inflation in the United States has aggravated the import problems of a number of unions. The Steelworkers, supporters of the TEA in 1962, emphasized the need for legislation to prevent "dumping" at their 1966 convention.⁵⁶ They soon joined the industry's efforts to obtain quotas on imports. As a result of industry and union demands, "voluntary" arrangements were worked out with major steel exporters to the United States to limit their shipments. The union, however, continued to push for legislative quotas on the grounds that the voluntary program was inadequate.⁵⁷ Other unions are moving in the same direction. The Electrical Workers (who enthusiastically supported the TEA) and the

⁵⁵ Information on the operation of the APTA can be obtained from *First Annual Report of the President to the Congress on the Implementation of the Automotive Products Trade Act of 1965* (Washington: U.S. Government Printing Office, 1967); *Second Annual Report of the President to the Congress on the Operation of the Automobile Products Trade Act of 1965* (Washington: U.S. Government Printing Office, 1968); *Canadian Automobile Agreement: Hearing Before the Committee on Finance, United States Senate* (Washington: U.S. Government Printing Office, 1968), pp. 5, 17, 18. The author will make unpublished data available on request. The UAW's president, Walter Reuther, comments in this last document that the readjustment program was successful but should be extended beyond June 30, 1968. See pp. 57-59.

Machinists sent a committee to visit a number of Asian countries in early 1969 to investigate the import problem. The committee reported that voluntary agreements were needed. In addition, the Electrical Workers (IUE) are supporting stricter country-of-origin labeling requirements and looking into legislative quotas.⁵⁸

Growing fear of import competition among these and other unions seems to have produced a change in recent AFL-CIO policy. In his submissions to the platform committees of the Democratic and Republican parties in 1968, AFL-CIO President Meany called for "agreements with other countries to regulate world trade . . . for industries sensitive to disruption from rapidly rising imports and unfair competition."⁵⁹ More recently, complaining of low-wage imports resulting from the Mexican border development program, the AFL-CIO called for special tariffs and tighter country-of-origin labeling.⁶⁰ It is still too early to tell if organized labor will now move steadily in a protectionist direction. The Mexican border issue might be an isolated case, tied to the bracer question of a few years back. And the Tariff Commission's 1969 steel decisions may weaken the argument for trade restrictions. But, if inflation continues, more and more industries will experience import problems and protectionist sentiment will grow.

IV. ANALYSIS AND CONCLUSIONS

An important question to be asked is whether unions have followed a "rational" policy with regard to tariffs over the periods we have discussed. To answer this question, it is worth noting what economic theory has to say on the subject. The economic analysis can be approached on two levels. First, judgments can be made about the actions of individual unions in import-competing industries (the micro level). Second, the official policy of organized labor toward the general question of tariffs and labor's welfare can be analyzed (the macro level).

The AFL-CIO also felt the APTA was a success. See its 1967 Convention, pp. 578-582. ⁵⁸ Resolution 18.

⁵⁷ See the Steelworkers' publication, *Steel Labor*, November 1967, p. 10; May 1968, p. 2; February 1969, p. 4; March 1969, p. 4; April 1969, p. 3; May 1969, p. 17; July 1969, p. 4. Three new worker petitions were filed with the Tariff Commission in September 1969. All involved the steel industry, although the Steelworkers union did not file the petitions.

⁵⁸ See the *IUE News*, January 16, 1969, p. 3; April 10, 1969, pp. 12-15; July 3, 1969, p. 2; September 25, 1969, p. 6.

⁵⁹ AFL-CIO, *The AFL-CIO Platform Proposals* (1968), p. 14.

⁶⁰ "Unions Plan Assault on Companies Lured by Mexico's Low Wages," *Wall Street Journal*, February 21, 1969, p. 1.

The Micro Level

An American union operating in an import-competing or an export-oriented industry has a problem not faced by unions in purely domestic industries. It cannot, through its own efforts, "take wages out of competition," because—with the exception of Canadian plants—it cannot organize the foreign sector of the industry. Any increase in American wages relative to the foreign level tends to discourage American production and employment and to encourage foreign production.

In a static situation, the imposition of a nonprohibitive tariff provides only limited relief for a union in an import-competing industry. When a tariff is imposed, a price differential results between the American and the foreign product, even if the product is standardized and homogeneous. Thus, a 10 percent ad valorem tariff would allow a product that sells for \$1 abroad to sell for \$1.10 (plus shipping costs) in the United States. On the day the tariff is imposed, the union, if it has the bargaining strength required, might appropriate some of the domestic price increase to its members in the form of higher wages. But, once the industry has adjusted to the tariff, the old situation prevails. A ceteris paribus increase in domestic relative to foreign wages tends to stimulate foreign production and to discourage American production and employment.

A tariff which is continually adjusted for changes in the American foreign wage differential would "take wages out of competition" and thus benefit the union involved. Similarly, quantitative restrictions, either quotas or "voluntary" control systems such as the Cotton Textile Agreement, benefit affected unions by allowing the American price of the good in question to move independently of the foreign price. Even if the quota allows some imports to enter the American market, once these are sold the industry has the remaining unsatisfied demand to itself.⁶⁵ A "rational" union in an import-competing industry supports quantitative controls (as does the United Textile Workers) or a tariff subject to continual adjustment for changes in American costs (essentially Matthew Woll's proposal).

It should be noted that this analysis does not depend in any way on the existence of cheaper labor abroad. It does not matter why the foreign industry is able to export to the United States. Many factors could be involved, such as relatively cheap raw materials and natural resources

⁶⁵ The statement in the text is an extension of the theory of quotas applied to firms. See Charles P. Kindleberger, *International Economics*, 4th ed. (Homewood, Ill.: Richard D. Irwin, 1968), Appendix E.

in the foreign country. Subsidies by the foreign government might play a role. Even the structure of American tariffs might in some cases discourage particular U.S. industries by raising the costs of imported inputs to production which these industries require. There is no reason *in theory* why the foreign producer might not pay a higher wage than his American counterpart and still be able to export profitably to the U.S. market.

Nevertheless, it is an empirical fact that wages in foreign countries, when converted to dollar terms at prevailing exchange rates, are generally lower than American wages. Thus, if an international industry is characterized by similar technology and similar nonlabor costs in different parts of the world, the high U.S. wage level is likely to put the American sector of the industry at a disadvantage. It is clear that in particular products, "cheap" foreign labor explains the advantage of the foreigner.

The analysis so far has been essentially static. But unions sometimes find themselves in dynamic situations in which their industries are not only import-competing but are declining relative to foreign producers or even absolutely. Foreigners may "discover" that economic circumstances give them an advantage in a particular good and begin to expand production. Unless a tariff is imposed which removes the foreign advantage and halts the trend, the transitional period may be particularly painful for the union. Not only will its bargaining ability be eroded by the foreign competition, but as domestic employment in the industry declines, the union as an institution may be threatened. So far the concept of readjustment assistance has been confined to injured workers and firms. No one has suggested a way of "compensating" an injured union.

In general, the reactions of individual unions in import-competing industries parallel the behavior of firms in these industries. In the sense of protection of bargaining power, limiting job losses for members, and institutional self-preservation, the policies followed are "rational."⁶⁶ But what is good for a particular union or group of unions is not necessarily good for labor as a whole. To discuss what is good for labor, it is necessary to turn to macro-level analysis.

⁶⁶ Of course, a union pursuing a protectionist policy must consider the consequences of antagonizing its foreign counterparts. Such antagonism might prevent attempts at internationally coordinated bargaining of the type described in chapter 4. A foreign complaint over protectionist actions of an American union was recently made by the International Union of Food and Allied Workers' Associations, an International Trade Secretariat. See its *News Bulletin*, vol. 39a, no. 10, 1969, p. 3.

The Macro Level

In chapter 1, two possible benefits to labor from tariff increases were discussed: decreases in overall unemployment and increases in real wages. The first would, of course, not apply in periods of full employment and assumes that tariff increases do not result in offsetting retaliatory trade restrictions in other countries. For a country as important in world trade as the United States, this assumption is unrealistic. In addition, monetary and fiscal policy is available as an alternative method of maintaining full employment.

In theory, tariff increases can improve real wages if imports are labor intensive relative to exports and if other assumptions are met. However, it was noted in chapter 1 that the factor intensity of American imports relative to exports is a matter of controversy. Once it is recognized—as in chapter 2—that “labor” is composed of many diverse occupations, the situation becomes even more complex. In principle, it would be necessary to examine the real wage effect on each occupation. It is safe to say that no one knows what the net effect of protection on real wages has been in the United States.

Given the existence of alternatives means to maintain full employment and the uncertainty over the effects of tariffs on labor's welfare, what policy can be recommended for national labor bodies such as the AFL-CIO? Cleraly, such organizations cannot tell their member unions in import-competing industries to refrain from pursuing policies of self-interest. Support for improved governmental worker assistance programs seems the best answer. Adjustment assistance was an important contribution of organized labor to national trade policy. Experience under the APTA and the recent steel decisions under the TEA show that such programs can operate successfully.

Chapter 4

Labor Standards and the International Coordination of Collective Bargaining

I. INTRODUCTION

In chapter 3, the interest of unions in “international fair labor standards” was noted. The reasoning behind such demands essentially involves a projection of the idea of “taking wages out of competition” from the domestic to the international level. This idea has appeared in several forms. First, it was an important rationale behind the formation of the International Labor Organization (I.L.O.) to coordinate the application of labor standards. Second, unions have demanded that fair labor standards be defined and enforced in international trade through some agency such as the General Agreement on Tariffs and Trade (G.A.T.T.). Third, unions in different countries dealing with the same corporation have tried to coordinate their bargaining. This chapter is an exploration of these various versions of taking wages out of international competition.

II. LEGISLATIVE LABOR STANDARDS

Proposals that nations should coordinate legal labor standards go back quite far in history. Jacques Necker, the French statesman, argued in 1788 that Sunday rest would have to be observed in all countries simultaneously. Otherwise, individual nations which tried to enforce it would put themselves at a competitive disadvantage in world trade.¹ Robert Owen, the British utopian socialist, is said to have been an early thinker in this field.² One historian, however, attributes the first concrete proposal for international labor conventions to a French economist, Jérôme Blánqui. Blánqui argued that an improvement in labor

¹ Paul Périgord, *The International Labor Organization: A Study of Labor and Capital in Cooperation* (New York: D. Appleton and Co., 1926), pp. 50-51.

² Boutelle Ellsworth Lowe, *The International Protection of Labor* (New York, Macmillan, 1921), p. xxv; National Industrial Conference Board, *The Work of the International Labor Organization* (New York, 1928), p. 1.

standards could be achieved only if it were "adopted simultaneously by all industrial nations which compete in the foreign market."³

Whatever its origin, the proposal for legislative world labor standards led to a number of international conferences in the late nineteenth and early twentieth centuries. Eventually, the International Labor Organization was established to implement labor standards as part of the aftermath of World War I. The international trade argument for coordinated standards was not the only motivation behind the I.L.O. Commentators of the period often stressed that world peace could be ensured only if economic deprivation was eliminated in all countries.⁴ But the trade argument did provide an important rationale for the new organization. When the United States declined to join it in the 1920s, the I.L.O. attempted to attract American participation by stressing that U.S. labor standards could be threatened by world trade.⁵

It should be noted that the trade argument cannot be applied to all I.L.O. conventions and recommendations. For example, those dealing with freedom of association do not have a direct bearing on labor costs. Some I.L.O. standards which do influence costs apply to industries, such as construction, which do not engage in international trade. Furthermore, although it is not always recognized in discussions of labor standards, the incidence of the costs of certain social legislation may fall primarily on the worker rather than on the employer. It is commonly assumed by economists, if not by those who favor such standards, that the taxes which finance social-security types of benefits are borne by labor.⁶

Many I.L.O. standards do have a direct impact on costs, however. Only in the case of seamen has the I.L.O. tried to set a specific minimum wage. But it has encouraged minimum wage-setting machinery for other

³ Quote translated in Conley Hall Dillon, *International Labor Conventions: Their Interpretation and Revision* (Chapel Hill, N.C.: University of North Carolina Press, 1942), pp. 1-2.

