NEW POLITICAL ECONOMY

Edited by
Richard McIntyre
University of Rhode Island

A ROUTLEDGE SERIES

NEW POLITICAL ECONOMY

RICHARD MCINTYRE, *General Editor*

POLITICAL ECONOMY FROM BELOW

*Economic Thought in Communitarian
Anarchism, 1840–1914*

Rob Knowles

STRUCTURALISM AND INDIVIDUALISM IN
ECONOMIC ANALYSIS

*The “Contractionary Devaluation
Debate” in Development Economics*

S. Charusheela

ENCODING CAPITAL

*The Political Economy of the Human
Genome Project*

Rodney Loepky

MIRACLE FOR WHOM?

Chilean Workers under Free Trade

Janine Berg

MIRACLE FOR WHOM?
Chilean Workers under Free Trade

Janine Berg

Routledge
New York & London

Published in 2006 by
Routledge
Taylor & Francis Group
270 Madison Avenue
New York, NY 10016

Published in Great Britain by
Routledge
Taylor & Francis Group
2 Park Square
Milton Park, Abingdon
Oxon OX14 4RN

© 2006 by Taylor & Francis Group, LLC
Routledge is an imprint of Taylor & Francis Group

10 9 8 7 6 5 4 3 2 1

International Standard Book Number-10: 0-415-97633-2 (Hardcover)
International Standard Book Number-13: 978-0-415-97633-6 (Hardcover)
Library of Congress Card Number 2005021112

No part of this book may be reprinted, reproduced, transmitted, or utilized in any form by any electronic, mechanical, or other means, now known or hereafter invented, including photocopying, microfilming, and recording, or in any information storage or retrieval system, without written permission from the publishers.

Trademark Notice: Product or corporate names may be trademarks or registered trademarks, and are used only for identification and explanation without intent to infringe.

Library of Congress Cataloging-in-Publication Data

Berg, Janine.

Miracle for whom? : Chilean workers under free trade / Janine Berg.

p. cm. -- (New political economy)

Includes bibliographical references and index.

ISBN 0-415-97633-2

1. Unskilled labor--Chile. 2. Chile--Foreign economic relations. 3. Wage differentials--Chile. 4. Free trade--Chile. 5. Cosmetics industry--Chile--Employees. 6. Agricultural processing industry workers--Chile. I. Title. II. Series.

HD8296.5.B475 2005

331.1'0983--dc22

2005021112

Taylor & Francis Group
is the Academic Division of T&F Informa plc.

Visit the Taylor & Francis Web site at
<http://www.taylorandfrancis.com>

and the Routledge Web site at
<http://www.routledge-ny.com>

Contents

List of Tables	vii
List of Figures	ix
Preface	xi
<i>Chapter One</i>	1
Introduction	
<i>Chapter Two</i>	11
Why has Inequality Increased Under Globalization?	
<i>Chapter Three</i>	27
Working in Chile: Reform, Repression and Flexibility since 1973	
<i>Chapter Four</i>	61
Foreign Competition, Corporate Strategies and Wage Suppression in the Cosmetics Industry	
<i>Chapter Five</i>	101
When Moving Up the Value Chain Isn't Enough: Temporary Labor in Chile's Agroindustry	
<i>Chapter Six</i>	133
Rent-Hoarding in an Open Economy: The Effects of Free Trade on Low-Skilled Chilean Workers	

<i>Chapter Seven</i>	157
Conclusion	
Notes	163
Bibliography	177
Index	185

List of Tables

Table 3.1	Important Changes to Labor Legislation during Three Distinct Political Eras	37
Table 3.2	Workers' Reasons for Not Having a Union, 1999, Percentages	44
Table 3.3	Management's Consultation with Unions and Workers, 1996	49
Table 4.1	Characteristics of Participating Firms	64
Table 4.2	Cosmetics Industry Jobs: Gender, Skills, Pay and Labor Demand	87
Table 4.3	Productivity and Wage Growth, Cosmetics Manufacturers, 1980 & 1995	94
Table 4.4	Existence and Status of Unions in the Cosmetics Industry	96
Table 4.5	Summary of Competitive Strategies of Multinationals and Domestic Firms	98
Table 5.1	Characteristics of Participating Firms	106
Table 5.2	Summary of Employment Effects of Identified Competitive Strategies	121

Taylor & Francis

Taylor & Francis Group

<http://taylorandfrancis.com>

List of Figures

Figure 1.1	Returns to Schooling for University, High-School and Primary-School Educated Workers, Greater Santiago, 1958–1998	3
Figure 2.1	Skill-Biased Technological Change and Wage Inequality	19
Figure 3.1	Real GDP Growth, 1980–2000, percentages	33
Figure 3.2	Real Average Wages, 1970–2000, Index 1989=100	35
Figure 3.3	Real Minimum Wage, 1974–1989, Index 1989=100	40
Figure 3.4	Labor Force by Years of Schooling, Greater Santiago, 1957–1996	53
Figure 4.1	Cosmetics Imports, Finished Goods, 1980–1989, US\$ Million 2000	68
Figure 4.2	Cosmetics Imports, Finished Goods, 1990–2000, US\$ Million 2000	69
Figure 4.3	Employment of Skilled and Unskilled Workers, Cosmetics Manufacturers, 1979–1995	84
Figure 5.1	Agroindustry Value Chain	104
Figure 5.2	Chilean Agroindustrial Exports, 1981–2000	108

Figure 6.1	Increased Wage Inequality under Supply and Demand Analysis	151
Figure 6.2	Index of Real Wages for Different Occupations, 1982–1992, Index 1982=100	152

Preface

This book is about Chile and how its workers have fared under free trade. Initially, my interest in studying this topic was to learn how globalization had affected workers in developing countries, as so much of the debate among academics and policymakers had been centered on the U.S. and Europe. Yet in the 1990s, trade liberalization—along with other Washington Consensus policies such as financial liberalization, privatization and labor market deregulation—was being pursued throughout Latin America and much of the developing world. This was evident not just in the national lowering of trade barriers across the region, but also by the number of bilateral and multilateral trade agreements that came into effect and continue to be negotiated well into the 2000s. The Free Trade Agreement of the Americas, which looms in the distance, indicates the resilience of free trade in Latin America as well as the continued need to understand how workers are affected.

Because Chile was the first country in Latin America to open its goods and capital markets it has become a model for other developing countries pursuing free trade. Though the country endured 15 difficult years of adjustment after liberalizing in 1974, including two severe recessions in 1975 and 1982, its high economic growth rates in the 1990s and its success in exporting natural-resource-based products, have led many to label it an “economic miracle.” But have its workers benefited from this miracle?

I felt that the best way to answer this question was through a firm-level analysis of how free trade affected Chilean firms’ competitive strategies and in the process, their use of labor. I specifically chose to do a study of firms’ and workers’ experiences because I felt that the economics profession had too often favored quantifying the effects of free trade as opposed to understanding how these effects occur. Chile was also a good choice for a study of this type since by the 1990s and 2000s the macroeconomic environment was stable, making firm-level analysis much more feasible.

But a study of how workers were affected by free trade could not be properly answered without considering the political and institutional setting of the country. Thus in this study of Chile—as would be the case in a study of any other country—its unique national experience was fundamental to my analysis of how workers have fared. Indeed, without an understanding of a country's history, social institutions and legislation, it is not possible to accurately assess policy results or to know to what extent the advice can be applied to other countries. Institutions were therefore a fundamental methodological consideration and also proved to be a fundamental determinant of how Chilean workers have fared under free trade.

This study was financed by the Fulbright-Hays Doctoral Dissertation Research Abroad Fellowship Program, the Organization of American States Regional Training Program, as well as the Center for Economic Policy Analysis at the New School for Social Research. I am extremely grateful to William Milberg for his guidance throughout the project, to Jorge Katz, who kindly gave me an office space and access to CEPAL's excellent resources during my year-long stay in Chile, and to Diego Sánchez-Ancochea, Lance Taylor, Dante Contreras, Nelson Barbosa, Monique Morrisey and Mica Hall, for help with many parts of the study. Richard McIntyre, editor of the Routledge Series in New Political Economy, provided many valuable comments that I hope I have done justice to. I would also like to thank my sister, Carolyn Berg, for introducing me to Chile, and my parents, for their encouragement and support. My deepest gratitude, however, is to my husband, Joseph Pendergast, for accompanying me to Chile and for his continuous support of my work.

Chapter One

Introduction

INTRODUCTION

In the 1990s the countries of Latin America abandoned import-substitution industrialization (ISI) and embraced free trade. Two decades earlier, in 1974, Chile had made a similar decision. Disenchanted with the progress of ISI, and influenced by the free-market beliefs of Chicago-trained Chilean economists, Chile reduced its tariffs on consumer goods from an average of 105 percent in the early 1970s to 10 percent by 1979. But how the open economy would affect Chilean workers was left to speculation.

