

CHAPTER II
UNEMPLOYMENT AND WAGES DURING
ECONOMIC CYCLES IN THE AMERICAS

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II.1 Introduction

Economic cycles are a normal feature of large societies. However, that they are an expected social phenomenon does not detract from the extent of damage these cycles can wreak on the welfare of families, or the possibility that public actions may need to be taken to reduce the social ramifications these cycles may leave in their wake. The objective of this chapter is to provide empirical evidence on the behavior of labor market variables across the business cycle in the Americas. Social insurance costs and benefits are closely linked to the cycles in the labor market, so in these times of crisis it is necessary to summarize the evidence on this field.

In our analysis, we included all the countries of the continent for which we could get reliable data, but this data does not always cover the same years. To our knowledge, this is the first study that analyzes the topic in a comprehensive fashion.

Figure II.1 presents the four main events identified as recessions of some degree of generality in the Americas since the eighties. The first one is centered around 1981-1982, a period linked to a banking crisis, high levels of indebtedness of national governments, and the beginning of the end of an era of increased trade

protectionism and direct control of the economy by the States. The second recessionary period took place around 1987-1989, and is often linked to the stock market crash of 1987. While this second episode looks milder in the graph, it is often seen as a continuation of the recession from earlier in the decade, which has meant that the whole decade is often labeled as "the lost decade" in Latin America. The third recession happened between 1999 and 2001, and here the symbolic event is the end of the "dot com" bubble in stock markets. This third recession for the Americas during the last decades was actually the mid-point of two long periods of high growth, which took place roughly between 1992-2000 and 2003-2007.

Finally, the fourth episode is the current global recession, one that will be linked in history to the events of September 2008, when a banking panic took hold of the world monetary system. This most recent episode began in some countries around late 2007, was evident in most developed countries by the summer of 2008, and was confirmed as a global event by late 2008 and through 2009.

During these economic cycles, labor markets are affected because human capital is the largest component of national wealth. Thus, when an entire national economy fluctuates, labor incomes respond. During the past months, most of the countries of the

world have been immersed in the global recession. How has this affected the labor markets and what can we expect in the near future?

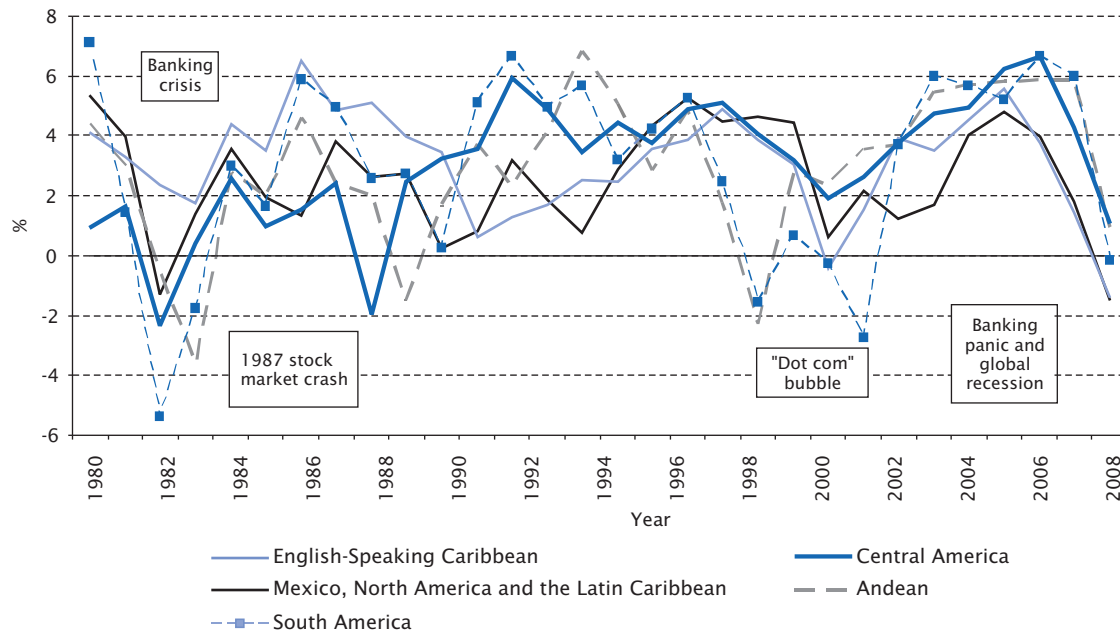
A main conclusion is that employment carries the largest share of the burden in a recession: it is strongly affected and sometimes production levels recover at a livelier step than employment. Wages tend to be affected by the lower demand for work during a recession, but it is not true that they fall in general, and for workers who keep their jobs, the welfare loss during a recession may be relatively small. In the following analysis, we have grouped the countries in a somewhat practical way: in some instances the grouping is regional and in others it approaches the trading blocks.