⁴ H. J. W. Hetherington, *International Labour Legislation* (London: Methuen & Co., 1920), p. 3.

⁵ International Labor Office, *The International Labour Organization: The First Decade* (London: George Allen & Unwin, 1931), pp. 42-43. The logic of the trade argument may account for the ambivalent response of U. S. employer associations during the 1920s. The National Association of Manufacturers was vehemently opposed to the I.L.O. Conference. And the National Industrial Conference Board cooperated with the I.L.O.'s International Labor Office on research projects. See T. G. Spates, "The Employers of the United States and the International Labor Organization," *Annals of the American Academy of Political and Social Science*, vol. 166, March 1933, pp. 146-155.

⁶ Douglas Dosser, "Fiscal and Social Barriers to Economic Integration in the Atlantic Area" in Bela Balassa et al., *Studies in Trade Liberalization* (Baltimore: Johns Hopkins Press, 1967), pp. 238-239.

sectors. And the safety standards and working conditions prescribed for particular industries presumably affect the costs of production. It has often been argued that some of these standards lead to productivity increases which tend to offset the cost-raising effect. For example, minimum wage laws in less developed countries have been defended on the grounds that higher income going to workers leads to increases in output through better diets and health. Skepticism has been expressed over the magnitude of such induced productivity increases, although the claim cannot be accepted or rejected except on a case-by-case basis.⁷

Perhaps the strongest version of the international labor standards argument is that wages and working conditions should be equalized in all countries. One of the early American proponents of fair standards in international trade put forth the idea that "the true basis for international competition is the wage-level of the dearer-labor country."⁸ However, it has long been recognized that an attempt to equalize wages and working conditions between, say, a developed and a less developed country would have disastrous consequences for the latter.⁹

A rejection of equalization leaves a basic problem unresolved. What is the optimum ratio of total standards (including wages) between countries at different stages of development that should be encouraged through agencies such as the I.L.O.? There is a theoretical economic answer to this question. Under a variety of restrictive assumptions, *laissez-faire* free trade leads to an "efficient" allocation of production throughout the world. However, since the resulting income distribution within countries may not be equitable, taxes and transfers must be used to assure a "social optimum." If it is assumed that in the absence of transfers labor in a particular country would receive less than an equitable share, a possible approach is through labor standards legislation. Such standards, however, would tend to distort trade patterns by putting that country's labor-using export and import-competing industries at a disadvantage. The imposition of *some* degree of standards in other countries could, in theory, tend to push world production back towards its "optimum" pattern. A "second-best" solution could be derived consistent with particular ratios of standards in the different countries. This "second-best" position would be inferior to *laissez-faire*

⁷ Elliot J. Berg, "Major Issues of Wage Policy in Africa" in Arthur M. Ross, ed., *Industrial Relations and Economic Development* (London: MacMillan, 1966), pp. 191-196.

⁸ George Gunton, *Principles of Social Economics*, 2d ed., (New York: G. P. Putnam's Sons, 1897), pp. 335-336. Gunton was a textile worker and labor organizer before becoming a writer on economic subjects.

⁹ Herbert Feis, "International Labour Legislation in the Light of Economic Theory," *International Labour Review*, XV, April 1927, p. 510.

free trade from an "efficiency" point of view, but better than the situation of free trade with labor standards enforced in only one country.¹⁰

There is always a possibility that labor standards in countries engaged in trade could have a detrimental effect on exporting and import-competing industries. It is well known, for example, that early Indian labor legislation was passed as a result of pressure from British textile interests who hoped to reduce Indian competition.¹¹ In more recent times, Reynolds has argued that pressure from U.S. mainland groups has pushed up minimum wage levels in Puerto Rico to the point where employment opportunities there have been curtailed.¹² Economic interest groups rather than abstract economic theory are likely to dominate in such situations.

Member nations of the I.L.O. would naturally be reluctant to ratify any conventions or recommendations which were detrimental to their economic interests. Even if they do ratify, implementation may not follow. For this reason, a number of conventions include special provisions for certain areas. In addition, the rather cumbersome procedures for adoption of conventions and recommendations give member states an opportunity to make their objections known. Finally, laxity of enforcement is often found in less developed nations. It seems unlikely that I.L.O. standards have substantially altered trade patterns between developed and less developed countries.

III. UNION DEMANDS FOR INTERNATIONAL FAIR LABOR STANDARDS

Chapter 3 points out that American organized labor has qualified its support for trade liberalization during the postwar period with the proviso that trade should be conducted in accordance with "international fair labor standards." It is difficult to say when this demand became an official position or to assess the importance of the demand to labor leaders in its early days. Walter Reuther has indicated that Philip Murray, President of the C.I.O., advocated such standards as early as 1943.¹³ Outside the United States, similar proposals have been made

¹⁰ The theoretical calculation described in the text would, of course, require far more information than could actually be obtained. In addition, it would be necessary to place weights on the welfare of the various social classes in each country. The theory is analogous to that involving calculations of second-best solutions of tariff reductions for particular products or countries. See J. E. Meade, *Trade and Welfare* (New York: Oxford University Press, 1956), especially chapters XXXI, XXXII.

¹¹ Rajani Kanta Das, *Factory Legislation in India* (Berlin: Walter De Gruyter & Co., 1923).

¹² Lloyd G. Reynolds, "Wages and Employment in a Labor-Surplus Economy," *American Economic Review*, LV, March 1965, pp. 19-39.

¹³ Reuther's statement appears in *International Metalworkers' Federation, Minutes of the Nineteenth Congress of the International Metalworkers' Federation*, Rome, May 9-12, 1961, p. 83.

by various international trade secretariats and the International Confederation of Free Trade Unions (I.C.F.T.U.).

Although the I.C.F.T.U. has included adherence to I.L.O. conventions and recommendations as part of one of its definitions of international fair labor standards, the phrase is not generally defined in terms of specific legislation. Instead, definitions are usually stated in terms of certain statistical measures which would allow an observer to discover whether trade is fair or unfair. Exactly what weights should be placed on these various measures is not always clear. Indeed, it is common to assert that the proposed measures should not be applied mechanically, and that case-by-case investigations are needed.

The ultimate objective of labor groups is to have such standards enforced by some international mechanism. Currently, attempts are being made to include international fair labor standards as part of the G.A.T.T. A complaint procedure is envisioned for countries which believe they have been injured by unfair competition. Labor standards were actually included in the charter of the still-born International Trade Organization in 1948.¹⁴ But attempts to incorporate them into the G.A.T.T. have so far been unsuccessful.

Before discussing some of the specific statistical measures that labor groups have proposed to assess unfair competition, it is worth reviewing three key features which characterize all the proposals. First, references to wages are generally (but not always) in money terms, presumably converted into a common currency at prevailing exchange rates. This omission of the cost of living may be somewhat surprising since it might be expected that unions would define "fair" wages in terms of some sort of minimum decent income standard. Under the typical definitions, however, there is no reason to suppose that a worker who is fairly paid is receiving a "decent" income. Conversely, there is no reason to suppose that a worker who is unfairly paid is receiving an "inadequate" wage. But, it will be seen that from the point of view of a union injured by import competition, a money wage definition makes the most sense.

Second, the definitions of "unfair competition" seem to suppose that only an export industry can be unfair. Import-competing industries are always assumed to be the plaintiffs in these matters, rather than the defendants. This is an entirely arbitrary distinction. Why rule out the possibility that an import-competing industry is "unfairly" increasing

¹⁴ Article 7 of the "Havana Charter" called for the "maintenance of fair labour standards related to productivity." Specific measurements of "unfair" conditions were not included. The I.T.O. never came into existence because of the failure of the United States to ratify the charter.

its share of the domestic market at the expense of "fair" foreign exporters and their workers? The "fair" foreigners are hurt just as much by a loss of sales to another country as they would be by a similar loss in "their" own markets.

Third, all proposals seem to assume that the data needed to determine unfairness are easily available. In fact, it might be quite hard to obtain such figures. Even if the alleged "unfair" competitor cooperated fully with the investigators, assessing the true level of such suggested measures as unit labor costs (including fringes) or wages might be difficult. How, for example, is the cost of a lifetime employment agreement between a worker and a Japanese firm to be valued?³⁵ Presumably, it would be necessary to make an estimate of the expected future cost of the worker to the firm. Current wages and benefits would not express the true cost. Fringe benefits could be extremely difficult to evaluate, apart from peculiar employment relationships. Should company-financed worker housing be included? Protective clothing? Discounts on the firm's products? Are labor-relations personnel part of labor costs?

If the definition of unfairness includes profits as a required measure, even more complications can arise. To have any meaning, profits must be expressed as a rate of return. Rates of return cannot be calculated unless the firm or industry stock of capital is evaluated. Government regulators of public utilities know that this is not a simple task. In multiproduct firms or industries, there may be problems in determining what proportion of the capital stock is actually used to make the product in question. In cases of true joint production, arbitrarily allocating the capital stock between different products in order to calculate rates of return makes little economic sense. Finally, aside from capital evaluation problems, vertically integrated firms can vary the profits of their export plants by changing the accounting prices charged on interplant transactions. Meaningful profits could be calculated only by obtaining estimates of the true costs of inputs.

These complications, of course, would not prevent an investigator from eventually arriving at some conclusion based on criteria for fair competition. Such an investigation would be much like an attempt by the U.S. Tariff Commission to determine whether "dumping" has oc-

³⁵ The Japanese example points to another problem that can arise. Japanese firms which employ lifetime workers may also hire temporary personnel. The marginal labor costs of the firm will be based on the costs of these temporary employees. These marginal costs may be more relevant for consideration than the average costs to which the definitions of unfair competition typically refer. For a recent review of Japanese employment relations, see Ken'ichi Kobayashi, "The Employment and Wage Systems in Postwar Japan," *The Developing Economies*, VII, June 1969, pp. 187-219.

curred or whether an industry has been injured due to imports. In international affairs, however, this type of investigation might become a forum for bargaining between the countries and industries involved. The weights given various criteria and the solutions to the measurement problems would become part of the bargaining process. In such cases, the actual criteria under which the investigation took place would not be terribly important.

Whether or not the specific criteria for unfair competition would become important, independently of the bargaining strength of the countries involved, is something which cannot be predicted. For that reason, it is worth looking at some typical proposals for definitions of international fair labor standards. Three suggested comparisons are treated below.³⁶ These are:

A. Comparisons between wages paid in the export industry and in other industries of the exporting country.

B. Comparisons between wages paid in the exporting firm with other firms in the same industry and country.

C. Comparisons of unit labor costs in the export and import-competing industry of the exporting and importing countries.

In general, such proposals are made as part of a list of criteria. No attempt will be made here to consider every proposal that has ever been made. However, many of the comments made about the three selected for discussion could be extended to variations along similar lines.

A. Comparisons between wages paid in the export industry and in other industries of the exporting country

The essence of this proposal is a search for "exploitation" of export employees relative to other workers in the same country. Presumably, the wage comparison is to be made according to occupation. An average wage would not have much meaning since it would reflect mainly the occupational composition of the industry. On the other hand, an industry whose work force contained a significant number of occupations found only in that industry could not be easily compared on an occupation-by-occupation basis.

On the assumption that occupational comparisons are possible, what interpretation could be drawn from an observation that the industry paid below-normal wages? It is possible that an industry might have

³⁶ Proposal C below can be found in AFL-CIO, *AFL-CIO Looks at Foreign Trade* (Washington, 1961), pp. 140-141. The I.C.F.T.U. has made proposal A in its *Economic and Social Bulletin*, issues of May 1964 (p. 48) and January/February 1965 (p. 10). Proposal B can be found in the issue of June 1964 (p. 64).

attached to it a pool of labor which was for some reason relatively immobile. This would allow a wage differential to occur without a movement of labor out of the industry. A possible explanation could be that the industry was located mainly in a region characterized by such immobility. Such a region would probably be the backward sector of the country's economy. Since the definitions of unfair competition typically recognize that less developed countries will pay lower wages than developed countries, it might be asked whether the same reasoning ought not apply to backward regions. Should an industry be considered unfair because it was located in a less developed region?