In part, the Chilean decision to liberalize its goods market was motivated by the belief in the Heckscher-Ohlin-Samuelson theory of international trade. The theory postulates that under free trade a country will shift production toward its relatively abundant factor of production. For developing countries, this factor is labor, as opposed to capital, and low-skilled labor as opposed to skilled labor. As a result, ISI was believed to have created a bias towards greater incorporation of capital goods into production that would be reversed under free trade, since, without tariff protection, industries would more readily use the available low-skilled labor. Thus it was expected that removing trade protections, including the preferential exchange rate on capital good imports, would favor job creation in Chile since labor would be favored over capital (Corbo and Meller, 1982). Increased demand for low-skilled labor under free trade would, in turn, increase the wages of these workers, resulting in a compression of the wage distribution and reduced inequality. However, precisely the opposite occurred: wage inequality increased under free trade.

Wage inequality can be considered an “output” of economic policies, while trade policy operates as an “input variable.” A wide range of other economic policies, besides trade policy, can be considered inputs. Some of

these inputs are internal to Chile, such as changes in labor laws, industrial promotion policies, or macroeconomic conditions, while other factors are external, such as foreign exchange rate and commodity price fluctuations, policies of multinational corporations, and technological change.

To analyze the causes of increased income inequality in Chile simply by identifying an outcome and then hypothesizing about its causes provides little understanding of the mechanisms by which trade liberalization alters demand for workers in developing countries. Unfortunately, this has so far been the typical approach. Most of the studies of rising wage inequality in Chile post-liberalization have been econometric studies documenting the occurrence, but only hypothesizing, with little or no evidence, as to the sources of wage dispersion.

The purpose of this study is to learn how industrial restructuring in Chile, in response to free trade, changed firms' competitive strategies and in the process, their use of labor. I do this based on case studies of two Chilean industries: cosmetics and agroindustry. My analysis considers the effects of changing strategies of multinational firms, increased competition, technological change, and a changed labor-relations environment, on the employment and pay of skilled and low-skilled workers. By studying the dynamic processes that cause openness to lead to increased relative wage dispersion, I present a more comprehensive picture of the causes for rising wage inequality under free trade. My analysis provides several insights into the applicability of the traditional view of trade and wages (HOS), versus alternative explanations, such as skill-biased technological change and labor market rigidity. In doing so, I illustrate the need to consider other changes in the economy besides just the price and use of certain labor.

RISING WAGE INEQUALITY

Despite the debate on the causes of rising wage inequality, there is consensus that inequality has indeed increased. Different measures of income and wage inequality lend support to the general pattern of increased earnings dispersion in Chile under free trade. Figure 1.1 shows the increase in returns to schooling for university-educated workers compared with other workers between 1958 and 1998 in the Greater Santiago area. During the late 1950s and early 1960s, when the economy was relatively closed, the returns to schooling for university and high-school educated workers was similar, it then increased in the late 1960s, only to compress again during the three years that the Popular Unity government was in power (1970–1973). After the coup d'état of September 11, 1973, which ushered in the 17-year military dictatorship headed by General Augusto Pinochet,

Figure 1.1 *Returns to Schooling for University, High-School and Primary-School Educated Workers, Greater Santiago, 1958-1998*

Source: Berg and Contreras (2004), based on University of Chile Employment Survey.

earnings of university-educated workers rose continuously, while that of high-school educated workers fell. By the early 1990s, the returns to high-school education had fallen from nearly fifteen percent to less than ten percent, just slightly above the earnings of workers with primary schooling. However, the returns to university-educated workers were substantial by this point, approaching a thirty percent wage premium, after controlling for other differences.

Other measures of inequality, using different data sources, reflect similar patterns. For example, the Gini coefficient for Greater Santiago increased from .506 in 1964–1969 to .586 in 1987–1990. Income inequality persisted during the 1990s as well. Based on the national household survey, CASEN, the Gini coefficient was .554 in 1990, .553 in 1996, and .559 in 2000 (CEPAL, 2002). Bravo et al. (1999) also find that during the 1990s, under democratic rule, income inequality did not improve, despite strong economic and real wage growth and increased social spending.

WHY CASE STUDIES?

I use a case study methodology to trace the restructuring of two Chilean industries in order to learn how industrial restructuring affected the relative demand for skilled and unskilled labor. By studying changes in corporate strategies and labor relations, I sought a better understanding for why wage inequality had increased in Chile in the years following the country's 1974 political-economic shift.

Case studies offered the most appropriate route for studying this phenomenon, because they ask “how” or “why” questions, which can be used to research “operational links that need to be traced over time, rather than mere frequencies or incidences” (Yin, 1994, p. 6). Furthermore, the case study methodology is a comprehensive research strategy that is able to consider many variables of interest and use a variety of information, both qualitative and quantitative, to establish patterns.

Yin (1994) explains that evidence for case studies may come from six sources: documents, archival records, interviews, direct observation, participant-observation and physical artifacts. The case studies undertaken in this book relied upon documents (such as collective bargaining agreements, newspaper and magazine articles, company annual reports), interviews (of firm managers, labor leaders and outside experts), and direct observation (factory tours). The studies also benefited from an annual survey of Chilean manufacturing firms, which provided important quantitative information of number of firms and workers, wages, equipment expenditures and revenues for each sector. The use of different sources of evidence is one of the

strengths of case study research because it allows the researcher to triangulate. Triangulation enlists multiple sources of evidence to show convergence upon a line of inquiry, for example, when evidence from interviews, databases and direct observation all support the same finding. If the researcher's multiple sources of evidence corroborate one another, then the conclusions of the study are likely to be more convincing and accurate than if just one source of evidence is given.

Two industries were studied: the cosmetics industry, an import-competing industry, and agroindustry, an exporting industry. Each of the case studies included nine representative firms, as well as other firms and actors linked to the industry. In some respects, the study had cases within the cases, as firms within the same sector were quite heterogeneous. Because this is a case study of industries, it was important to ensure that sufficient information was gathered to establish representativeness *within* the case. I believe this was accomplished, as many of the firms that participated in the interviews had substantial market share. Other types of information—such as interviews with industry analysts, company documentation, business press articles and industry survey data—allowed me to corroborate information from the interviews and check that it was representative of the industry. This is not to imply, however, that the industry cases are representative of Chilean industry or Chile as a whole. Nor is this the intention. As Yin (1994) states, “case studies should not be used to assess the incidence of phenomenon.” Continuing, he argues,

Case studies, like experiments, are generalizable to theoretical propositions and not to populations or universes. The case study, like the experiment, does not represent a “sample” and the investigator's goal is to expand and generalize theories (analytic generalization) and not to enumerate frequencies (statistical generalization). (p. 10)

Thus, this approach differs from econometric work, which relies on databases that are representative of a population to quantify effects. Econometric analysis has the benefit of showing the extent to which one variable affects another for a given population, but, unlike case studies, it offers little understanding of how and why certain processes occur.

As the literature review given in Chapter 2 will show, there have been numerous econometric studies documenting rising wage inequality in Chile post trade liberalization, and much hypothesizing as to possible causes. Yet the multitude of studies documenting the rise in wage inequality has been matched with a dearth of studies explaining why. This book is an attempt to fill a void in our understanding. My analysis uses the neoclassical theory

of international trade as a template to compare the empirical results of the case study. Certain findings match the predictions of the theory, while others do not. I then attempt to account for findings that did not conform to neoclassical trade theory, by identifying patterns, which I use to develop a theory about rent sharing. Though based on the findings from two industry case studies, the theory elucidates certain structures of international trade as well as managerial strategies and labor relations, allowing for further analyses of unequal wage distribution in Chile.

CHOICE OF CASES

This book analyzes the effects of industrial restructuring under free trade on the cosmetics and agro industries. The cosmetics industry is an import-competing industry, protected from imports during the period of import-substitution industrialization, and then exposed to the effects of free trade beginning in the mid-1970s, but particularly during the latter half of the 1980s and in the 1990s. Agroindustry is a successful exporting industry that emerged in the early 1980s, following the economic, financial and land ownership reforms of the second half of the 1970s and 1980s, giving way to dynamic growth in the 1980s and first half of the 1990s.

A variety of factors were taken into consideration when choosing these industries, including feasibility, but also whether the case offered an interesting study. For example, for my choice of an import-competing sector, I deliberately stayed away from dying industries, such as apparel and footwear, which have suffered tremendous and continual job loss since the 1970s. I felt that doing an analysis of a dying sector would reveal little new information; the cosmetics industry, on the other hand, offered an interesting case since employment in the manufacturing plants of that sector, which I broadly define to include all toiletry products, had expanded over the past several decades despite significant restructuring. In 1979, cosmetics firms with factories employed 4,359 workers growing to 6,239 by 1997, according to data from the annual manufacturing survey. Another important factor in my decision to study the cosmetics industry was its technological accessibility. Cosmetics products had been successfully produced in Chile for a century, thus their production did not pose a scientific hurdle for the country. Simple perusal of supermarket and pharmacy shelves also indicated that there was substantial domestic and foreign presence in the sector, offering the possibility for an analysis of foreign direct investment. The fall in trade barriers, transportation costs and more aggressive market-seeking by multinational cosmetics firms offered enough challenges to make its story worth telling.