II.2 Unemployment, Formal Employment and Wages across the Business Cycle

II.2.1 Unemployment and Formal Employment

The general empirical relationship between GDP and the unemployment rate is seen in Figures II.2 to II.4. The first two sets of graphs show the correlation coefficient between the GDP and the unemployment rate with different leads and lags for the unemployment rate for women and men. This means that unemployment does not move exactly at the same time and direction as national income. Unemployment may not have declined as it reduced the rhythm of economic activity or even by the time a recession had been declared, and it may continue increasing long after a recession has finished. Notwithstanding, for most countries, especially the large ones, unemployment falls simultaneously with GDP growth.

Figure II.1
GDP Annual Change in the Main Regions of the Americas



Source: Own elaboration.

Figure II.4 shows the behavior along the business cycle of the unemployment rates for females and males for many countries in our continent. Shaded areas mean that, during those periods and according to the methodology we used, declines in economic activity were observed. The not-shaded areas indicate periods of expansion of GDP (see the working paper CISS 2009a that accompanies this chapter for a detailed analysis).

It should be emphasized that our goal is to apply the same technique to all countries and that national statistics or other public agencies may have definitions of what comprises recession that do not fully coincide with the procedure used here. Thus, in the following graphs, some countries have "few" shaded areas: two or three periods over a two or three decade period, while others may have six or seven over the same time span. It is not possible to argue that a country is better off with more or less shaded areas. More frequent cycles can be determined by a national economy that adjusts quickly to changing conditions, but also by a national government that behaves erratically and induces undue uncertainty upon investment decisions. It is also not true that shaded areas denote a recession in strict sense. A recession is usually defined through the absolute fall in GDP over a given period of time (for example, two quarters). The shaded areas in the graph mark a less restrictive event; they represent the period between the date of the highest rate of growth of GDP during the last upward phase of the economic cycle, and the date of the lowest rate of growth of GDP during the last downswing of the economic cycle, after filtering the series of short-range movements.

The international economic environment creates similarities across countries. For example, both Canada and the United States share the peak in unemployment rates around 1982–1983. Argentina

and Uruguay have highly coincident shaded/not shaded patterns. Chile and Mexico seem to share the 2000 recession, but during the nineties and the late eighties their shaded areas do not coincide. In the Caribbean we see that Trinidad and Tobago and Jamaica experienced consistently falling unemployment rates even while the economy had its slumps, while Saint Lucia had been through wider cycles and had a more stable unemployment rate. An explanation of these differences requires a study of the conditions of each country, which we believe cannot be achieved with the statistical tools used to draft this chapter.

The grouping of the countries in Figure II.4 is explained by the approximate coincidence of the cycles of recession/expansion observed since the eighties. It seems that North America, Central America, Mexico and the Caribbean (Latin and English speaking) share two large events: one around 1990, and the second around 2000. Several countries were affected by the crisis of 1994–1995 in Mexico or of 2000 in Argentina, but these crises were not shared in general. Also in Figure II.4, we see that the MERCOSUR countries have similar patterns. It seems also that the 2000 and the 2008–2009 recessions are quite general, but the 1981–1983 recession was also fairly generalized (although for several countries good data are not available for the eighties or before).

Figure II.5 shows the correlation of the number of workers using social security to GDP for selected countries to understand not only unemployment, but also formal employment. This variability is very similar to the unemployment rate.

According to the information provided, we can classify countries into three groups regarding the correlation between unemployment and national income: pro-cyclical (when the unemployment rate grows as the economy expands); counter-cyclical (when there is an inverse relationship); and neutral-cycle (when the correlation is very low). According to this classification, Cuba is the only pro-cyclical case. The counter-cyclical category includes most countries and all of the largest: Canada, Chile, Colombia, Mexico, United States, all countries in the MERCOSUR area, Bahamas, Barbados, and Trinidad and Tobago of the English Speaking Caribbean, Costa Rica, Panama, Bolivia, Ecuador, and Peru. Finally, in the neutral-cycle class are Jamaica, Saint Lucia, Dominican Republic and El Salvador.

Employment in the largest countries suffers significantly through the time of the recession. Since several Caribbean and Central-American countries tend to move against the cycle, recessions also affect employment. In Cuba, a country with a non-market economic system—the unemployment moves in the same direction as the cycle. Interestingly though, the magnitude of the correlation varies significantly across countries. For example, unemployment rates in the United States and Canada correlate very closely with same-period national income growth. While for some countries highly linked to the North American economy (Bahamas, El Salvador, and Mexico) the highest correlation coefficient is observed between male unemployment one year after and the contemporary GDP, i.e., unemployment grows after GDP declines. This phenomenon also happens in Bolivia and Ecuador for female workers.