An industry might pay lower than average wages because "institutional" forces such as minimum wage laws applied to other sectors. Such a situation would imply that if the country had applied a lower or zero minimum wage to other sectors, the industry under investigation would not be unfair! Differentiated minimum wages are not uncommon. The United States, for example, exempts certain employment from the Fair Labor Standards Act and provides for a lower minimum wage in agriculture. And, the British wages councils system provides different minimum rates on an industry basis.

In less developed countries, the manufacturing sector is likely to be the high-wage sector rather than the low. This fact is worth noting since in the future many of the complaints of unfair competition are likely to result from light manufacturing exports of low-wage countries.²⁷ Already, studies have found that the complaint-ridden textile industry does not pay lower than average wages compared with other sectors in the same country.²⁸ In short, wage comparisons of the export industry with other industries may not be much of a protection for workers in developed countries whose industries compete with low-wage imports.

B. Comparisons between wages paid in the exporting firm with other firms in the same industry and country

A lower wage paid by an exporting firm for the same occupations relative to the rest of the industry conjures images of a "company town" situation. A single firm facing an upward-sloping supply curve of labor would be in a position to depress wages. Such a supply curve assumes that the workers employed by the firm are immobile and cannot or will

²⁷ One study on manufacturers in the less developed countries predicts that light consumer goods will be a big growth area for these countries. See Hal B. Lary, *Imports of Manufactures from Less Developed Countries* (New York: Columbia University Press, 1968), p. 114.

²⁸ "Trade, Wages and Employment in Textiles," *International Labour Review*, LXXXVII, January 1963, p. 2; "Labour Cost as a Factor in International Trade," *International Labour Review*, LXXXIX, May 1964, p. 441.

not move to other firms paying higher wages. Economic theory suggests that this type of situation is self-limiting on the production side. The firm would not be able to attract workers outside of its immediate labor market to work at subnormal wages. Indeed, unless the upward sloping supply curve of labor facing the firm is completely inelastic, action to raise the wage might actually raise production to the detriment of import-competing firms in other countries!²⁹

A far more common type of wage differential between firms in the same industry could result from union action. It is not unusual for unions to gear their demand to a firm's "ability to pay." Since this ability might vary across firms, differential wages can occur. But would unions really want this type of differential to be labeled unfair? It seems unlikely that the United Automobile Workers would consider that the concessions given to Studebaker in an effort to preserve that firm's American production were unfair in connection with any Studebaker cars which happened to be exported.

C. International comparisons of unit labor costs

The AFL-CIO has taken the position that unit labor cost differentials are *prima facie* evidence of unfair competition, particularly if foreign exporters are making excessive profits. This suggestion has been modified by other labor groups to limit findings of unfairness to cases in which both wages and unit labor costs are lower in an exporting country than in an importing country.³⁰ Such a modification, of course, in effect excludes findings of unfairness in the United States relative to the rest of the world, and in developed countries relative to less developed countries. The rationale behind the use of unit labor costs is that an equalization of such costs internationally means that trade will be based on costs other than those connected with labor. Therefore, the modification is inconsistent with the rationale. Why should an American industry be allowed to compete on the basis of labor costs in the Japanese market while the reverse is not true?

If enforced, the unit labor cost criterion could lead to substantial wage differentials between exporting industries and other industries in less developed countries. As an example, if an industry was characterized by the same level of productivity in the United States and India, American wages would have to be paid in both countries. Aside from the economic problems that could arise from such a wage structure,

²⁹ For an exposition of this type of "exploitation," see K. W. Rothchild, *The Theory of Wages*, 2d ed. (Oxford: Basil Blackwell, 1960), pp. 98-99.

³⁰ This is the position of the United Steelworkers. See "Urge Tariff Surcharge on Foreign Steel: Bernstein," *Steel Labor*, May 1968, p. 2.

there are also equity considerations. Why should only those workers who happen to be in high-productivity export industries receive the benefit of that productivity?

An I.L.O. study of the textile industry seemed to imply that such wage differentiation should be allowed to occur. The AFL-CIO, on the other hand, suggested that in such cases the unfair competition might be remedied by financing general social benefits out of a tax on the unfair industry.²² This proposal is essentially a call for protection of the import-competing industry in the importing country with one major difference. From the export industry's point of view, its production will be inhibited whether it is taxed by its own country or by importing countries in the form of tariffs. Under the AFL-CIO scheme, however, the exporting country rather than the importing country will collect the revenue. It is as though the importing nations imposed a tariff on the product of the exporter and then gave foreign aid back to the exporting nation equal to the tariff revenue. Given a choice between a tariff imposed by importers and a tax imposed by itself, the exporting country will choose the latter. But in either case, the effect will be a limitation on production for export and a stimulus to the import-competing industries abroad.

The unit labor cost criterion depends, of course, on the existence of an import-competing sector somewhere else. A country which enjoyed a monopoly on the production of a particular product could not be unfair because there would be no import-competing industries elsewhere with which to compare unit labor costs. In principle, if an unfair exporting industry succeeds in putting its foreign competitors in importing countries completely out of business, it ceases to be unfair. If an American firm invented a product and decided from the beginning to produce it abroad because of lower unit labor costs, its action would not be unfair. But if it began production in the United States and then gradually shifted it to foreign plants, the transition phase would be unfair.

In fact, transition problems seem to be one of the reasons behind calls for international fair labor standards. Less developed countries typically possess relatively abundant amounts of cheap unskilled labor. As noted in chapter 1, they are likely to have an advantage in simple-

²² See International Labor Organization, *Conditions of Employment and Related Problems in the Textile Industry in Countries in the Course of Industrialization* (Geneva, 1968), p. 103; AFL-CIO, *op. cit.* p. 141. According to microeconomic theory, it might be impossible to equalize unit labor costs by raising wages. This is because the reaction of a firm to a wage increase might be to substitute capital and other factors for labor. In some production functions average productivity might rise fast enough to lower unit labor costs as a result of this substitution.

technology industries which are intensive in the use of such labor. Unfortunately, these are the industries which are often found in the underdeveloped areas of the industrialized countries. Hence, transition problems may be quite severe.²³

However, it is not clear that the best policy is to inhibit less developed countries from competing with these industries in the markets of the industrialized nations. If the less developed countries are to raise their income levels, they must be allowed to export products other than raw materials. As the Director-General of the I.L.O. has put it, "a new international division of labor must emerge in which manufactures must become an important source of foreign exchange for (less developed) countries."²⁴ While agreeing with this statement in principle, labor and employer organizations in "sick" import-competing industries are likely to insist that their own situations constitute special exceptions.²⁵ This dilemma faces less developed countries seeking to expand their export markets.

Of course, most of the less developed countries have yet to produce substantial quantities of the products in which they have a theoretical comparative advantage. Many recent complaints over unfair competition in the United States seem to have arisen from the domestic inflationary problems accompanying the war in Viet Nam. American unions must demand large settlements just to maintain their real wages in the face of a rising cost of living. But on the assumption that other countries experience lower rates of inflation, the American cost increases stimulate a shift toward imports. At some point, foreign exporters will be guilty of unfair competition under the AFL-CIO definition since American unit labor costs will tend to rise relative to foreign, and foreign producers will show increased profits as they capture U.S. markets. But a halt in inflation is a better solution to the problem, particularly since there is no way at present to enforce international fair labor standards.

²³ The I.C.F.T.U. included the "effect of the industry concerned on the employment situation, both in the exporting and importing countries" as one of the factors to be looked at in determining unfair competition. The import aspect of this factor probably refers to transition problems, while the export aspect presumably refers to the development needs of less developed countries. See I.C.F.T.U.'s *Economic and Social Bulletin*, January/February 1965, p. 10.

²⁴ The statement is reported in the *News Bulletin* of the International Union of Food and Allied Workers' Associations, February 1966, p. 9.

²⁵ For example, at the United Nations Conference on Trade and Development in 1964, the International Textile and Garment Workers' Federation asked the conference to "take account of the experience and special characteristics of the textile and garment industries when considering ways and means of allocating an increasing share of international trade to developing countries." See the I.C.F.T.U.'s *Economic and Social Bulletin*, June 1964, pp. 72-75.

IV. COORDINATED INTERNATIONAL BARGAINING: AN ANALYSIS

The unit labor cost criterion for fair competition has a dynamic aspect to it. If an initial parity of unit labor costs were somehow brought about between the export and import-competing producers in different countries, wages and productivity changes would thereafter have to be coordinated. That is, if *relative* productivity levels in the exporting and importing countries remain the same, wages (plus other labor costs) would have to increase by the same percentage per unit of time in order to maintain the parity. This is suggestive of cooperation between unions in the various countries.²⁸

It is not evident that unions in different countries would agree that parity of unit labor costs should be maintained. (See below.) Nevertheless, there has been considerable interest in union circles in the possibility of internationally coordinated bargaining. Union literature tends to stress that multinational firms must be met with multinational groups of unions. Three characteristics of such firms are commonly cited. First, multinational firms are large and so can stand strikes in individual countries financially, even if they can't reallocate production to other nations. If unions struck simultaneously in the various countries where the firm operated simultaneously, this financial advantage could be neutralized. Second, multinational firms often *can* reallocate production from struck plants to operating plants in other countries. Although they would prefer the original pattern of production, the reallocation allows them to avoid losing customers. Coordinated action by unions in different countries could prevent such temporary reallocations. Third, multinational firms take account of international labor cost differentials in deciding where to produce. A wage increase in one country could lead a firm to reduce its production there and make a permanent reallocation of production toward areas where labor costs have not risen as much. If unions coordinated their demands, the incentive for such reallocation would evaporate.²⁹

Union literature on internationally coordinated bargaining has not clearly separated these points. The first two points deal with bargaining advantages. Only the third concerns permanent changes in patterns of

²⁸ The I.C.F.T.U. once declared that a clear index of what is fair in an export industry is the "standards which a strong free trade union, having taken into account all relevant factors, would agree to accept." See its *Economic and Social Bulletin*, March 1967, p. 24.

²⁹ Note that in terms of economic efficiency, a "second-best" argument for such coordination could be made similar to that presented in section II. The "distortion" of the trade pattern arising from an increase in wages above market levels in one country could be partially alleviated by some wage increase in other countries.

international trade. It is clear that the first point could apply even if the firm produced an output which could be reallocated. For example, the International Union of Food and Allied Workers' Associations (an International Trade Secretariat or I.T.S.) has intervened in labor disputes involving employees of worldwide hotel corporations. Hotel services cannot be moved between countries.³⁰ Such examples need not involve untradeable services. Suppose a multinational firm is a conglomerate producing different tradeable goods in different countries. It could not, therefore, move production between countries on a temporary basis during a strike. But it would have the financial advantage of a large cash flow resulting from its diverse activities.