Agroindustry offered an interesting case because it was a successful exporting sector that emerged under free trade, based on the comparative advantages of the abundant and high quality natural resources and low-skilled labor. Its story is similar to that of other successful natural-resource-based manufacturing industries such as fishmeal, canned fish, wood chips and cellulose. Like these other export-intensive industries, agroindustry shows the effects of Chile's relatively recent diversification into non-traditional export sectors, specifically the opportunities and limits inherent in these sectors. Moreover, studying agroindustry offered possible understanding of the linkages to world markets. Agroindustry has had substantial job growth, nearly tripling its workforce from 5,700 workers in 1979 to 15,668 in 1997. For these reasons, I felt that its story would also be worth telling.

By studying both an import-competing sector and an exporting sector I was able to conduct a more comprehensive analysis of the effects of free trade on skilled and low-skilled workers, than if I had studied just one sector. Theoretical models in economics treat shifts in production differently depending on the sector's market, necessitating an analysis of both local and export market conditions. By having an industry from each sector I felt I could better analyze traditional international trade theory as well as consider alternatives.

Definition of Skilled and Low-Skilled Workers

Economists tend to use the terms skilled and low-skilled workers rather loosely, and unfortunately, this study is no exception. The adjectives are sometimes inappropriate as they presume that difficulty in work is associated with degree of decision-making and workforce hierarchy, without considering the degree of difficulty of the specific task, even if the difficulty is just physical. Essentially, I define skilled workers as workers with greater than secondary education, either with some years of university studies or completed university studies. Generally, skilled workers are non-production workers, although university-trained production workers such as food scientists that supervise laboratories or engineers that design machinery are also considered skilled. Low-skilled workers range from primary education to completed secondary education. The definition I use corresponds with the Chilean manufacturing survey's (ENIA) definition of skilled and low-skilled production workers. Because of the sectors studied, the low-skilled workers tend to be production workers hired to perform repetitive tasks that involve little training. They are thus easily replaceable. In the analysis I also distinguish between low-skilled and semi-skilled production workers, noting that the semi-skilled workers possess knowledge that makes them

valuable to the firm, typically know-how about fixing a machine or mixing chemicals. The categories have a strong gender bias, with low-skilled positions dominated by women, semi-skilled positions dominated by men, and skilled jobs biased towards men.

OVERVIEW OF THE BOOK

The book is structured to provide the necessary theoretical and contextual background for the analysis of the case studies. The case studies, presented in Chapters 4 and 5, are then followed by an analytical discussion of the findings, and a summary and conclusion.

Chapter 2 reviews the contemporary literature on the causes of rising wage inequality in the industrialized and developing world, including Chile. Following a brief discussion of the neoclassical theory of the determination of wages under free trade, I review competing hypotheses such as skill-biased technological change and labor market rigidity. The empirical evidence in support of these hypotheses is limited, based at times on residuals in regression equations that are interpreted as technological change. I point out the limits to econometric work, offering examples from the industrial relations literature of promising alternative approaches to analyzing rising wage inequality.

The uniqueness of the Chilean experience is evident in Chapter 3. In this chapter, I review the major economic and political shifts that occurred in Chile, starting with the September 1973 coup d'état that overthrew the Socialist government of Salvador Allende and ushered in the military dictatorship of General Augusto Pinochet for seventeen years. The Pinochet government unveiled a radical economic program centered on market liberalization, becoming the first country in Latin America to depart from import-substitution industrialization and embrace free trade. Market flexibility in goods was complemented with policies of financial flexibility, deregulation and labor market flexibility. Labor union leaders were persecuted and there was no recognized freedom of association until a new labor code took effect in 1979. Yet the new labor code severely limited the power of labor, weakening the movement. Labor in Chile continues to be weak, despite the more than ten years that have passed since the return to democracy.

In Chapter 4, I analyze the shifts in competitive strategies of the Chilean cosmetics industry. The changing strategies of multinationals have affected the competitive environment of the industry, as imports skyrocketed in the 1990s. Because of this, Chilean-owned cosmetics firms have developed competitive strategies based on technological upgrading to

increase output and improve productivity. From the workers' perspective, the strategies have not been helpful, and in the case of multinational subsidiaries, quite harmful. Multinational companies have regionalized production to other Latin American countries, shutting Chilean-based factories built during import-substitution industrialization, and dismissing production staff. At the Chilean-owned firms, improvements in productivity have not been accompanied by wage increases for the low skilled, though skilled workers have benefited. Unionization is low in the sector, despite a history of union involvement that dates back to the 1940s. A main conclusion of the research is that Chilean-owned cosmetics firms have compensated for the decrease in rents that resulted from the sector's opening by squeezing the wages of their production staff.

Chapter 5 analyzes the birth and growth of agroindustry, a successful exporting sector, in light of the employment and earnings of its workforce. Agroindustry started in the early 1980s, spurred by the availability of discards from the fresh-fruit exporting sector and an ample supply of available labor. Since its modest beginnings, the industry has developed into a technologically sophisticated provider of high-quality supplies to Northern processed food manufacturers. Yet its position in the global value chain has restricted it to the production of low value-added intermediate goods. Firms interested in entering the high-rent activities of retail, marketing and distribution are limited to the domestic or Latin American market. The constraints imposed on this sector by the international trading environment have encouraged firms to hire workers on temporary contracts even if they are employed year-round. Because agroindustry workers can be hired for contracts that specify the processing of a particular crop, the contract can easily and legally be renewed continuously. Moreover, workers on temporary contracts do not have the right to bargain collectively, making labor rotation much more fluid, while at the same time keeping workers' wages down. The case studies show that regardless of a firm's competitive strategy, reliance on a temporary labor force, even when production is year-round, is a hallmark of the industry's human resource policy.

Based on the findings from the industry case studies, I develop, in Chapter 6, an alternative explanation for why wage inequality has increased in Chile under free trade. I hypothesize that there has been a hoarding of rents at three levels, with each level contributing to limit the pay of low-skilled Chilean workers. The first level of rent-hoarding occurs in the international trading regime, between Northern and Chilean capitalists. The second level occurs at the domestic level and concerns how firms divide rents into profits and wages. This level is influenced by macroeconomic as well as institutional conditions. Finally, I argue that there has

been a division of rents between skilled and low-skilled workers, and that Chilean firm managers have used the weak institutional environment to constrain the wage growth of easily replaceable and poorly organized low-skilled workers.

Chapter 7 summarizes the major findings and themes of the book. I also consider its policy implications, in particular, the role that better labor relations could play in encouraging firms to pursue policies that emphasize training and worker commitment. I argue that in the long run more labor-friendly policies may prove more beneficial for Chile's development than the cost-based strategies that have been used since liberalization.

Notes

NOTES TO CHAPTER TWO

1. See Howell (2002) for a detailed review of this debate.
2. One caveat to this point of view, however, is the level of disaggregation of the industry data, since industries can have different sub-industries that place different emphasis on low-skill and high-skill workers.
3. The study was later followed by Robbins (1996) and Gindling and Robbins (2001). Riveros (1990) was the first study to document the rising relative return to schooling. However, his analysis puts emphasis on changes in education policy, rather than trade, macroeconomic and labor reforms.
4. Both studies rely on data from the University of Chile household employment survey, which is limited to the Greater Santiago area and thus excludes mining, agriculture and fishing.
5. There has been less work in this area, mainly because none of Chile's three employment surveys includes variables that can proxy for labor market institutions. For example, neither the Greater Santiago employment survey, the annual manufacturing survey, nor the more recently instituted CASEN survey, has a question pertaining to unionization. The only survey to consider labor relations is the recently employed ENCLA survey undertaken by the Labor Inspectorate (Dirección del Trabajo). Unfortunately, it dates from 1999 and is limited to labor relations and general firm features (size, sector); it does not consider other firm attributes such as investment and output.

NOTES TO CHAPTER THREE

1. Edwards and Lederman (1998) argue that an economic philosophy did not fully emerge in the government until the April 1975 appointments of ardent free-market supporters, Jorge Cauas as Minister of Finance, and Sergio de Castro as Minister of Economics. However, these men held non-official advisory positions prior to their appointments, while 200 copies of the much touted "ladrillo" document, summarizing the free-market strategies

of the Chicago Boys, were distributed to government officials just one week after the coup.