The third point on permanent reallocation can apply whether or not there are multinational corporations involved. Even when production is undertaken entirely by national firms, a wage increase in one country relative to others could give foreign firms a cost advantage. This advantage would tend to reallocate production away from the wage increase, just as if a multinational firm operated the entire industry. As a practical matter, it may be that multinational firms react more quickly to labor cost discrepancies than national firms.³¹

It is clear that from the union point of view, international cooperation is desirable. But, this does not mean that no conflicts of interest can arise between unions. At any given international wage differential, the demand for labor facing a union in a particular country will become more inelastic if an agreement is reached to raise foreign wages in *some* relation to domestic in future bargaining. In that sense, all unions gain from coordination. But such agreements affect the pattern of production. At the existing domestic wage, if foreign unions could be persuaded to raise the foreign/domestic wage ratio, the domestic union would experience an outward shift in the demand curve for labor it faces.³²

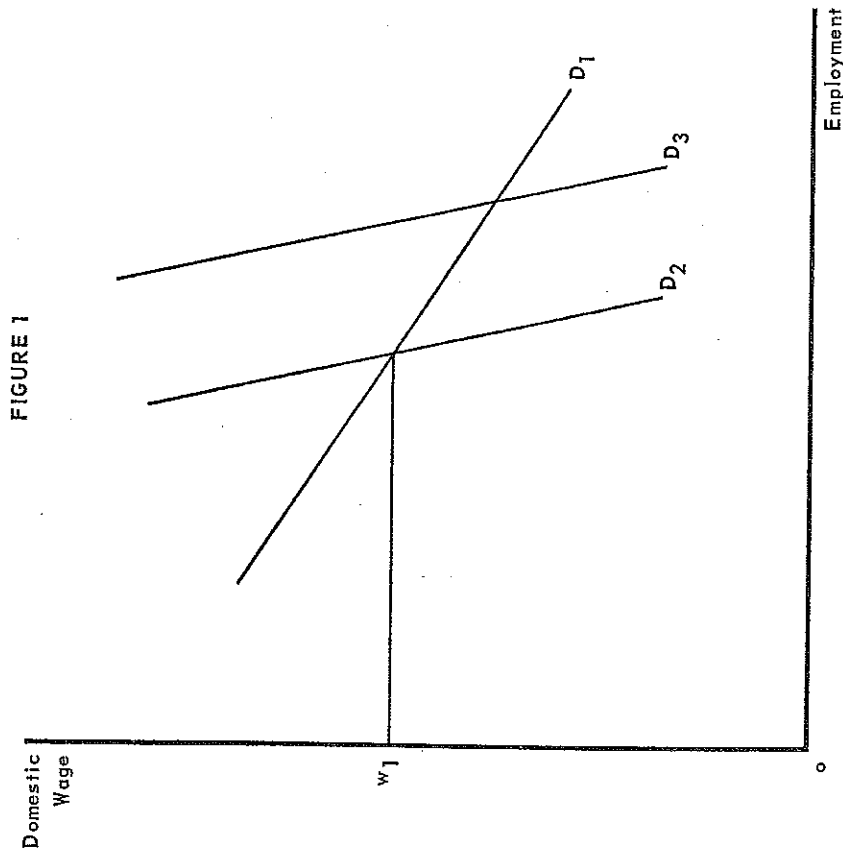
³⁰ See the I.U.F.'s *News Bulletin*, March-April 1968, p. 1.

³¹ The second point might also apply to national firms through international subcontracting. In any case, whatever bargaining advantage might accrue to the union from inconvenience to the struck firm's customers may be lost if the customers can simply bring in imports. Thus, the International Metalworkers' Federation asked its member unions to avoid production of steel in one country as a substitute for struck production in another. See the I.C.F.T.U.'s *Economic and Social Bulletin*, January 1966, pp. 3-4.

³² The discussion in the text assumes that the demand for labor facing a particular union can be expressed as $L = F(w_a, w_f)$ where L = the number of labor units demanded, w_a = the domestic wage, and w_f = the foreign wage. The partial derivative of L with respect to w_a is assumed negative and with respect to w_f positive. An agreement to coordinate can be algebraically expressed as $dw_f/dw_a > 0$. There is an old debate in labor economics concerning whether union leaders "think" in terms of such economic factors as the demand for labor. But in the case of international competition, the existence of a considerable union literature on the benefits of coordination indicates an understanding of the underlying forces.

The domestic union would then be able to obtain both an increase in employment and wages.

Diagrammatically, the demand for labor facing the union with an agreement to coordinate with foreign unions is D_1 , drawn relatively elastic on figure 1 to emphasize the permanent reallocation problem. Increases in wages tend to drive production abroad. Suppose the union is currently operating at wage w_1 and makes a cooperative agreement with foreign unions. If it succeeds in raising wages domestically, they will demand sympathetic wage increases. Such an agreement automatically causes the demand curve to rotate to D_2 , which is more inelastic than D_1 . But the domestic union would have been even better off if the foreign unions had agreed to increase the foreign/domestic wage ratio prior to the coordination of wage increases. Such an arrangement would have shifted the demand curve to D_3 , preferable to D_2 , from the viewpoint of the domestic union. However, such an agreement would



have a detrimental effect on the demand curves for labor facing the foreign unions.

Conceptually, the agreement that must be reached between unions can be broken down into two components. First is the easy agreement. Unions can readily agree that some form of cooperation is a good thing since it makes the demand curves facing all unions more inelastic. In union terminology, wages are taken out of international competition. Second comes a far more difficult decision. How is the employment pattern in the industry to be allocated among countries (and, hence, among the various national unions)? In this regard, the union situation can be compared with that of oligopolistic firms. Such firms can readily agree to the proposition that some arrangement to eliminate competition between them would be desirable. But deciding on market shares has proved far more difficult.

The analysis so far has a corollary that is probably most relevant to the present state of international union cooperation. If a domestic union finds a case in which a foreign union in the same industry is trying to get an increase but is too weak to attain its goal, the domestic union should aid its foreign counterpart. American unions often find that their foreign counterparts are in fact relatively weak. Thus, the Americans are anxious to extend aid.³⁰ Further, the conflict of interest that might occur is more likely to be submerged in the context of expanding production in all countries. None of the industries where coordination has been tried are of the "sick" type, where employment is expanding in some areas at the expense of others.

V. SOME STEPS TOWARD INTERNATIONAL BARGAINING

Until recently, much of the international activity of union groups has been concerned to a large extent with spreading models of labor relations, rather than with coordinating collective bargaining. Examples of "missionary" activity go back fairly far in union history. The Wobblies had a branch in Chile to which they sent financial aid.³¹ In the postwar period, missionary activity has tended to revolve around the East-West conflict.

Perhaps the earliest permanent international union institutions were

³⁰ For example, the United Steelworkers sent union personnel to aid the efforts of a steelworkers union in the Bahamas to negotiate. A 30 percent wage increase resulted. See "USWA Aid Brings 30% Wage Hike to Bahamas Steel Workers," *Steel Labor*, May 1968, p. 8.

³¹ Robert J. Alexander, "Foreign and Local Influences on Latin American Trade Unionism" in Robert L. Aronson and John P. Windmuller, eds., *Labor, Management, and Economic Growth* (Ithaca, N.Y.: New York State School of Industrial and Labor Relations, 1954), p. 194.

the International Trade Secretariats (I.T.S.), some of which were founded in the latter part of the nineteenth century. These organizations were intended to provide contacts and services to member national unions. Not all of these bodies would have any reason to coordinate their members' bargaining activities. Clearly, such bargaining would serve no function for teachers, post office employees, or other civil service workers. Such workers do not produce goods which can be traded internationally and are not employed by multinational firms. But recently, some of the I.T.S. which cover industries engaging in international trade or dealing with multinational corporations have shown interest in coordination between member unions.

This interest has been expressed in a number of ways. Some I.T.S. officials apparently hope that the industrial committees of the I.L.O. will become forums for international bargaining. There complaints over an alleged downgrading of the committees in 1964 led the I.L.O.'s Director-General to promise their revitalization.³² The I.T.S. have held conferences on the subject of collective bargaining and in some cases have organized member unions dealing with the same firms into specialized councils. And there have been some instances of international union coordination during labor disputes. I.T.S. interest in coordinated bargaining has been reflected in some recent resolutions of the I.C.F.T.U. calling for "coordination of trade union efforts" to deal with corporations which "exploit international labour cost differentials in order to boost profits."³³

Perhaps the most active I.T.S. in the field of international bargaining has been the International Metalworkers' Federation (I.M.F.). The automotive department of the I.M.F. sponsored conferences of unions dealing with particular firms as far back as the mid-1950s.³⁴ Under the guidance of Walter Reuther, the 1964 World Automotive Conference called for the formation of councils of unions dealing with Ford, General Motors, and Chrysler. Such councils were established, and at the group's 1966 meeting, conferences were held between representatives of the General Motors and Ford councils and representatives of management. (Chrysler declined to participate.) The automotive department has expressed a desire to achieve uniformity of conditions through-

³² See the editorials appearing in the *News Bulletin* of the International Union of Food and Allied Workers' Associations in the February, March, and April 1964 issues.

³³ See the "Resolution on Multinational Corporations and Conglomerates" reprinted in the I.C.F.T.U.'s *Economic and Social Bulletin*, July-August, 1969, pp. 16-17.

³⁴ U.S. Office of International Labor Affairs, *The International Metalworkers' Federation* (Washington: U.S. Government Printing Office, 1959), p. 16.

out Europe and to obtain simultaneous contract expiration dates in all countries.³⁵

The example of the automotive department has been followed by other groups within the I.M.F. Agricultural implement unions dealing with Ford, Massey-Ferguson, John Deere, Caterpillar, Allis-Chalmers, and J. I. Case met in 1967 and called for coordination. There have also been I.M.F.-sponsored meetings for unions dealing with General Electric and Westinghouse. In one case in the electrical industry, I.M.F. representatives met with management officials of the Swiss Brown Boveri Company for an exchange of views.³⁶

Activities of the I.M.F. were watched carefully by other Secretariats. For example, the International Federation of Chemical and General Workers' Unions (I.C.F.) held a conference on coordinated bargaining in 1967. The conference was addressed by Victor Reuther of the United Automobile Workers and the I.M.F., and afterwards decided to establish machinery within the I.C.F. for dealing with multinational companies. At a meeting of the I.C.F. Executive Committee, a decision was made to organize councils for unions dealing with specific corporations. The Pulp and Paper section of the I.C.F. has established such councils for the British Bowater Paper Company and the Norwegian Borregaard Company. As a Norwegian delegate put it, "We may not be able to fix Norwegian wages for the Brazilian paper workers in the Borregaard Company, but we will certainly be able to fix them higher than those presently prevailing in the Brazilian paper industry."³⁷

The I.C.F. has been particularly pleased with the results of its activities in connection with a dispute concerning the glass operations of the international corporation Saint-Gobain in 1969. A committee was set up to coordinate bargaining between I.C.F. member unions and the company in various countries. The unions agreed not to sign a contract with the company unless authorized to do so by the committee. Reallocation of struck work was to be prevented by refusals to work overtime. These tactics suggest that if international bargaining develops, a host of legal problems could arise. For example, refusal to sign a contract due to a continuing dispute in another country could be a sign of

³⁵ These goals are reported in "Toward Greater Free World Worker Unity," *UAW Solidarity*, July 1968, p. 4; and the I.C.F.T.U.'s *International Trade Union News*, December 1, 1969, p. 2.

³⁶ See the I.C.F.T.U.'s *Economic and Social Bulletin*, November-December 1967, pp. 8-9; April 1967, pp. 16-18; *International Trade Union News*, December 1, 1969, p. 2.

³⁷ For information on I.C.F. activities, see the *IFC Bulletin*, especially issues of August 1967 and December 1967. The quote in the text appears in the issue of June-July 1969, pp. 58-59.

bargaining in "bad faith" under American law. In the Saint-Gobain dispute, the I.C.F. did not act as a bargaining agent. However, in another case the I.C.F. did intervene directly with the parent concern of a Japanese subsidiary. Apparently, the firm, involved was impressed by the mere threat of coordinated action in other countries. But, what would be the legal status in the United States of a union *demand* that a firm make some concession to workers in another country?³⁸

The I.C.F. has even published a plan on how to engage in international bargaining.³⁹ First, the I.T.S. should attempt to meet with companies which have good records of industrial relations for the purpose of "consultation." Then, it should present a list of demands which are not likely to be automatically rejected. Nonwage issues are recommended. If all goes well, more specific demands can be made concerning wages and recognition of I.T.S. affiliates. Finally, a coordinated bargaining campaign should be prepared "where circumstances are favourable."

Of course, these tactics may not meet with complete success. The tobacco workers group of the International Union of Food and Allied Workers' Associations (I.U.F.) decided in 1964 that it would be desirable "to obtain some form of agreement between the I.U.F. and the tobacco manufacturers... for the recognition of (the I.U.F.) as a negotiating body." Initial contacts with British-American Tobacco brought an agreement by the company to the principle of recognition of I.U.F. affiliates. However, the company refused to bargain with the I.U.F. on the grounds that its national subsidiaries were all independent operations.⁴⁰

VI. A SPECIAL CASE OF INTERNATIONAL BARGAINING: THE UNITED STATES AND CANADA

It is evident that coordinated bargaining across countries is still in a formative stage. As yet, despite I.T.S. activity, the future cannot be predicted. An important factor in achieving success, of course, is the strength and motivation of the unions in the various countries involved. The I.T.S.-affiliated unions are probably the closest to the American style of labor organization in their respective countries. They are not likely to be extremely left-wing or religiously oriented. But they are

³⁸ References to the disputes described in the text may be found in the *ICF Bulletin*, June-July 1969, pp. 9-23. The International Federation of Petroleum and Chemical Workers, an I.T.S. which has engaged in jurisdictional rivalry with the I.C.F., has also, on occasion, entered into negotiations with international companies on behalf of member unions. See its journal *Petro*, January 1969, inside cover and p. 1.

³⁹ *ICF Bulletin*, June-July 1968, pp. 7-11.

⁴⁰ See the I.U.F.'s *News Bulletin*, May 1964, pp. 11-12; March-April 1968, p. 1.

also not always the most important unions on the scene in their industries. "Exclusive" bargaining agents are commonly not found outside the United States. Additionally, in countries such as Australia where governmental agencies play a major role in wage determination, international coordination may not be possible.⁴¹

The American-Canadian situation provides a unique case in which international union activities can be examined. Over 70 percent of Canadian union members belong to unions headquartered in the United States. It is not necessary to review here this aspect of Canadian unionism. Suffice it to say that the similarity of culture and the early mobility of labor across the border helped spread American unions into Canada.⁴² Because of the similarity of union institutions in the United States and Canada, the possibilities of internationally coordinated bargaining can be explored in the context of optimum conditions for its development. In addition, the experience of unions in bargaining in these two countries seems to have some role in attracting the attention of the various I.T.S. to the field of international coordination.⁴³

Complaints that the international unions were controlled from the United States and pursued policies harmful to Canadian workers have been heard from time to time. Employers have occasionally used nationalism as an antiunion tool.⁴⁴ As early as 1903, Samuel Gompers denounced attempts by Canadian employers to outlaw U.S.-based labor organizations.⁴⁵ Despite allegations against the "internationals," informed observers seem to agree that their Canadian branches retain a good deal of autonomy, even if such autonomy is not specifically

⁴¹ It is noteworthy, however, that the United Automobile Workers sent a representative to testify before the Australian wage authorities on behalf of a wage increase for auto workers there. See the record of the U.A.W.'s 1966 convention, pp. 121-126.

⁴² These factors are commonly cited by commentators on Canadian labor history. See, for example, the readings by Norgren and by Montague in Aranka E. Kovacs, ed., *Readings in Canadian Labour Economics* (Toronto: McGraw-Hill, 1961). A case in point is the history of the International Brotherhood of Paper Makers. Encouraged partly by a reduction in the U. S. tariff, the newsprint industry moved northwards into Canada after 1913. As the industry moved, American workers followed taking the union with them. The union met strongest resistance in Quebec, an illustration of the importance of cultural similarities and differences. See W. E. Greening, *Paper Makers in Canada* (International Brotherhood of Paper Makers, 1952).

⁴³ The importance of the United Automobile Workers to I.M.F. policy has already been noted. Joseph Tonelli, President of the American-Canadian Pulp, Sulphite and Paper Mill Workers, was elected chairman of the pulp and paper division of the I.C.F. in 1968. The division's activities have also been noted. See "Tonelli Heads World-Wide Union Group," *Pulp and Paper Worker*, July 1968, p. 2.

⁴⁴ Stuart Jamieson, *Industrial Relations in Canada* (Ithaca, N.Y.: Cornell University Press, 1957), p. 7.

⁴⁵ Samuel Gompers, "The American Labor Movement is Continental, Not Local," *American Federationist*, X, pp. 469-470.

granted by the union constitution.⁴⁶ Canadian members are often proportionately overrepresented in the leadership of the international, and commonly receive more in the way of services and financial assistance than they pay for in dues.⁴⁷

A key issue has been whether international unions would tend to make "excessive" demands in Canada beyond the "ability to pay" of Canadian industry. In terms of the earlier analysis, would U.S.-based unions attempt to shift out the demand curve for American workers at the expense of Canadian workers? The Premier of Ontario during the heat of a 1937 automobile strike declared that "foreign agitators" were seeking to destroy Canadian exports. But the well-known Brecher-Reisman study for the Royal Commission on Canada's Economic Prospects concluded that "there is little evidence to suggest that the expansion of Canadian industry has been impeded by international union extraction of excessive returns to labor. . . ."⁴⁸ In addition, the obvious vulnerability of Canada to developments in foreign markets has been cited as a factor which both tempers union demands and strengthens employer resistance.⁴⁹

In theory, of course, the possibility of a conflict of interest of the type previously analyzed could occur between American and Canadian union members. However, Canadian workers would be unlikely to remain in unions which they felt were not operated in their best interests. The conflict, if it is perceived, would have to be worked out through the internal political processes of the union to the satisfaction of both sides. Especially noteworthy is the fact that the demand for Canadian "wage parity" with the United States usually emanates from the Canadian membership. This is not surprising since many Canadian workers are in a position to make comparisons between their wages and those of their American counterparts.⁵⁰

⁴⁶ For example André Tayauald, *The Canadian Economic System* (Toronto: McGraw-Hill, 1967), pp. 130-131; Eugene Forsey, "The Influence of American Labor Organizations and Policies on Canadian Labor" in Hugh G. J. Aitken, et al, *The American Economic Impact on Canada* (Durham, N.C.: Duke University Press, 1959), p. 134; Arthur Kruger, *International Unions and Canadian-American Relations* (Canadian Institute of International Affairs, 1964), p. 5.

⁴⁷ John Crispo, *International Unionism: A Study of Canadian-American Relations* (Toronto: McGraw-Hill, 1967), pp. 61-63; Norgren in Kovacs, *op. cit.*, p. 33.

⁴⁸ Irving Brecher and S. Reisman, *Canada-United States Economic Relations* (Royal Commission on Canada's Economic Prospects, 1957), p. 220.

⁴⁹ Jamieson, *op. cit.*, p. 13.

⁵⁰ Bryan Downie, "International Union Influence on Collective Bargaining in Canada" in Shitley B. Goldenberg and Frances Baird, eds., *Dominance or Independence? The Problem of Canadian Autonomy in Labour-Management Relations* (Industrial Relations Centre, McGill University, 1965), pp. 100-101. Downie notes that the original pressure for wage parity in the United Automobile Workers (discussed below) came from an anti-Reuther Canadian faction (pp. 115-116).

The demand for parity has several meanings. It is sometimes used by unions as a pure bargaining tactic rather than as a serious demand. For the auto workers, the demand means the same nominal wage on both sides of the border with the American wage denominated in U.S. dollars and the Canadian wage in Canadian dollars. At the current exchange rate, this gives a labor-cost advantage to Canada. One wonders what would have happened had Canada adopted a currency unit other than the dollar. In the agricultural implement industry, parity means that Canadian workers receive the same pay as American workers minus an allowance for transportation costs of the product to the U.S. market. In the coastal British Columbia pulp and paper industry, parity means that the same wage converted to a common currency is paid to Canadian and American workers. However, the International Woodworkers Association was recently unsuccessful in an attempt to raise interior British Columbia workers to coastal rates.⁵¹

The success of the United Automobile Workers in obtaining their version of parity from the "big three" automakers has received considerable attention.⁵² Despite the fact that parity in this case ignores the exchange rate, the achievement is not illusory. In terms of the previous analysis, a pattern of production consistent with a 7½ percent labor-cost advantage for Canadian plants was determined. From that point, coordination will occur in the sense that employees on both sides of the border will obtain equivalent percentage increases.⁵³

The Auto Workers type of settlement may represent a special example which cannot be duplicated outside the U.S.-Canada market. Conditions were ideal for coordination in the automobile industry. First, the same firms operated in both countries. Second, the labor force on both sides of the border was represented by the same union. Third, a 1965 treaty between the United States and Canada joined the product markets by permitting "free trade" in automobiles and parts. By allowing larger production runs in Canada, unit costs in Canadian plants were reduced. Fourth, the geographical proximity of the produc-

⁵¹ The various meanings of parity are discussed in "Wage Parity for Canadian Workers," *Labour Gazette*, August 1968, pp. 466-469. The Woodworkers dispute over parity during 1967-1968 is described in various issues of the *International Woodworker* of that period.

⁵² The pact concluded in 1968 provided for parity to be reached in steps by 1970. The smaller American Motors Corporation was not required to attain parity.

⁵³ The cost-of-living escalator clauses included in the contracts will have the effect of changing the American/Canadian wage ratio if price movements in the two countries differ. This problem could be remedied by restoring parity at each renegotiation. It should be noted that the auto companies are somewhat limited in their ability to reallocate production between the two countries. They made certain commitments concerning production to the Canadian government at the time of the 1965 Canadian-American automotive treaty.

tion centers in both countries allows for wage comparisons across the border by the union membership.⁵⁴

Where similar circumstances exist, similar results can be expected. Thus, the Auto Workers have been able to obtain parity concessions from firms in the automotive parts industry where the same conditions prevail.⁵⁵ It remains to be seen whether such closely coordinated bargaining will be possible outside of the American-Canadian context. The European Economic Community has joined the product markets of a number of countries. To some extent, the labor markets are also joined. But large differences in industrial relations systems and cultural settings exist. In particular, there are no international unions in Europe. Thus, the key determinant of the success of coordinated bargaining will be the ability of individual unions to act in unity through some intermediary body such as an I.T.S., despite institutional and cultural barriers.

⁵⁴ The first, third, and fourth factors are suggested by Downie, *op. cit.*, p. 104, as determinants of the pressure for parity.

⁵⁵ "Champion Locals Get Parity, Wage Parity," *UAW Solidarity*, March 1968, p. 14.

Chapter 5

The 1967 British Devaluation: A Failure for Incomes Policy?*

I. INTRODUCTION

Chapter 1 noted that in theory incomes policy and devaluation appear to be substitute instruments for improving a country's balance of trade. The latter lowers domestic wage and other costs in terms of foreign currency by a change in the exchange rate; the former performs the same function but operates through direct pressure on wages and prices. Since the current international monetary system is based on fixed exchange rates, devaluation of a country's currency is something to be avoided. Hence, incomes policy appears to be an attractive alternative for a country which would otherwise use an exchange rate adjustment.

Britain provides an interesting recent example of the use of incomes policy for balance-of-payments purposes.¹ The British economy had been suffering from the so-called "stop-go" cycle during the postwar period. Balance-of-payments difficulties would lead to policies of demand restraint. These policies would improve the balance of payments, but at the cost of increased unemployment. The unemployment and the temporary improvement in the external balance would stimulate the authorities to resume expansionary policies. Finally, the expansion would lead to a deterioration of the balance of payments and the cycle would begin again. When the Labor government had come to power

* Much of the material used here originally appeared in the author's doctoral dissertation written at the Department of Economics, M.I.T. He wishes to thank the members of his dissertation committee, Professors Charles P. Kindleberger, Charles A. Myers, and Robert M. Solow, for their aid and advice in preparing the thesis. The regression equations of section III of this paper were run on the facilities of the Campus Computer Network, UCLA.

¹ The "Joint Statement of Intent on Productivity, Prices and Incomes" signed in late 1964 by union, employer, and government representatives listed economic growth, full employment, and social justice as the objectives of official policy. It noted, however, that these objectives could not be realized without "a healthy balance of payments."

in 1964, it established with great fanfare an incomes policy to break the cycle.

Despite these great anticipations, the stop-go cycle continued. Eventually, in November 1967, Britain was forced to devalue the pound. Since the devaluation was just what the incomes policy was supposed to avoid, it seems fair to ask (1) whether in this case the use of incomes policy for balance-of-payments purposes appeared warranted, (2) whether the program had any effect, and (3) whether the devaluation marked a failure for British incomes policy. We conclude in answer to question (3) that the program's "failure," if it can be called that, was in meeting the over-optimistic expectations of government policymakers.