2. The number of annual bankruptcies in manufacturing increased from 19 during 1965–1970 to 76 during 1975–1982 (Gatica Barros, 1989).
3. Unemployment figures are based on the University of Chile Employment Survey, a quarterly survey started in 1957. Like most household employment surveys, it follows the resolution adopted by the 13th International Conference of Labour Statisticians, which considers a person employed if they worked more than one hour the previous week, regardless of whether or not the work was informal. Approximately one-fourth of the employed labor force in Chile is working in the informal sector.
4. The tariff would later be reduced to 20 percent in June 1985 as the economy started to recover, and then to 15 percent in 1988.
5. Unlike the public enterprises sold during the first round of privatizations in the mid-1970s, these were operating better than the private sector. Another objective of privatization of state enterprises was to provide investment opportunities for the newly privatized pension funds. Because of this, the most common method of sale was through the purchase of minority ownership blocks on the stock exchange, which had the added benefit of reducing the concentration of ownership (Muñoz, 1992).
6. To qualify as a non-traditional export, the total value of exports of that product had to be below a certain threshold. For example, at three percent, the lowest refund rate, a maximum of US\$20.9 million of exports of that product was allowed.
7. 1970 is often used as a benchmark, as it marks the end of the period before the run up in real wages during Allende's term. Real wages jumped from 108.9 in 1970 to 133.6 in 1971, based on an index that sets 1989 at 100. Real wages did not recover their 1971 level until 1997.
8. Based on findings from the CASEN national survey, 1987 and 1996.
9. Based on 1972 CUT election data given in Stallings (1978).
10. The increase in real wages between 1975 and 1982 as a result of the wage indexation policy has been blamed for the high unemployment rate of this period. Yet real wages were cut in half following the coup, which meant that despite the wage increases after 1975, wages in the 1975–1982 period had still not recovered their 1970 level. Meller (1984) defends the position that wage indexation did not cause unemployment during this period.
11. See Bergquist (1986) for a history of the Chilean labor movement beginning with the organization of the nitrate sector in the early 1900s, the formation of the first important workers' central in 1911, and the increased participation of the labor movement in the political process until the coup in 1973.
12. Despite the ability to bargain at the supra-firm level prior to 1973, most collective bargaining in Chile took place at the firm level (Cortázar, 1997).
13. The military forced the dissolution of the CUT (Central Única de Trabajadores) following the coup. In 1974, a new group emerged known as the CUT Coordinadora. It was replaced in 1976 by the Coordinadora Nacional Sindical (Frank, 1995).

14. Meller (1992) based on Campero and Cortázar (1988).
15. It also granted permanent workers the option of forming “negotiation groups” rather than unions to bargain collectively. A negotiation group is a group of workers elected democratically to negotiate a collective bargaining agreement. Once the negotiations are over, the group dissolves and must be formed again at the end of the agreement, usually in two years. Nevertheless, the group has the same rights as a union during the collective bargaining process, for example, it can call a strike.
16. Calculated from data given in Table A.4 of Stallings (1978) and Table 3.16 of Romaguera et al. (1995).
17. Between 1973–1976, the government deliberately indexed wages below the rate of inflation as part of its attempt to lower the rate of inflation in the economy. After 1976, the government committed itself to full indexation, though the CPI was underestimated in the 1976–1978 period (Cortázar, 1997).
18. Based on data given in Table 8–1 of Cortázar (1997).
19. Renamed the Central Unitaria de Trabajadores, the new CUT was formed in 1988 in preparation for the plebiscite against continuation of the military government. The labor movement believed it was more strategic to have a national union federation than several industry federations (Frank, 1995).
20. These included inappropriate behavior, unjustified absence from work, refusal to perform the work specified in the employment contract, actions that deliberately affect the safety and health of others, and deliberate material damage. An employment contract could be terminated for just cause and with severance pay for the following reasons: reorganization or modernization of the company, decrease in the worker’s productivity, change in market conditions or the state of the economy, or lack of occupational or technical training.
21. The decrease in firm size has also caused the size of unions to shrink. In 1990, the average union had 68 members, falling to 50 members by 1995 and 40 members by 2000 (Data provided by Dirección del Trabajo).
22. Data from Dirección del Trabajo website (dt.gob.cl) and INE (at Banco Central website www.bcentral.cl).
23. Based on interview with the three officers of the Servipag union and their advisor in January 2001. I am grateful to Marcos Canales of the CUT for referring me to them.
24. Interview with Servipag union officers, January 2001.
25. If no contract currently exists, union demands may be presented at any time.
26. Based on interview with Guillermo Campero in June 2001.
27. Interview with Guillermo Campero, June 2001.
28. Based on interviews on May 23 and May 30, 2001.
29. July 2001 interview.
30. July 2001 interview. Espinosa (1996) gives a similar account of the labor-political party relationship prior to 1973.

31. Both Frias and Acevedo identified unions in the copper industry as those with the most "modern" labor relations.
32. Author's calculations based on data from the University of Chile Employment Survey.
33. Minimum wage in Chile for the second half of 2001.
34. The International Institute for Management Development conducts an annual survey of hours worked and publishes the results in its *World Competitiveness Report*. Information reported by Cindy Rivera, "Trabajólico," *El Mercurio*, May 2, 2001. Information on legislative changes for 2005 reported in "A partir del 2005 jornada laboral se reduce en 3 horas semanales," *El Mercurio*, June 14, 2001.
35. All permanent employees with more than one year of service receive 15 days vacation by law. After 10 years of service, employees receive an additional day for every three years worked.
36. Mainly bonuses for Christmas and Independence Day celebrations, but can also include benefit for death of a family member as well as help with children's school uniform expenses at the start of the academic year. These benefits are not mandated by law but it is common for firms to offer them. Depending on the firm they may be extended to temporary workers.
37. As mentioned earlier, permanent workers are entitled to severance of one year's pay for every year of service, up to a maximum of 11 years.
38. This section draws from an interview with Magdalena Echevarría, Research Division, Dirección del Trabajo, July 2001.
39. The first temporary agency to begin working in Chile was Manpower, opening its doors in 1963. In 1984, there were three temporary agencies operating in the country, increasing to 79 by 1986 and 150 by 1997. It is estimated that 30,000 individuals are employed through temporary agencies (Echeverría et al., 1998).
40. Temporary agencies often pay their workers on honorarium (Echeverría et al., 1998).

NOTES TO CHAPTER FOUR

1. Based on lists of cosmetics manufacturers and distributors maintained by the Cosmetics Industry Chamber of Commerce and the U.S. Embassy, the companies are all located in the Greater Santiago area. Though 50 may seem like a large number, this also includes small import businesses that import high-end niche goods for sale at department stores and do not manufacture. According to the manufacturing industry survey, there were 39 "soap and cleaning detergent" plants in 1995, though a company can have more than one plant.
2. This estimate is based on market size data from the Cosmetics Industry Chamber of Commerce, sales data, and ACNielsen marketing studies, and on the importance attributed to these firms from industry experts.

3. Classification and explanation of continuous versus discontinuous flow activities based on J. Katz, an expert on technological development in Latin America (Conversation with J. Katz, 2001 and Katz, 1986).
4. ASACH, Asociación Gremial de Supermercados de Chile. Information based on an interview with the general manager, Jonathan Powditch, in March, 2001 and data supplied by the association.
5. This section is based on interviews with the Human Resource Department and the Controller of the multinational subsidiary conducted in November and December of 2000, as well as information from the company's 1999 annual report.
6. "The basis for centralization is the harmonization of the product range across national borders. This year [1999] we started the standardization of recipes and packages for the entire region" (1999 annual report).
7. Information based on an interview with the general manager of the Chilean subsidiary in January 2001, articles in international and local business press, the company's annual report, and press releases.
8. *Business Week*, June 28, 1999.
9. According to an AC Nielson market study from January-February 2000, the company's line of cosmetics accounted for 16 percent of the number of units sold in the metropolitan region, second after the 33 percent unit share of a domestic makeup line. Because M2's prices are higher, it led the market in 2000 in terms of value of sales.
10. *Business Week*, June 28, 1999.
11. Interview with public relations manager, February 2001. Additional information was gleaned from the company's annual report.
12. M3's strategy to consolidate factories within Latin America for distribution within the region mirrors its European strategy. In the early 1990s, the European division of M3 standardized products to "consolidate their European production and distribution systems in order to reduce costs through greater plant specialization." Seven plants were involved in the restructuring, which led to the closing of one factory and the transferring of production of four different product lines. The measures favored "those plants located close to the European core to the detriment of peripheral sites" (Bailey et al., 1993, p.86).
13. As my research focused on the Chilean cosmetics industry, my interview with the general manager concerned only the cosmetics portion of the business.
14. The contract signed with subcontractor C5 stipulates that M4 must give a year's notice if it decides to cease using C5 as subcontractor.
15. *El Mercurio*, May 25, 2000.
16. Conversation with Howard Baker, Technical Consultant to the U.S. cosmetics industry, December 2001.
17. Interview with company president, February 2001.
18. *El Mercurio*, March 25, 1997.
19. Cosmetics companies must provide their own reshelers at the supermarkets. Local firms have banded together to hire reshelers at large supermarkets, a

more effective strategy than having one reshelfer running around all day to different stores.