II. BRITISH EXPORTS AND THE COMPETITIVE EFFECT

Policy-makers often resort to incomes policy when they feel they have an inflationary problem with wage and other costs. An interesting question is whether this was a correct diagnosis of Britain's balance-of-trade difficulties. A nation's balance of trade may deteriorate for several reasons. It might be the case that the country happened to be exporting types of products for which world demand was declining due to a shift in "tastes." Similarly, it might be the case that the level of overall demand for imports by the nation's main trading partners was, for some reason, falling. Or, it could be that the nation had an inelastic demand for certain import goods whose price was rising. Finally, inflation, whether of the cost-push or demand-pull variety, could place export and import-competing industries in a "cost squeeze," reducing their competitiveness on world markets.

British imports consist in large part of foodstuffs and materials while her exports are chiefly manufactured goods.² Consequently, official attention has tended to concentrate on improving exports as a long-run solution rather than reducing imports. Much has been made of the fact that the ratio of British exports to total world trade slowly declined during the postwar period,³ and various explanations have been offered for this seemingly poor performance. It has been said that British products compare unfavorably with the exports of other coun-

² In 1967, the devaluation year, food, beverages, and tobacco, basic materials, and fuels (S.I.T.C. groups 0, 1, 2, 3, 4) accounted for 54.5 percent of total British imports. Manufactured goods (S.I.T.C. groups 5, 6, 7, 8) accounted for 85.0 percent of British exports.

³ British exports amounted to 12 percent of total world exports in 1950, and to about 8 percent in 1964 on the eve of the establishment of the incomes policy.

tries in terms of such nonprice factors as packaging, design, and advertising.⁴ Lazy management has been blamed.⁵ Above all, there is evidence of a cost-squeeze problem.

To examine such evidence, this chapter presents the results from the application of a technique previously used by several authors in various contexts.⁶ However, certain changes in computational methods and data sources were made to adapt the technique to this particular case.⁷ The heart of the method is a "forecast" of British exports to particular industrial nations, based on developments in the type of commodities she sells and in the markets of the trading partners. The deviation between actual British exports and forecasted exports is, therefore, a residual after the influences of commodity and market developments have been subtracted. This residual is called the "competitive effect," and it is assumed to be due to internal cost movements as well as all other events which affect British competitiveness (foreign tariff changes and devaluations, etc.).

In order to shed light on the need for incomes policy, the competitive effect was calculated for the period 1960-1966. This provides information on the years immediately preceding and following the establishment of the incomes program. Exports to thirteen developed coun-

⁴ Some of these nonprice factors may be attributable to high domestic demand pressure. For example, it has been estimated that an increase in "waiting times" in the British machine tool industry of one month would result in a 10 percent drop in new foreign orders. See M. D. Steuer, R. J. Ball, and J. R. Eaton, "The Effects of Waiting Times on Foreign Orders for Machine Tools," *Economica*, n.s. XXXIII, November 1966, p. 400.

⁵ One observer reports that the executive of a British firm responded to government appeals to business to help correct the balance-of-payments problem by cutting back his foreign sales budget in order to save foreign exchange! See Norman Macrae, *Shades in October* (London: George Allen & Unwin, 1968), p. 151.

⁶ See Charles P. Kindleberger, *Europe's Postwar Growth* (Cambridge, Mass.: Harvard University Press, 1967), pp. 121-123; A. Lamfalussy, *The United Kingdom and the Six* (Homewood, Ill.: Richard D. Irwin, 1963), pp. 47-58, 137-140. The method was first used by H. Tyszyński, "World Trade in Manufactured Commodities, 1899-1950," *Manchester School*, XIX, September 1951, pp. 272-304.

⁷ Details of the calculations are given in the appendix to this chapter. Two points should be noted here, however. First, although the text speaks of British "exports," the figures actually used except in one case were reported imports from Britain by the 13 countries listed on table 1. Conceptually, exports of Britain to the 13 countries should equal imports of the 13 countries from Britain. Due to differences in reporting methods, definitions, etc., the two series are not identical. Second, previous studies have compared British export performance with the export performances of other countries. We, instead, look at British performance in the import markets of the 13 countries. We ask how Britain performed in the French market, for example, rather than how Britain competed relative to France in other markets.

tries were divided into ten commodity groupings.⁸ A base year (1964) was selected and the share of British exports in total imports of each country by commodity grouping was calculated. For example, it was found that Britain accounted for 12 percent of total West German imports of "machinery and transport equipment" in 1964. In the following year, West German imports of machinery and transport equipment from Britain can be "forecast" by assuming Britain maintained her base year share. The forecast is made by simply multiplying actual West German total imports of machinery and transport equipment in 1965 by the base year share of Britain. The same process is repeated in each commodity grouping, country, and nonbase year. By this method, a forecast for total British exports can be made by summing the forecasts for the various subgroups. To obtain the "competitive effect," the total forecast is subtracted from actual British exports for each nonbase year.⁹ A negative competitive effect between 1964 and 1965 of, say, -\$50 million can be interpreted as indicating that cost and/or other developments were sufficiently adverse to Britain to lower her exports by \$50 million.

Although only one base year is used in this calculation, it is possible to estimate the amount of the competitive effect occurring between nonbase years. For example, let the base year be denoted as Year B. Assume there occurred a competitive loss between Year B and Year B + 1 of -\$35 million and a competitive loss between Year B and Year B + 2 of -\$100 million. Then we can say that between Years B + 1 and B + 2 a loss occurred of -\$65 million.

Table 1 presents the results of the computations. The competitive effect is divided into the amounts due to trade with each of the thirteen developed countries. Because Canada did not report on a revised S.I.T.C. basis during 1960, Canadian data are omitted from the calculation for that year. During the remaining period, Britain can be seen to have suffered a continual competitive loss with Canada. Some of this is undoubtedly due to the depreciation of the Canadian dollar during 1961-1962.

Even when Canada is omitted from the calculation, a net competitive gain appears only in the period 1961-1963. Unfortunately, the

⁸ The 13 countries are shown on table 1. The 10 commodity groupings are S.I.T.C. groups 0 through 9. That is, food and live animals; beverages and tobacco; crude materials (inedible); mineral fuels, lubricants, etc.; animal and vegetable oils and fats; chemicals; manufactured goods classified chiefly by material; machinery and transport equipment; miscellaneous manufactured articles; and unclassified commodities and transactions.

⁹ The base year 1964 was picked on the grounds of convenient data availability. It has the advantage of being the year immediately preceding the implementation of incomes policy. If we compare the base year with a previous year such as 1963, it is necessary to reverse the sign, i.e., subtract actual exports from the forecast.

TABLE 1
COMPETITIVE EFFECT BY COUNTRY, U.K., 1960-1966 (U.S. \$MILLION, LOSS = (-))

Between the Years of	1960+ 1966	1960+ 1961	1961+ 1962	1962+ 1963	1963+ 1964	1964+ 1966	1965+ 1966
Country:							
Belgium							
Luxemburg	-37	+3	-21	+10	-31	-4	-36
Canada	^a		-97	-48	-29	-47	-68
Denmark	-29	-16	-4	+14	-12	-17	+7
France	-34	+32	+25	+65	-67	-45	-44
West Germany	-152	-38	+12	+8	-12	-80	-42
Ireland	+4	+5	-11	+8	-7	-3	+13
Italy	-48	-10	+32	-6	-30	-20	-14
Holland	-93	+2	-2	-2	+2	-51	-42
Norway	-15	+13	-12	+22	-52	-23	+36
South Africa	+38	+23	-11	+65	-69	+14	+16
Sweden	+72	+29	+8	+19	+8	-22	+31
Switzerland	+33	-14	+5	+14	+13	+3	+12
U.S.A.	-210	-78	-9	+6	-86	+22	-64
Total with Canada	^b		-43	+173	-372	-274	-196
Total without Canada	-470	-48	+54	+222	-343	-227	-127

Note: Details need not sum to totals due to rounding. See text and footnotes for data sources and method of calculation.

^a The figure for the competitive effect between the years of 1961 and 1966 for Canada is -289.

^b The figure for the competitive effect between the years of 1961 and 1966 including Canada is -711.

gains during 1961-1963 of \$55 million and \$221 million were not sufficient to overcome the losses occurring during 1960-1961 and 1963-1966. An overall competitive loss of \$470 million (excluding Canada) results during the entire 1960-1966 period. Significantly, the years of gain were times of relatively high unemployment by British standards. The unemployment rate for Great Britain rose to an average of 2.0 percent in 1962 and to 2.5 percent in 1963. Thereafter, the unemployment rate fell until mid-1966, accompanied by a large competitive loss.¹⁰

It seems reasonable, then, that the incoming Labor government of 1964 should have been looking around for some new instrument to deal with the problem of rising costs. They knew, as table 1 shows, that

¹⁰ One study concluded that had the unemployment rate been about 2.5 percent in 1964, exports would have been £168-179 million higher. See R. J. Ball, J. R. Eaton, and M. D. Stever, "The Relationship between United Kingdom Export Performance and the Internal Pressure of Demand," *Economic Journal*, LXXVI, September 1966, pp. 501-518, especially p. 516. The competitive loss to the 13 countries was \$372 million or about £133 million between 1963 and 1964. If most of the export gain would have occurred in trade with the 13 countries, the competitive loss would have been reversed.

deflationary pressure could improve Britain's export performance, but that such pressure would also lead to a rise in unemployment. The question still to be answered, however, is whether the new instrument, incomes policy, warranted a return to the relatively low unemployment rates that occurred in 1965 and the first half of 1966. That is, was the power of incomes policy to restrain costs (and thereby aid the balance of payments) in the face of low unemployment rates overestimated by policy-makers?

III. THE EFFECT OF INCOMES POLICY ON WAGES

It is convenient to divide predevaluation incomes policy into four phases. During Phase I, the first two quarters of 1965, the National Board for Prices and Incomes (N.B.P.I.) was established to investigate wage and price increases suspected of being inflationary by the government. A 3 to 3½ percent "norm" was to be used for judging wage settlements. However, the N.B.P.I. was just getting organized during that period and issued no final reports. "Moral suasion" based on government appeals was the main influence.

During Phase II, lasting until July 1966, the N.B.P.I. issued a number of decisions based on the norm. These opinions were not binding on the parties involved. However, balance-of-payments difficulties mounted and led to Phase III, a legislated wage "freeze." Between July 1966 and June 1967, a zero norm was imposed on wages and prices. No increases were allowed for six months. Thereafter, a few exceptions were permitted.

Phase IV relaxed the program. The emphasis switched from a legislated freeze to a long delay period in which selected wage and price increases were not allowed until an N.B.P.I. report was completed. Since only one full quarter under Phase IV elapsed before the devaluation, consideration of this period is omitted from the analysis below.

To estimate the effect on wages of the incomes policy, a method previously used by Brechling has been applied.²¹ Brechling estimated a "Phillips" curve for Britain, explaining percentage change in the weekly wage rate index for all workers on a quarterly basis during 1948-I to 1965-IV.²² He added dummy variables to pick up the influ-

²¹ Frank Brechling, "Some Empirical Evidence on the Effectiveness of Price and Incomes Policies," paper presented to the Canadian Political Science Association, June 1966 (mimeo).

²² Since a wage rate index was used, wage drift above the official rates could not be detected. Unfortunately, no figures were available for quarterly earnings adjusted for overtime during the entire period of observation.

ence of two previous postwar attempts at incomes policy and the current program.²³

To update Brechling's investigation, his data were extended through 1967-II and used to reestimate the same type of equation.²⁴ The dependent variable was explained with current and lagged values of the seasonally adjusted unemployment rate (inverted), percentage change of the implicit consumers' expenditure deflator, and dummy variables set equal to unity during the periods of incomes policy they represented, and equal to zero otherwise. Percentage change was defined as the percent increase over the same quarter of the previous year. Various lag schemes were tried, and the best equation was selected and adjusted by an iterative technique to improve the efficiency of the estimates in the face of serial correlation.²⁵

Table 2 presents two forms of this equation. The three major attempts to achieve wage restraint in the postwar period (1948-1950, 1961-1962, 1964-1967) seem to have met with some success. That is, the dummies associated with these periods have negative coefficients. The 1961-1962 "moral suasion" effort by the Conservatives shows the smallest effect, perhaps a reflection of the ties between the Labor Party and the unions. Taken literally, equation (1) indicates that the most recent incomes policy lowered the annual rate of wage increase by 1.78 percentage points. During the ten quarters of recent policy covered by equation (1), wage rates rose by a little more than 4 percent. Without the policy, equation (1) implies the rate would have been almost 6 percent. At the end of the ten quarters, wage rates were thus roughly 4 percent lower than they would have been in the absence of incomes policy.