20. Information based on interview with founder/owner/president of the firm in November 2000. He, along with his daughter, run the company.
21. Interviews with owner/general manager in November 2000 and July 2001. Between 1985 and 1995, C2 was owned by M1. In 1995, M1 made a company-wide decision to focus exclusively on hair products, leading it to sell this subsidiary, along with other international ventures in both cosmetics-related products, as well as furniture. Because of C2's committed consumer base and the present owner's familiarity with it—as a former employee of M1—the present owner purchased the company.
22. Interview with founder/owner/general manager in February 2001.
23. Interview with Sales Manager, February 2001, Production Manager, March 2001, and Chief of Production, July 2001.
24. C4's organizational structure lends itself to subcontracted manufacturing jobs, making it somewhat surprising that the firm does not accept such jobs. C4 is organized as part of a small holding company. It takes sales orders from the "commercial company" of the holding, manufactures the products, and then sells the goods to the commercial company. There are tax benefits to organizing as a holding. Also, it limits unionization since the unions can only form within the holding's smaller companies. This is discussed briefly in Chapter 3.
25. Interview with general manager in February 2001.
26. See Harrison (1997) for an in-depth discussion of this topic.
27. Between 1987 and 1999, output per worker (measured in hours worked rather than by employee) in the U.S. cosmetics industry grew 2.5 percent annually. Yet despite the higher rate of productivity growth in Chile, the industry still lags behind the U.S., which by 1980 had reached value added per employee of \$100,000 (Wilder, 1982).
28. Updating product look is difficult and costly to do, since apart from the investments in redesigning and reconfiguring the machines for the new bottles or jars, the company must ensure that its loyal customers continue to purchase the product with the new look. Also, the firm must buy back the inventory of old products available at the stores when the new product is introduced since it is not a good idea to have old and new products selling simultaneously.
29. This discussion is based on an interview with two managers in the human resources department of the firm, both of whom had worked for the company prior to the reorganization. I also interviewed the firm's controller, a business-school trained American, who joined the company in 1998. He argued that the environment prior to the reorganization stifled creativity. As an example, he mentioned the practice on the part of upper management to have their lunch served by waiters while the rest of the staff went through the cafeteria line.
30. In February 2001, at the time of the interview, the minimum wage was C\$100,000 pesos per month. It was raised to C\$105,000 per month on July 1, 2001.

31. Conversation with German Acevedo, Ministry of Labor, May 2001.
32. As explained in Chapter 3, a *convenio colectivo* is a form of a collective negotiation whereby the workers elect three representatives to meet with management and negotiate wages for a two-year period. Workers do not have the right to strike under the rules of this agreement and wage increases are not binding.
33. Federación Nacional de Trabajadores Laboratorios Químicos Farmacéuticos y Cosméticos. Founded in the early 1940s, the Federation was outlawed during 1973–1990, though it operated in secret, mostly as a political organization in the fight for democracy (Conversation with Saul Troncoso, President of the Federation, June 2001). With the return to democracy in 1990, federations regained legal status, though industry-level collective bargaining is still prohibited, unless agreed to by the management of the firms.
34. Management of this firm denied my request for an interview, though I did get a tour of the facility and copies of the collective bargaining agreements during my meetings with the company's union leader. The company's union leader is the current president of the National Federation of Cosmetics and Pharmaceutical Laboratory Workers. The union is well organized, with ninety percent of blue-collar workers belonging to the union.
35. Union leaders are legally protected from being fired under the "fuero laboral."
36. Union dues were modest and in some cases, were returned to the members at the end of the year in a lump-sum check to help with holiday expenses.
37. Free-riding was partially offset by the 1990 change in the labor law which required employers to deduct the equivalent of 75 percent of union dues from the wages of non-union workers who received the benefits under the collective bargaining contract (Cortázar, 1997).

NOTES TO CHAPTER FIVE

1. Specifically juicing, dehydrating, canning or freezing fruits and vegetables. The term agroindustry is sometimes understood to include all processed agricultural products including dairy, fishing and livestock industries. The definition has been limited for purposes of this study.
2. Phone interview with David Olsen, U.S. sales representative for firm 3 and international fruit buyer (February 2002).
3. The interviews were conducted in 2001. Of the twelve firms that were asked to participate in the study, nine accepted, of which eight are agroindustrial manufacturers. Besides interviews with firm management and factory visits, I also interviewed industry experts and union leaders, when a union did exist. My analysis also relied on secondary information, including annual reports of two publicly traded companies, data from the manufacturing census, as well as the wide body of literature on the employment conditions of temporary workers in the fresh fruit industry. This literature is relevant for agroindustry, as the industry draws from and competes for the same labor pool.

4. Although exchange rate fluctuations can affect sales, it cannot explain the increase in sales until 1996 and the subsequent fall. Despite a steady appreciation of the real exchange rate between 1990 and 1996, there was strong growth in sales during those years. After 1996, the real exchange rate depreciated slightly from 84.7 in 1996 to 86.0 in 2000, based on an index of the Central Bank of Chile that sets the real exchange rate of 1986=100. The Chilean Central Bank reports exports in US\$.
5. Chinese low-grade tomato paste sells at CIF prices that are US\$120 below Chilean cost (Peppelenbos, 2000).
6. Interview with Gonzalo Jordán, Head of Agroindustry Department, Fundación Chile, May 2001 and former general manager of one of Chile's leading agroindustrial firms.
7. Between 1980 and 1990, annual productivity was -0.3 percent, between 1990 and 1995, it averaged 6 percent annual growth. Employment, on the other hand, grew at an annual rate of 9.9 percent between 1980 and 1990; between 1990 and 1995 employment growth slowed to a 3.2 percent annual increase.
8. Interview with Operations Manager, July 2001.
9. Laboratory workers ensure that the chemical balance of the products meets customer demands. They continuously run quality control tests on the goods being processed. The laboratory must operate when the line is moving, thus laboratory workers are staffed for three shifts per day.
10. Phone conversation with Dr. John Reid, Manager of the Technology Department, John Deere Technical Center, February 2002. See also Reid (2001).
11. Besides the optical sorting machine, most investments are in processing equipment. Improvements in this area cause a negligible reduction in labor intensity.
12. Conversation with Sandra Johnson, Sales Department, Key Technology, February 2002.
13. Interview with Training Manager, August 2001.
14. Although the firm emphasizes training more than equipment purchases, it nonetheless has updated some technology. Besides the continuous dryer, which was purchased in 1999, the company bought a drum drier in 2000 that uses dehydrates discards to produce fruit and vegetable flakes and powders.
15. To be ISO-certified means that a company's products or services have been carefully monitored for quality according to standards set by the International Standards Organization. Thus, by obtaining this certification, firms can sell to more exclusive clients, at higher prices.
16. Interview with Owner/General Manager, May 2001.
17. The company also got approval from the Dirección del Trabajo to reorganize the work shifts. Instead of working three shifts a day, six days per week, with one day off, which was leading to scheduling difficulties, the operators work four days consecutively, twelve hours per day, followed by two days off.

18. The owner considered including the workers in the company's profit-sharing plan to which management belongs. He decided, however, that the workers were not ready for this system. An employee has to be able to understand fluctuations in commodity prices and recognize that fluctuations in the market are real and that the company is not just tricking workers out of their fair share. For this reason, he decided that pay-for-productivity would be a more appropriate system.
19. Interview with General Manager and the Operations and Finance Manager, May 2001.
20. Measured in US\$ FOB, exports have increased, in real terms, at 19 percent annually, despite greater production of higher-value added (pitted) prunes. Data are from FEPACH, based on the Central Bank of Chile; 1981 is the first available year given.
21. Hazard Analysis Critical Control Point. It is a system that guarantees quality at all stages of production.
22. Interview with one of the founding partners and managers of the firm, June 2001.
23. Interview with Owner/General Manager, May 2001.
24. Interview with Operations Manager, August 2001.
25. The war in Bosnia prompted the U.S. and Europe, in the early 1990s, to give preferential tariffs to countries of that region, an important berry-growing center. This hurt Chilean berry exports and prompted concern, among A8's management, about the future of this sector. (Follow-up conversation with Operations Manager, A8, February 2002).
26. Another area for growth, for both A7 and A8, is in importing and reselling prepackaged foods, using the companies' established distribution networks. A7 imports frozen deserts, fries and hamburgers from Argentina, the U.S. and Canada, for sale at supermarkets. A8's line of imported foods has grown to fifteen percent of their sales.
27. According to the operations manager, the central-valley factory is the most mechanized in South America, far ahead of its Chilean competition. Still, it trails behind the U.S., where frozen food factories produce far more products at much greater output levels. Nevertheless, the company does not believe that it needs to improve its machinery in order to compete and gain domestic market share. They see themselves as being at the optimum technological level and further technological investments are not central to their competitive strategy. (Interview with Operations Manager, A8, August 2001).
28. Interview with General Manager, June 2001.
29. Interview with Owner/General Manager, July 2001.
30. See "El Trabajo Agrícola de Temporada" under the Guías Laborales of the Dirección del Trabajo's website, www.dt.gob.cl.
31. Estimate based on factory visits and interviews with management. The manufacturing census reports that 50% of the unskilled jobs and 30% of the skilled jobs were filled by women. It is likely that these figures grossly underestimate female employment as women's more erratic employment contracts make them more difficult to account for. Moreover, the seasonal

workers in the industry are referred to as *temporeras* instead of *temporeros*, which includes both genders, and would be the noun of choice if indeed there were equitable distribution of seasonal jobs.