Equation (2) provides dummies for the first three phases of the pre-

²³ The dummy variables were set equal to unity during the periods of incomes policy to which they correspond. This means that they pick up the effects of all variables not included in the equations which may have been active during the periods of incomes policy. Thus, incomes policy is not the only influence reflected in the coefficients of the dummies. A review of this problem in the context of statistical examinations of the American wage-price guideposts can be found in John Sheahan, *The Wage-Price Guideposts* (Washington: The Brookings Institution, 1967), chapter VII.

²⁴ Ordinary least squares was used by Brechling and in the results reported below. This method of estimation raises certain problems of bias. However, Brechling noted—ordinary least squares estimates and those made by simultaneous estimation techniques. See N.B.P.I., "Third General Report," Cmnd. 3715, July 1968, pp. 65-66.

²⁵ The technique is described in J. Johnston, *Econometric Methods* (New York: McGraw-Hill, 1965), pp. 192-194. Only one "round" of the iterative method was required to raise the Durbin-Watson statistic to respectable levels. Alternative forms of the wage equation may be found in the appendix to this chapter.

devaluation incomes policy. It appears that the policy was relatively strong during the early quarters before union opposition began to crystallize and during the legislated "freeze." It was relatively weak when it relied on voluntary compliance with N.B.P.I. opinions. Significantly, at this writing British incomes policy most resembles the weak Phase II program.

TABLE 2
EQUATIONS SHOWING IMPACT OF INCOMES POLICY ON PERCENTAGE CHANGE IN WAGE RATES, QUARTERLY ESTIMATES

Independent Variable	Equation (1): Coefficients	Equation (2): Coefficients
Constant.....	-.45	-.39
Reciprocal of seasonally adjusted Great Britain unemployment rate, current quarter.....	4.66 (.91)	4.57 (.97)
Percentage change in consumption deflator, current quarter.....	.49 (.06)	.49 (.06)
Percentage change in consumption deflator, lagged 3 quarters.....	.32 (.06)	.32 (.06)
Dummy variable = 1 during 1948-I to 1950-IV.....	-1.97 (.37)	-1.96 (.38)
Dummy variable = 1 during 1961-III to 1962-II.....	-1.29 (.50)	-1.29 (.50)
Dummy variable = 1 during 1965-I to 1967-II.....	-1.78 (.37)	.....
Dummy variable = 1 during 1965-I to 1965-II.....	.....	-1.89 (.63)
Dummy variable = 1 during 1965-III to 1966-II.....	.....	-1.57 (.54)
Dummy variable = 1 during 1966-III to 1967-II.....	.....	-1.86 (.54)
R ².....	.88	.83

Note: Percentage change defined as percentage change over the same quarter of the previous year. Unemployment rate used as proxy in *National Institute Economic Review*. Price variable can be calculated from series appearing in *Monthly Digest of Statistics*. Dummy variables are set equal to one during various periods of incomes policy and set equal to zero at other times. Period of observation: 1948-I to 1967-II. Standard errors are shown below coefficients of independent variables.

No attempt was made to estimate the effects of incomes policy on prices. Statistical examination by both Brechling and the N.B.P.I. were unable to find a restraining influence.³⁶ Computations of table 1 indicate a reduction in the rate of competitive loss during 1964-1966. Some of this reduction might be attributed to incomes policy. However, an export subsidy in the form of tax rebates went into effect in late 1964. Thus, it would be risky to attribute the decrease in the rate of loss to incomes policy.

The possible restraint of money wage rates of 1.78 percent per year might best be compared with the effects of the November 1967 devaluation. That devaluation *reduced* money wages on impact by 14.3 percent in terms of foreign currency. Yet, at this writing it is still not clear that this amount was sufficient to bring about a balance-of-trade improvement. How much, then, could reasonably be expected of a program which at best slowed down the rate of *increase* of money wages? Although in a theoretical sense incomes policy and devaluation affect the balance of payments through similar channels, as a practical matter incomes policy is a weak substitute for devaluation.

Critics of Britain's incomes policy, particularly those in the trade unions, have sensed the apparent overestimate of the impact of the program. Part of the problem in maintaining support for the incomes policy has been just this growing realization. Incomes policy, despite its name, is really a device for controlling costs, not incomes. Income distribution is far more susceptible to programs of taxation and transfers than to incomes policy. Yet the government "sold" incomes policy to the unions and the public as a device for planning incomes and avoiding a "free for all" in the labor market. This approach appealed to important segments of the Labor Party but tended to obscure the real issues.³⁷

³⁶ See the studies by Brechling and the N.B.P.I. cited above.

³⁷ The reaction on one union leader to the government's defense of its program is particularly interesting. At the 1967 annual meeting of the Labor Party, Mr. D. McGarvey (Amalgamated Society of Boilermakers, Shipwrights, Blacksmiths, and Structural Workers) declared:

I know the arguments that are put forth for . . . incomes policy [and] . . . the arguments that have been advanced . . . in relation to that well-known red herring about higher paid workers. The argument that [incomes policy] legislation was needed because of a selfish minority was in fact always false. It gave too much importance to the contribution that a wage standstill could ever make to the overall economic policy of this country. By exaggerating the direct contribution that incomes policy can in the short run make in improving the balance of payments, the Government has laid on that part of its policy a burden it cannot carry.

(Quote taken from Labour Party, *Report of the Sixty-sixth Annual Conference of the Labour Party* (Scarborough, 1967), p. 166.)

Chapter 1 pointed out that in an open economy important sectors of the price level may be determined largely in world rather than domestic markets. This means that domestic wage increases will have little effect on these prices. Thus, if world-traded goods are a significant part of labor's consumption, real wage gains will accompany money wage increases. Similarly, wage restraint can lead to reductions in real wages below the levels they might otherwise obtain.

Since a successful devaluation or incomes policy both lead to a decrease in money wages relative to foreign prices, it would be useful to look at the income redistribution effect of the 1967 devaluation. Presumably, incomes policy has had the same qualitative influence. However, in the case of incomes policy it would be hard to distinguish this influence from that of other factors because it had a smaller impact than devaluation and operated for a long period of time. The 1967 devaluation in effect provides the closest approximation to a laboratory experiment that could be found.

Table 3 provides some information on the devaluation's effect on prices. It shows the percentage changes which occurred in material and fuel costs for various industries in the period immediately surrounding the devaluation (October–December 1967). Naturally, non-devaluation influences contributed to the observed changes. It may be useful, therefore, to compare the observed changes with those occurring just before the devaluation (August–October 1967). These earlier changes can be seen to be relatively small. For manufacturing as a whole, costs of material and fuel rose during October–December 1967 by 8.1 percent. Costs to the food, drink, and tobacco, and the textile industries rose 6.6 and 8.5 percent, respectively. Food, drink, and tobacco prices received a weight of 43.2 percent in the retail price index during 1967. Prices of clothing and footwear received a weight of 9.1 percent. The large price rises in raw wool and raw cotton undoubtedly explain most of the textile increases. On the other hand, increases in materials used on construction and house building were small. Even if costs had increased markedly here, the subsidized council housing program would have cushioned the eventual effect on rents. Coal prices were virtually unchanged, a reflection of the protected nature of the coal industry in Britain.

Increases in costs eventually must be reflected in retail prices. The length of time between a rise in the price of inputs and a rise in the price of final outputs will vary according to the particular circumstances of the industries involved. If we look at the five-month period following the devaluation (November 14–April 23), retail prices rose

TABLE 3

PERCENTAGE CHANGE IN SELECTED COSTS: OCTOBER–DECEMBER 1967 AND AUGUST–OCTOBER 1967

Cost Index	Percent Change October–December 1967	Percent Change August–October 1967
Materials and fuels used in:		
Manufacturing.....	8.1	.9
Food manufacturing.....	6.6	1.2
Chemicals and allied industries.....	4.5	-.3
Mechanical engineering.....	4.3	.8
Electrical machinery.....	6.3	1.1
Textile industries.....	8.5	-.7
Timber industries.....	3.8	.1
Paper industries.....	4.1	.1
Construction materials.....	1.7	.6
Housing building materials.....	1.9	.7
Raw cotton.....	18.2	1.9
Raw wool.....	11.1	-3.7
Raw rubber.....	4.2	1.9

Sources: Calculated from series appearing in *Monthly Digest of Statistics*, August 1968, pp. 142–143.

by 3.65 percent.¹⁸ The wage index during this period rose by 3.06 percent for a decrease in real wages of about .6 percent.¹⁹ In the five-month period preceding the devaluation (May 16–October 17), retail prices rose only .25 percent while the wage rate index rose by 3.17 percent for a real wage gain of 2.9 percent. Some of the postdevaluation price rise was undoubtedly due to increased indirect taxes and purchases made in anticipation of increased prices. Consumption in real terms during the first quarter of 1968 showed a large increase over the last quarter of 1967. However, since the retail price index rose steadily after the devaluation, the entire rise cannot be attributed solely to excise taxes or panic buying.²⁰

IV. LONGER TERM EFFECTS OF THE INCOMES POLICY

Judged by the subjects discussed in its reports, the N.B.P.I. realized from the beginning that its immediate impact on wages and prices

¹⁸ Use of a five-month interval is arbitrary, of course. It is necessary to balance the danger of picking too long an interval (and thereby allowing nondevaluation influences to play a major role) with the danger of picking too short an interval (and thereby not allowing sufficient time for cost increases to work their way into retail prices).

¹⁹ If earnings figures are substituted for wage rate figures, similar results are obtained.

²⁰ That is, changes in tax rates and panic buying should have a lump-sum effect rather than cause a gradual rise.

TABLE 4
CLASSIFICATION OF N.B.P.I. PRICE AND WAGE STUDIES PUBLISHED BEFORE
NOVEMBER 1967 ACCORDING TO TYPE OF REFERENCE AND TOPICS COVERED

Number of Reports Published before November 1967 ^a	37
<i>Type of Industry Involved:</i>	
Private ^b	23
Government including civil service.....	12
Significant mixture of government and private.....	2
	37
<i>Type of Reference Involved:</i>	
Price.....	18
Wage.....	18
Both price and wage.....	1
	37
<i>Industrial Structure, Restrictive Practices, Pricing Considered?</i>	
Yes.....	19
No-Civil service references.....	6
No-Excluding civil service references.....	12
Total No.....	18
	37
<i>Bargaining Machinery, Union Structure, Wage-setting Methods Considered?</i>	
Yes.....	21
No-Price references only.....	12
No-References dealing with wages.....	4
Total No.....	16
	37
<i>Suggestion Made for Cost-Cutting and/or Productivity Improvement:</i>	
Yes.....	24
No.....	13
	37

SOURCE: Various reports of the N.B.P.I.
^a Where the N.B.P.I. issued an interim report followed by a final report, both have been counted as a single report. One case in which the final report was issued during November 1967 has been included.
^b Includes two cases in which private firms operated under government contracts or regulation.

was not going to be great. The reports focused a good deal of attention on such matters as increasing efficiency and encouraging productivity bargaining, elimination of restrictive practices, and reforms in bargaining machinery and wage-setting. It is difficult, of course, to attempt to measure the importance of these topics to the N.B.P.I. Table 4 presents a simple count of the number of reports appearing before November 1967, in which industrial structure, bargaining machinery, and productivity improvement were discussed in a "significant" way. The table is based on a subjective judgment of whether a topic was merely mentioned in a report or was a significant element in it.

A simple count of the number of reports in which a topic was or was not discussed understates the stress the N.B.P.I. has placed on that topic. In matters involving civil service employees, for example, the question of pricing and industrial structure is not involved. Table 4 therefore notes whether a report which did not take up this subject involved such employees. Similarly, the table indicates whether reports which did not discuss bargaining and related matters were price references. It can easily be seen that long-term reforms have been emphasized by the N.B.P.I. in most cases where such reforms were relevant. Post-devaluation incomes policy has retained this stress. Although reformed institutional arrangements are unlikely to have a sudden impact on domestic costs, they may provide a better climate for adjustments in the balance of payments than presently exists.