32. Based on interview with former laboratory head of A6, May 2001. The exception is A5, which keeps its four laboratory workers during the winter months to work on product development.
33. Factory visits confirmed the reports of secondary sources.
34. The irony, however, is that by returning to their full-time duties as home-makers during the winter months, the women are less able to renegotiate household duties so that their husbands take on greater responsibility in the home. Most women carry the double burden of paid work and housework during their employment in agroindustry. Yet despite the substantial increase in workload, most women prefer to work than not (Barrientos et al., 1999). Newman (1994) in her study of female grape packers found that most women would like to be able to work throughout the year, but that there were no such opportunities.
35. The company has maintained a consistent policy of offering ten percent above the minimum wage, despite the increases in the minimum wage during the 1990s. In June 2001, the salary worked out to about US\$192 per month plus a 5% bonus for working the night shift. A worker with no absences received an attendance bonus worth US\$12. The end-of-season bonus is US\$80; in general, most workers who lasted through the season received the bonus.
36. "The issue of salary has fallen behind . . . [the return for their contribution] is more about status." Nevertheless, status—or the respect accorded to workers—is a recurring theme that I came across in both my primary and secondary research. See discussion of labor relations later in this chapter. Also, in a survey of workers in the fish-processing sector in Chile that asked what workers would most want to change about their jobs, the number two answer given was being treated with more respect (17%). Salary was the number one answer with 25% of responses (Schurman, 1993).
37. Part of the decline is also due to a loss in canned peach exports, which have suffered from a loss of business to subsidized Greek peaches. Canned peaches make up almost half of A6's sales.
38. Instead of working three shifts a day, six days per week, with one day off, which was leading to scheduling difficulties, the operators work four days consecutively, twelve hours per day, followed by two days off. The alternative work schedule was approved by the Dirección del Trabajo.
39. During the three months that the factory sits still, the workers take vacation (one month), perform maintenance (one month) and do small jobs around the factory such as painting during the third month. The four laboratory workers use the time for product development.
40. Data on temporary employment at Jucosa and Patagonia from annual reports. Data from A5 from interview with General Manager, 2001.
41. Employment data for A4 is not comparable with A5 because it also includes workers in the dehydration facility.

42. When the prune is dried it has a humidity level of 16%. Processing the prune involves first sterilizing it, then cleaning, and finally adding water to raise the humidity level to 25–28 percent. The pit is then removed, followed by quality control inspection, the adding of preservatives, and lastly, packaging (Factory Visit, A1).
43. Interview with the president of union, A8, July 2001. The 15 permanent non-managerial factory workers belong to the small, one-officer union.
44. Legally, an “honorarium” is a civil contract between two equal parties, differing from labor law, which recognizes the imbalance of power between employer and worker, and attempts to address this inequality. Although it is illegal to hire a worker on honorarium for the purpose of circumventing an employment contract, use of honoraria has become more widespread (Dirección del Trabajo, 2000; conversation with M.Echeverría, 2001).
45. Union officers are protected from being fired under the *fuero laboral*.
46. With the return to democracy in 1990, the labor code was reformed to allow temporary workers the right to form and join unions, yet they still do not earn the right to collective negotiation or to the right to strike, since strikes are only permissible during specific collective bargaining periods.
47. Since I met with the union officers of A6 and A7, I report their and management’s accounts of labor relations in this section. I did not meet with the union head of A5. That union formed in 1999 in response to a difficult period in the company that led to lay-offs.
48. Nor were they able to obtain wage increases. In the collective bargaining contract signed in 2000, the union negotiated cost-of-living adjustments for their wages and bonuses, but was unable to secure a real wage increase. The bonuses the union members receive are standard in most union contracts. They include a back-to-school bonus that enables parents to buy new school uniforms, bonuses for Christmas and Independence Day holidays, and reimbursement for taking the bus to and from work.
49. Having several days to spend with their families during the summer vacation months was important to the workers. The union president, for example, had not had a day off during the summer in his fourteen years of working for the company.
50. The benefits include Christmas and Independence Day holiday bonuses, access to canned products that the firm produces, and a benefit in the case of death of a family member.

NOTES TO CHAPTER SIX

1. The elasticity of demand of the product is an indicator of the market power of the firm.
2. In a comprehensive study of the fishing industry in Chile between 1973 and 1990, Schurman (1993) shows how the high profits available in these industries in the late 1970s and 1980s gave way to overinvestment and resource depletion, so that by 1990 there were few rents left.

3. Models of imperfect competition (see Krugman, 1980, 1991) are useful for explaining intra-industry trade, but cannot explain unequal trading relations stemming from different degrees of monopoly power. Many of the assumptions of HOS are maintained, including identical structures of demand between the two trading nations.
4. These are the main sources of monopoly power for controlling firms of buyer-driven commodity chains. In producer-driven commodity chains another source of monopoly power is technological asymmetries.
5. The association between higher rent industries and higher wages is both an empirical finding and a theoretical proposition. See Galbraith (2001) for an explanation of the theoretical proposition; Katz and Summers (1989) provide empirical evidence for the United States.
6. See Amsden (1989) for an account of the development policies of the South Korean government following the Korean War.
7. This does not imply that Chile and other Latin American countries did not suffer from adverse terms of trade under ISI, but by closing itself off it was more insulated. See Prebisch (1981) for a discussion of the troubles Latin American countries faced during ISI.
8. An important implication of this finding is that technological spillovers are not simply the result of direct foreign investment, but rather the result of international competition. This competition occurs both externally as well as internally. Externally, Chilean firms must make technological investments to help their exports compete with the goods of other countries; similarly, firms competing with imports for the domestic market make investments to secure market share.
9. The exception is A5, which tied pay to productivity, and a productivity bonus negotiated for one cosmetics firm, whose management did not participate in the study.
10. The data are restricted to Greater Santiago because there does not exist a sufficiently long time series for the whole country. Approximately one-third of Chileans live and work in Santiago, which is also the country's manufacturing center.
11. The case study of the cosmetics industry confirmed the well-known finding that multinationals pay more than domestic firms—in cosmetics, almost double the domestic firms' unskilled wage rate of roughly US\$275 per month. Unfortunately, managers could not convincingly explain why. In Chapter 4, I propose some explanations of this finding.
12. Between 1974 and 1989, the minimum wage fell drastically. By 1989, its real value was nearly sixty percent less than its value in 1970. However, it climbed again in the 1990s and by 2000, the minimum wage was 90 percent above its 1989 level.
13. Unfortunately, Chile's National Statistical Institute (INE) changed the questionnaire in 1992 making it incompatible with the previous series. In 2000, they once again changed the methodology.
14. See for example, Cox Edwards and Edwards, 1997; Márquez and Pagés, 1997; Heckman and Pagés, 2001.

15. In C4, the administrative staff has a union, though it is separate from the union of the production staff. The unions do not consult each other, either prior to or during contract negotiations.
16. Bacha and Taylor (1978) propose a similar explanation for rising wage inequality in Brazil in the 1960s. In their view, hierarchy in firm, rather than marginal productivity, determines a worker's earnings. As managers share in the residual income after workers are paid, they attempt to squeeze laborers' pay.

Bibliography

- Abraham, Katherine and Susan Taylor (1993) "Firms' Use of Outside Contractors: Theory and Evidence," NBER Working Paper No. 4468.
- Agosin, Manuel (1999) "Comercio y Crecimiento en Chile," *Revista de la Cepal* 68, August.
- Alburquerque, Mario (1999) "Obstáculos a la modernización de las relaciones laborales en Chile. ¿Qué impide una extensión mayor de las experiencias de alianza estratégica en las empresas chilenas?" en C. Montero, M. Alburquerque y J. Ensignia (eds.), *Trabajo y Empresa: entre dos siglos*, Caracas: Editorial Nueva Sociedad.
- Amadeo, Eduardo (1995) "International Trade, Outsourcing and Labor: A View from the Developing Countries," mimeo, PUC-Rio de Janeiro.
- Amsden, Alice (2001) *The Rise of "The Rest": Challenges to the West from Late-Industrialization Economies*, New York: Oxford University Press.
- Amsden, Alice (1989) *Asia's Next Giant: South Korea and Late Industrialization*, New York: Oxford University Press.
- Asesorías Estratégicas (2000) *Tendencias Emergentes en la Negociación Colectiva: El Tránsito del Contrato al Convenio*, Cuaderno de Investigación 11, Santiago: Dirección del Trabajo.
- Bacha, Edward and Lance Taylor (1978) "Brazilian Income Distribution in the 1960s: 'Facts,' Model Results and the Controversy," *Journal of Development Studies* 14 (3): 271-297.
- Bailey, Paul, Aurelio Parisotto and Geoffrey Renshaw, eds. (1993) *Multinationals and Employment: The Global Economy of the 1990s*, Geneva: International Labour Office.
- Bair, Jennifer and Gary Gereffi (2004) "Outsourcing and Changing Patterns of International Competitiveness in the Global Apparel Commodity Chain," in W. Milberg, ed., *Labor and the Globalization of Production*, Houndmills: Palgrave Macmillan.
- Bair, Jennifer and Gary Gereffi (2001) "Local Clusters in Global Chains: The Causes and Consequences of Export Dynamism in Torreon's Blue Jean Industry," *World Development* 29 (11): 1885-1903.

- Baker, Howard (2001) "It's a Small Run!" *Global Cosmetics Industry* 167 (5): 58–59.
- Barrientos, Stephanie et. al. (1999) *Women and Agribusiness: Working Miracles in the Chilean Fruit Export Sector*, London: Macmillan Press.
- Behrman, Jere, Nancy Birdsall and Miguel Székely (2000) "Economic Reforms and Wage Differentials in Latin America," Inter-American Development Bank, Working Paper #435, October.
- Benería, Lourdes and Martha Roldán (1987) *The Crossroads of Class and Gender: Industrial Homework, Subcontracting and Household Dynamics in Mexico City*, Chicago: Univ. of Chicago Press.
- Berg, Janine and Dante Contreras (2004) "Political-Economic Regime and the Wage Curve: Evidence from Chile, 1957–1996," *International Review of Applied Economics* 18, 2 (April): 151–165.
- Bergquist, Charles (1986) *Labor in Latin America*, Stanford: Stanford University Press.
- Berman, Eli, John Bound and Zvi Griliches (1994) "Changes in the Demand for Skilled Labor within U.S. Manufacturing: Evidence from the Annual Survey of Manufacturers," *Quarterly Journal of Economics* 109 (May): 367–397.
- Berman, Eli and Stephen Machin (2000) "Skill Biased Technology Transfer: Evidence of Factor Biased Technological Change in Developing Countries," mimeo, January.
- Beyer, Harald, Patricio Rojas and Rodrigo Vergara (1999) "Trade Liberalization and Wage Inequality," *Journal of Development Economics* 59: 103–123.
- Blecker, Robert (1999) "Kaleckian models for open economies," in Johan Deprez and John Harvey, eds., *Foundations of International Economics: Post Keynesian Perspectives*, London: Routledge Press.
- Bound, John and George Johnson (1992) "Changes in the Structure of Wages in the 1980s: An Evaluation of Alternative Perspectives," *American Economic Review* 82 (June): 201–232.
- Bravo, David and Alejandra Marinovic (1997) "Wage Inequality in Chile: 40 Years of Evidence," mimeo, Universidad de Chile.
- Bravo, David, et al. (1999) "Wage Inequality and the Labor Market in Chile, 1990–1996: A Non-Parametric Approach," mimeo, Universidad de Chile.
- Brown, Clair and Benjamin Campbell (2001) "Technical Change, Wages and Employment in Semiconductor Manufacturing," *Industrial and Labor Relations Review* 54 (2A): 450–465.
- Campero, Guillermo (2000) "Respuestas del sindicalismo ante la mundialización: El Caso de Chile" Instituto Nacional de Estudios Laborales, Ginebra, Documento de Trabajo 113.
- Carr, Marilyn and Martha Chen (2004) "Globalization, social exclusion and gender," *International Labour Review* 143 (1–2): 129–160.
- CASEN (1998) *Encuesta de Caracterización Socioeconómica Nacional*, Santiago: MIDEPLAN.
- CEPAL (2002) *Panorama Social de América Latina 2001–2002*, Santiago : CEPAL.
- CEPAL (1998) *Agroindustria y pequeña agricultura: vínculos, potencialidades y oportunidades comerciales*, Santiago: CEPAL.
- CEPAL (1990) "La cadena de distribución y la competitividad de las exportaciones latinoamericanas: la fruta de Chile," LC/G.1639, Santiago: CEPAL.

- Cline, William (1997) *Trade and Income Distribution*, Washington, D.C.: Institute for International Economics.
- Corbo, Vittorio and Patricio Meller (1982) "Alternative Trade Strategies and Employment Implications: Chile," in A. Krueger, ed., *Trade and Employment in Developing Countries*, Cambridge: NBER.
- Corbo, Vittorio and José Miguel Sánchez (1984) "Impact on Firms of the Liberalization and Stabilization Policies in Chile: Some Case Studies," PUC-Chile, Documento de Trabajo 91, May.
- Cortázar, René (1997) "Chile: The Evolution and Reform of the Labor Market," in S. Edwards and N. Lustig, eds., *Labor Markets in Latin America*, Washington: Brookings Institution.
- Cortázar, René (1993) *Política Laboral en el Chile Democrático*, Santiago: Dolmen Ediciones.
- Cox Edwards, Alejandra (1993) "Labor Market Legislation in Latin America and the Caribbean," Education and Social Policy Report no. 31, Inter-American Development Bank.
- Cox Edwards, Alejandra and Sebastian Edwards (1997) "Trade Liberalization and Unemployment: Policy Issues and Evidence from Chile," in J. Borkakoti and C. Milner, eds., *International Trade and Labor Markets*, London: Macmillan Press.
- De Gregorio, José (1999) "Trade Liberalization, Macroeconomic Performance and Wage Inequality: The Chilean Experience," mimeo, Universidad de Chile.
- Dirección del Trabajo (2000) *ENCLA Encuesta Laboral: Informe de Resultados*, Santiago.
- Dirección del Trabajo (1997) *Sindicalismo en la empresa moderna: Ni ocaso, ni crisis terminal*, Cuaderno de Investigación 4, Santiago.
- Dunning, John (1993) *Multinational Enterprises and the Global Economy*, Wokingham, England: Addison-Wesley.
- Echeverría, Cristián (1997) "La institucionalidad laboral en Chile," mimeo, Ministerio del Trabajo.
- Echeverría, Magdalena and Verónica Uribe (1998) "Condiciones de Trabajo en Sistema de Subcontratación," n. 81, OIT-ETM: Santiago.
- Echeverría, Magdalena et al. (1998) *El Otro Trabajo: El suministro de personas de las empresas*, Cuaderno de Investigación 7, Santiago: Dirección del Trabajo.
- Edwards, Sebastian and Alejandra Cox Edwards (1991) *Monetarism and Liberalization: The Chilean Experiment*, Chicago: University of Chicago Press.
- Edwards, Sebastian and Daniel Lederman (1998) "The Political Economy of Unilateral Trade Liberalization: The Case of Chile," NBER Working paper 6510, April.
- Espinosa, Malva (1996) *Tendencias Sindicales: Análisis de una Década*, Cuaderno de Investigación 2, Santiago: Dirección del Trabajo.
- Feenstra, Robert C. (1998) "Integration of Trade and Disintegration of Production in the Global Economy," *Journal of Economic Perspectives* 12 (4): 31–50.
- Feenstra, Robert C. and Gordon Hanson (1997) "Foreign direct investment and relative wages: Evidence from Mexico's Maquiladoras," *Journal of International Economics* 42: 371–393.
- FEPACH (2001) *Exportaciones de Frutas y Hortalizas Procesadas, 1981–2000*, Santiago: FEPACH.

- Ffrench-Davis, Ricardo (1999) *Entre el Neoliberalismo y el Crecimiento con Equidad: Tres Décadas de Política Económica en Chile*, Santiago: Dolmen Ediciones.
- Fitter, Robert and Raphael Kaplinsky (2001) "Who Gains from Product Rents as the Coffee Market becomes more Differentiated?," *IDS Bulletin* 32 (3): 69–82.
- Fortin, Nicole and Thomas Lemiux (1997) "Institutional Changes and Rising Wage Inequality: Is there a Linkage?" *Journal of Economic Perspectives* 11 (Spring): 75–96.
- Frank, Volker Karl (1995) "Plant Level Leaders, the Union Movement, and the Return to Democracy in Chile," Ph.D. dissertation, University of Notre Dame.
- Freeman, Richard B. (1995) "Are Your Wages Set in Beijing?," *Journal of Economic Perspectives* (Summer): 15–32.
- Galbraith, James (2001) "The Distribution of Income," Richard Holt and Steven Pressman, eds., *The New Guide to Post Keynesian Economics*, London: Routledge Press.
- Gatica Barros, Jaime (1989) *Deindustrialization in Chile*, Boulder: Westview Press.
- Gerrefi, Gary (1999) "International trade and industrial upgrading in the apparel commodity chain," *Journal of International Economics* 48: 37–70.
- Gindling, Thomas and Donald Robbins (2001) "Patterns and Sources of Changing Wage Inequality in Chile and Costa Rica during Structural Adjustment," *World Development* 29 (4): 725–745.
- Griliches, Zvi (1969) "Capital-Skill Complementarity," *Review of Economics and Statistics* 51: 465–468.
- Hanson, Gordon and Ann Harrison (1995) "Trade, Technology and Wage Inequality," NBER Working Paper 5110, May.
- Harrison, Bennett (1997) *Lean and Mean*, New York: Guilford Press.
- Heckman, James and Carmen Pagés (2001) "Regulation and Deregulation: Lessons from Latin American Labor Markets," *Economía* 1(1):109–134.
- Henríquez, Helia et al. (1994) "Temporeras del Sector Agrario: Sindicatos Débiles en Búsqueda de Nuevas Perspectivas," Informe de Investigación 106, Santiago: PET.
- Howell, David (2002) "Increasing Earnings Inequality and Unemployment in Developed Countries: Markets, Institutions and Unified Theory," CEPA Working Paper 2002–01, January.
- Humphrey, John (2004) "Upgrading in Global Value Chains," Policy Integration Department Working Paper 28, Geneva: International Labour Office.
- ILO (2003) *Key Indicators of the Labour Market, Third Edition*, Geneva: ILO.
- INE (1979–1995) *Encuesta Nacional Industrial Anual (ENIA)*, Santiago: Instituto Nacional de Estadística.
- Infante, Ricardo and Emilio Klein (1992) "Chile: Transformaciones del mercado laboral y sus efectos sociales, 1965–1990," Documento de Trabajo, Ginebra: OIT/PREALC.
- Kalecki, Michal (1954) "Theory of Economic Dynamics: An Essay on Cyclical and Long-run Changes in a Capitalist Economy," London.