V. CONCLUSIONS

Three questions were posed in the introduction to this chapter. The first was whether the addition of a new instrument to deal with Britain's balance-of-payments problems seemed warranted. Since there was a competitive loss during the sixties, except during periods of demand restriction, an instrument which restrained increases in wages and other costs certainly would have been useful. Experimentation with incomes policy was a reasonable step.

The second question asked if incomes policy had any restraining effect. Statistical evidence does indicate that there was a restraining influence on wage rates. But the magnitude of the effect for balance-of-payments purposes was small.

Question 3 asked if the 1967 devaluation marked a "failure" for British incomes policy. "Yes" is the answer only if one holds unrealistic expectations about the strength of incomes policy. The failure was really one of overly optimistic policy-makers rather than of incomes policy.

An interesting fourth question can be posed at this point. Can the British experience be generalized to other countries? Incomes policy has taken on so many diverse forms that it may appear impossible to answer this question. Some countries such as Britain establish formal incomes policy agencies to run their programs. Others rely on guidelines and exhortations. Centralized wage determination, either through bargaining as in Norway or through compulsory arbitration as in Australia, can be influenced on occasion by government policy. But perhaps the greatest similarity of these programs lies in what they are not like. They are not like the thoroughgoing wage and price control systems that have been used in wartime. Thus, they are not likely to have really drastic impacts. Modern-day incomes policies are not well suited for governments which find themselves in need of quick miracles. Other countries can profit from the British example.

APPENDIX TO CHAPTER 5

I. THE COMPETITIVE EFFECT COMPUTATION

Readers familiar with the literature cited in connection with the competitive effect of table 1 will recognize that calculations of this effect are generally made as part of procedures to measure two other effects as well. It is possible to obtain estimates of these other effects from our data.

The basic task of the procedure is to "explain" why Britain's exports to the thirteen developed countries of table 1 in a given year deviated from her base year share of total world exports to these countries. Assume for the moment that the base year is chronologically before the given year. The "quantity to be explained" is $X' - \tau X$ where X' = actual British exports to the thirteen developed countries in the given year, τ = the *base year* share of Britain in total world exports to these countries and X = total world exports to these countries in the given year. If $X' - \tau X$ is negative, then British exports fell short of what a simple projection from the base year would have predicted. Whether $X' - \tau X$ is negative or not, it can be explained in terms of the "commodity" effect, the "market" effect, and the "competitive" effect.

The commodity effect attempts to measure the influence of the rate of growth in demand for the type of commodities Britain exports. Presumably, if Britain happened to be exporting commodities for which world demand was rapidly expanding, Britain's export drive would be "helped." The reverse would be true if Britain happened to be an exporter of commodities for which demand was growing slowly. Let i denote the revised Standard Industrial Trade Classification (S.I.T.C.) number (groups 0-9). The commodity effect is defined as:

$$\sum_{i=0}^9 \tau_i X_i - \tau X$$

where τ_i is the base year share of Britain in total world exports of commodity group i to the thirteen developed countries and X_i is total world exports of commodity group i to these countries in the given year.

The commodity effect can be seen to be the difference between a projection of British exports based on commodity groups and a cruder projection based on total exports to the thirteen developed countries. If the commodity effect is positive, the commodity distribution of British exports worked in the direction of helping Britain exceed the cruder projection.

The "market" effect is defined as:

$$X' = \sum_{j=1}^{13} \sum_{i=0}^9 r_{ij} X_{ij} - \sum_{i=0}^9 r_i X_i$$

where r_{ij} is Britain's base year share of total world exports of commodity group i to country j and X_{ij} = total world exports of commodity group i to country j in the given year. Thus, the market effect is the difference between a detailed projection going country by country and commodity by commodity and a less detailed projection going commodity by commodity. The detailed projection summarizes the effects of country (market) distribution of British exports and commodity distribution. The less detailed projection summarizes the effects only of commodity distribution. Subtracting the latter from the former is, therefore, a measure of the influence of markets alone.

The "competitive" effect was defined in the text. Its formal algebraic expression is:

$$X' - \sum_{j=1}^{13} \sum_{i=0}^9 r_{ij} X_{ij}$$

This expression is a residual item, i.e., what is left over after a detailed projection which takes account of markets and commodities is subtracted from the actual figure for British exports to the thirteen developed countries in the given year. It will be noted that "the quantity to be explained," $X' - rX$, is the sum of the commodity, market, and competitive effects. The three effects, therefore, algebraically account for this quantity.

Table A1 presents the three effects for the period 1960-1966 excluding Canada (Canada did not report on a revised S.I.T.C. basis during 1960), and for the period 1961-1966 including Canada. Three points should be made about the computations. First, British exports (with one exception) and total world exports to the thirteen developed countries were measured by reported imports from these sources by the thirteen countries. In the case of South Africa, it was necessary to use reported British export figures to calculate the base year shares. Second, the base year was not the first year in the period; 1964 was, in fact, used as the base year. Hence, during 1960-1963, the "given" year precedes the base year. This means that for that period the signs of the formulas shown above must be reversed. The figures before 1964 are thus somewhat analogous to Paasche index numbers, while the figures following 1964 may be compared with Laspeyres index numbers. Third, the choices of base year, computational method, commodity classification, etc., were made almost entirely on the basis of convenient data availability. Figures obtained from the computation should be taken as suggestive rather than as conclusive. Data sources are shown on table A1.

TABLE A1
COMPONENTS OF THE DEVIATION FROM BASE YEAR SHARES, U.K.^a
(U.S. \$MILLION, LOSS = (-))

Between the Years of:	Quantity to be explained =		Excluding Canada		Competitive Effect
	Commodity Effect	Market Effect	Commodity Effect	Market Effect	
1960+1966.....	-68	-217	+619	-217	-470
1961+1966.....	-87	-166	+500	-166	-421
1960+1961.....	+19	-52	+119	-52	-48
1961+1962.....	+54	-91	+91	-91	+54
1962+1963.....	+250	-13	+41	-13	+222
1963+1964.....	-182	+86	+75	+86	-343
1964+1965.....	-111	-7	+123	-7	-227
1965+1966.....	-99	-142	+170	-142	-127
Between the Years of:	Quantity to be explained =		Including Canada		Competitive Effect
	Commodity Effect	Market Effect	Commodity Effect	Market Effect	
1961+1966.....	-364	-185	+532	-185	-711
1961+1962.....	-40	-77	+80	-77	-43
1962+1963.....	+196	+7	+16	+7	+173
1963+1964.....	-205	+75	+92	+75	-372
1964+1965.....	-151	-24	+147	-24	-274
1965+1966.....	-163	-164	+197	-164	-196

Note: Details need not sum to totals due to rounding.
^a Calculated from data appearing in: Statistical Office of the United Nations, *World Trade Annual Yearbook of International Trade Statistics*; O.E.C.D., *Commodity Trade, Overall Trade by Countries*; International Monetary Fund, *Direction of Trade*. South African figures for 1965 and 1966 are from the *Standard Bank Review*.

The results of the calculation reveal that during the period 1960-1966, the combined effects of commodities and markets were generally favorable. That is, if the two effects are summed, a positive number is obtained over the entire period and during most of the subperiods. The negative value of "the quantity to be explained" is due, therefore, to the negative competitive effect. Had Britain suffered no competitive loss, her export position would have improved.

II. THE WAGE EQUATIONS

This section presents the results of several trial runs of different forms of the equations presented in section III of chapter 5. Equations A1 and A2 of table B1 present the results of regressions using current and lagged values of the independent variables (through the same quarter of the previous year). Equations B1 and B2 are in basic format the equations used by Professor Brechling in the work cited in the text.

These equations have been modified by a slight change in the definition of the dummies referring to the current incomes policy,¹ and by the extension of the period of regression through 1967-II. Equations C1 and C2 are simple regressions using no lagged values of the independent variables. Equations D1 and D2 are the equations presented in section III before adjustment for serial correlation.

TABLE B1
UNADJUSTED LEAST SQUARES REGRESSIONS CONCERNING BRITISH INCOMES POLICY

	A1	A2	B1	B2	C1	C2	D1	D2
Constant	-.75	-.73	0.62	-.62	1.07	1.13	-.58	-.58
1/u _t	2.98	3.08	5.03	5.22	3.06	2.94	4.71	4.72
1/u _{t-1}	2.17	2.19	.....	.....	.....	.....	.....	.....
1/u _{t-2}	1.83	1.78	.....	.....	.....	.....	.....	.....
1/u _{t-3}	-.62	-.74	.....	.....	.....	.....	.....	.....
1/u _{t-4}	-1.37	-1.36	-.21	-.44	.....	.....	.....	.....
%ΔP _t	.36	.36	.46	.46	.68	.69	.55	.55
%ΔP _{t-1}	.12	.12	.....	.....	.....	.....	.....	.....
%ΔP _{t-2}	.16	.16	.21	.23	.....	.....	.....	.....
%ΔP _{t-3}	.14	.15	.17	.17	.....	.....	.31	.....
%ΔP _{t-4}	.08	.08	.....	.....	.....	.....	.....	.....
D1	-1.76	-1.76	-1.77	-1.76	-1.97	-1.97	-1.75	-1.75
D2	-1.52	-1.51	-1.53	-1.51	-1.98	-1.99	-1.59	-1.59
D3	-2.01	.....	-1.95	.....	-1.73	.....	-1.93	.....
D3-1	.....	-2.22	.....	-2.22	.....	-2.11	.....	-2.24
D3-2	.....	-1.97	.....	-1.91	.....	-1.87	.....	-1.82
D3-3	.....	-1.94	.....	-1.78	.....	-1.88	.....	-1.90
R ²	.86	.86	.85	.85	.76	.76	.84	.84
Durbin-Watson	1.04	1.05	1.08	1.10	.89	.91	1.16	1.17

Note: Italic independent variable coefficients were significant at 5% level according to T statistic. But, serial correlation biases this statistic toward an indication of significance.

The symbols used on table B1 are defined as follows:
 1/u_{t-i} = reciprocal of the seasonally adjusted unemployment rate for Great Britain in percentage points lagged i quarters.
 %ΔP_{t-i} = percent change in the consumption deflator over the same quarter of the previous year in percentage points lagged i quarters.

¹ Brechling dated the current incomes policy as beginning in 1964-IV. The equations in the text assume it began in 1965-I. This approach seems more realistic since the "Statement of Intent" which inaugurated the program was signed in late December 1964.

- D1 = dummy variable for incomes policy period 1948-I to 1950-IV.
- D2 = dummy variable for incomes policy period 1961-III to 1962-II.
- D3 = dummy variable for incomes policy period 1965-I to 1967-II.
- D3-1 = dummy variable for incomes policy subperiod 1965-I to 1965-II.
- D3-2 = dummy variable for incomes policy subperiod 1965-III to 1966-II.
- D3-3 = dummy variable for incomes policy subperiod 1966-III to 1967-II.

Current and lagged values of the independent variables show a high degree of collinearity. For example, the correlation coefficient (R) between 1/u_t and 1/u_{t-1} is .89. The results of this collinearity can be clearly seen in equations A1 and A2, where only the dummies appear significant using the T statistic as a test. Consequently, a procedure was adopted of trying various forms of the equation and then picking the "best" one. When Brechling's form was used (equations B1 and B2), it was found that one lagged variable (1/u_{t-1}) was no longer significant when the equation was run over the longer period (through 1967-II rather than through Brechling's period ending 1965-IV).

The simple form of equations C1 and C2 (no lagged values) substantially reduced the explanatory power of the equation. As a result, this form was rejected. Equations D1 and D2 seemed to give the best results in terms of significance and explanatory power.

Because of substantial serial correlation, it was necessary to adjust the data according to the method cited in the text. This procedure tends to increase the calculated standard errors associated with the regression coefficients and to reduce the apparent "explanatory" power of the equations. However, the adjusted equations produced coefficients of determination only slightly below those of equations D1 and D2. All independent variables remained significant.

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