- Kaplinsky, Raphael (2000) "Globalisation and Unequalisation: What can be Learned from Value Chain Analysis?," *Journal of Development Studies* 37 (2, December): 117–146.
- Katz, Harry and Owen Darbishire (2000) *Converging Divergences: Worldwide Changes in Employment Systems*, Cornell: Industrial and Labor Relations Press.
- Katz, Jorge (1986) "La tecnología metalmecánica como factor determinante de la conducta técnica de la empresa y el sendero de expansión de la capacidad tecnológica doméstica," en Jorge Katz, ed., *Desarrollo y crisis de la capacidad tecnológica latinoamericana*, Buenos Aires: CEPAL.
- Katz, Jorge and Hector Vera (1997) "The ongoing history of a Chilean metal products and machinery firm," *Cepal Review* 63, Santiago: ECLAC.
- Katz, Lawrence and Lawrence Summers (1989) "Industry Rents: Evidence and Implications," *Brookings Papers on Economic Activity, Microeconomics* 1989: 209–275.
- Koser, Glen (2001) "State of the Industry 2001," *Global Cosmetics Industry* 168 (6): 20–30.
- Kregel, Jan (1979) "Income Distribution," in Alfred Eichner, ed., *A Guide to Post-Keynesian Economics*, New York: M. E. Sharpe.
- Krugman, Paul (1991) "Increasing returns and economic geography," *Journal of Political Economy* 99: 183–199.
- Krugman, Paul (1980) "Scale economies, product differentiation, and the pattern of trade," *American Economic Review* 70: 950–959.
- Larrañaga, Osvaldo (1999) "Distribución de ingresos y crecimiento económico en Chile," Serie Reformas Económicas 35, Santiago: CEPAL.
- Levinsohn, James (1999) "Employment responses to international liberalization in Chile," *Journal of International Economics* 47: 321–344.
- Locke, Richard, Thomas Kochan and Michael Piore (1995) *Employment Relations in a Changing World Economy*, Cambridge: MIT Press.
- Márquez, Gustavo and Carmen Pagés (1997) "Trade and Employment: Evidence from Latin America and the Caribbean," mimeo, Inter-American Development Bank, July.
- Marshall, Adriana (1997) "State labour market intervention in Argentina, Chile and Uruguay: Common model, different versions," ILO Employment and Training Papers 10.
- Martínez, María Laura (2000) "Detergentes: El año mas limpio del siglo." www.publicmark.cl/nanterior/n128/deter.html.
- Meller, Patricio and Andrea Tokman (1998) "Chile: Apertura Comercial, Empleo y Salarios," Santiago: OIT/ETM.
- Meller, Patricio (1992) "Labor Reforms," in Oscar Muñoz, ed., *Economic Reforms in Chile*, Occasional Paper, Washington, D.C: Inter-American Development Bank.
- Meller, Patricio (1984) "Análisis del problema de la elevada tasa de desocupación chilena," *Coleccion Estudios CIEPLAN*, 14 (septiembre): 9–41.
- Milberg, William (2004) "Globalized Production: Structural Changes for Developing Country Workers," in W. Milberg, ed., *Labor and the Globalization of Production*, Houndmills: Palgrave MacMillan.

- Milberg, William (1999) "Foreign Direct Investment and Development: Balancing Costs and Benefits," Paper prepared for the annual meeting of the Technical Group of the G-25, March.
- Mizala, Alejandra (1992) "Las reformas económicas de los años setenta y la industria manufacturera chilena," *Colección Estudios CIEPLAN* 35 (número especial):153-199.
- Mizala, Alejandra and Pilar Romaguera (1996) "Flexibilidad del mercado del trabajo: El impacto del ajuste y los requisitos del crecimiento económico," *Colección Estudios CIEPLAN* 43: 15-48.
- Morley, Samuel (1999) "The Impact of Reforms on Equity in Latin America," report submitted to the World Bank, July.
- Muñoz, Oscar, ed. (1992) *Economic Reforms in Chile*, Occasional Paper, Washington, D.C: Inter-American Development Bank.
- Newman, Constance (1994) "How are piece rates determined? A Micro-level analysis of piece rates in Chilean Table Grape Packing Sheds," Ph.D. Dissertation, Department of Agricultural Economics, UC-Davis.
- OIT (1998) *Chile: Crecimiento, empleo y el desafío de la justicia social*, Santiago: OIT.
- Pagés, Carmen and Claudio Montenegro (1997) "Job Security and the Age-Composition of Employment: Evidence from Chile," Working Paper 398, Washington: Inter-American Development Bank.
- Pavcnik, Nina (2002) "What Explains Skill Upgrading in Developing Countries," NBER working paper, March.
- Peppelenbos, Lucian (2000) "Hesitant Mechanization of Tomato Harvesting in Chile: An Inquiry into the Management of Agro-Industrialization," paper presented at the X World Congress of Rural Sociology, Rio de Janeiro, July 30-August 5.
- Piore, Michael and Charles Sabel (1984) *The Second Industrial Divide*, New York: Basic Books.
- Prebisch, Raúl (1950) "The Economic Development of Latin America and Its Principal Problems," Santiago: *ECLA Review*.
- Prebisch, Raúl (1981) "The Latin American Periphery in the Global System of Capitalism," Santiago: *ECLA Review*.
- Price Waterhouse (1997) "Outsourcing en Chile," Departamento de Servicios de Desarrollo Empresarial, Abril.
- Ravenga, Ana (1997) "Employment and Wage Effects of Trade Liberalization: The Case of Mexican Manufacturing," *Journal of Labor Economics* 15 (July): S20-S43.
- Reid, John (2001) "An Overview of Machine Vision," *Food Product Design*, March.
- Riveros, Luis (1990) "The Economic Return to Schooling in Chile. An Analysis of its Long-term Fluctuations," *Economics of Education Review* 9: 111-121.
- Robbins, Donald (1996) "Evidence on Trade and Wages in Developing Countries," OECD Research Paper.
- Robbins, Donald (1994) "Relative Wage Structure in Chile, 1957-1992: Changes in the Structure of Demand for Schooling," *Estudios de Economía*, University of Chile: Santiago, vol. 21.

- Romaguera, Pilar (1991) "Wage Differentials and Efficiency Wage Models: Evidence from the Chilean Economy," Working Paper #153, Helen Kellogg Institute for International Studies, Notre Dame University.
- Romaguera, Pilar et al. (1995) "Chile," in Gustavo Márquez, ed., *Reforming the Labor Market in a Liberalized Economy*, Washington: Inter-American Development Bank.
- Ruiz-Tagle, Jaime (1985) *El Sindicalismo Chileno después del Plan Laboral*, Santiago: PET.
- Sachs, Jeffrey and Howard Shatz (1994) "Trade and Jobs in U.S. Manufacturing," *Brookings Paper on Economic Activity* 1: 1–84.
- Saez, Raul (1993) "Las privatizaciones de empresas en Chile," in Oscar Muñoz, *Después de las Privatizaciones: Hacia el estado regulador*, Santiago: CIEPLAN.
- Schurman, Rachel (2001) "Uncertain Gains: Labor in Chile's New Export Sectors," *Latin American Research Review* 36(2): 3–29.
- Schurman, Rachel (1993) "Economic Development and Class Formation in an Extractive Economy: The Fragile Nature of the Chilean Fishing Industry, 1973–1990," Ph.D. dissertation, University of Wisconsin-Madison.
- Silva Torrealba, Francisca (1999) "La Inversión en el Sector Agroindustrial Chileno," Serie Reformas Económicas 46, Santiago: CEPAL.
- Singer, Paulo (1997) "Social Exclusion in Brazil," mimeo, International Institute for Labor Studies, Geneva: ILO.
- Slaughter, Mathew (1997) "International Trade and Labor Demand Elasticities," NBER Working Paper 6262, November.
- Snower, Dennis (1998) "Causes of Changing Earnings Inequality," paper presented at the Symposium on Income Inequality: Issues and Policy Options, Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming, August 27–29.
- Solow, Robert (1990) *The Labor Market as a Social Institution*, Cambridge: Basil Blackwell.
- Stallings, Barbara (1978) *Class Conflict and Economic Development in Chile, 1958–1973*, Stanford: Stanford University Press.
- U.S. Department of Commerce (2000) *Industry Sector Analysis Chile: Cosmetics*, Santiago: American Embassy.
- U.S. Department of Commerce (1995) *Industry Sector Analysis Chile: Cosmetics*, Santiago: American Embassy.
- Wilder, Patricia (1982) "Cosmetics Industry Achieves Long-Term Productivity Gains," *Monthly Labor Review*, December.
- Wood, Adrian (1995) "How Trade Hurt Unskilled Workers," *Journal of Economic Perspectives*, Summer 9 (3): 57–80.
- World Bank (1995) *World Development Report: Workers in an Integrating World*, New York: Oxford University Press.
- Yañez, José (1992) "Tax Reforms," in Oscar Muñoz, ed., *Economic Reforms in Chile*, Occasional Paper, Washington, D.C.: Inter-American Development Bank.
- Yin, Robert (1994) *Case Study Research: Design and Methods*, New York: Sage Publishers.