Figure II.2
Movement of the Female Unemployment Rates a
Given Number of Years before and after the Change in Real GDP

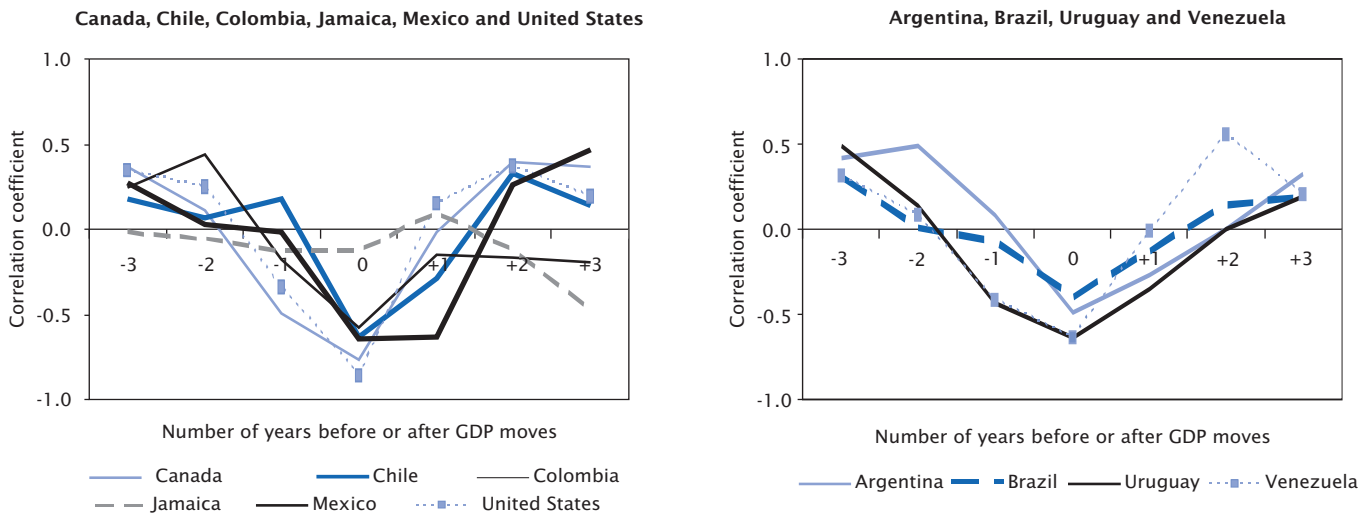
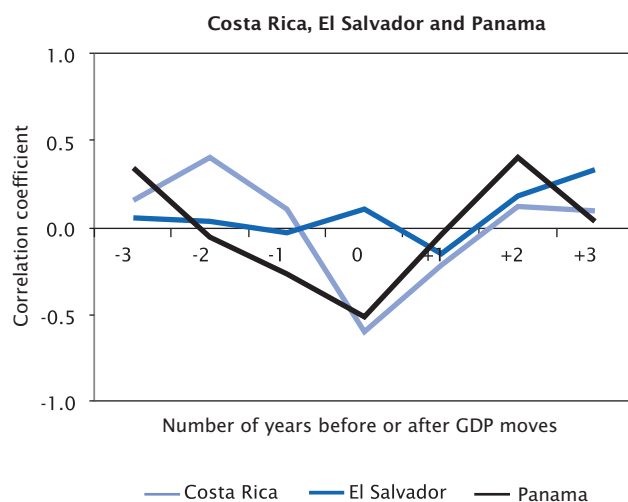
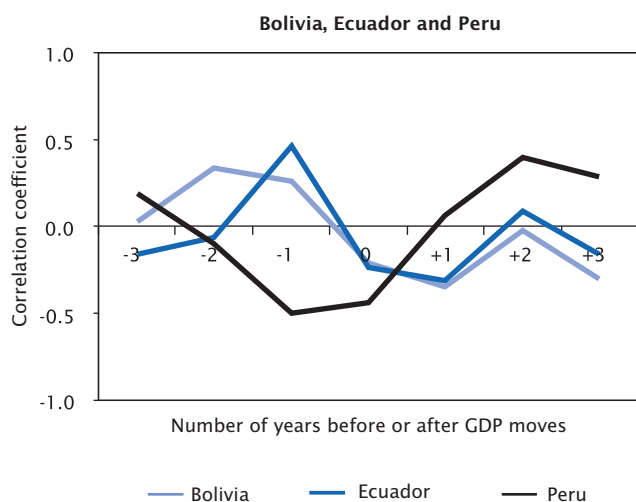
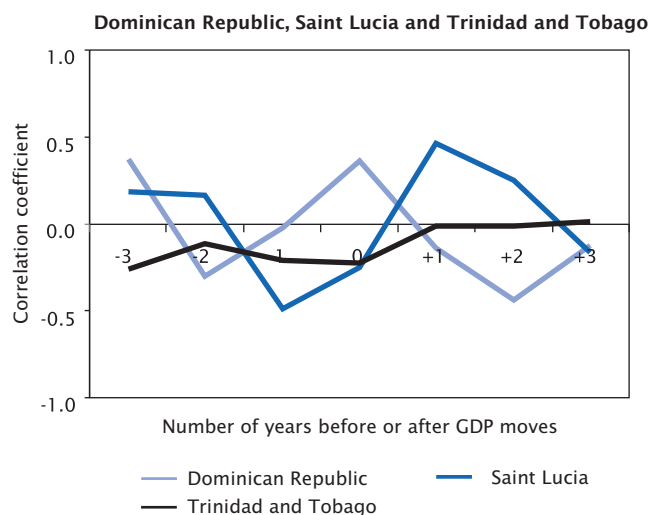
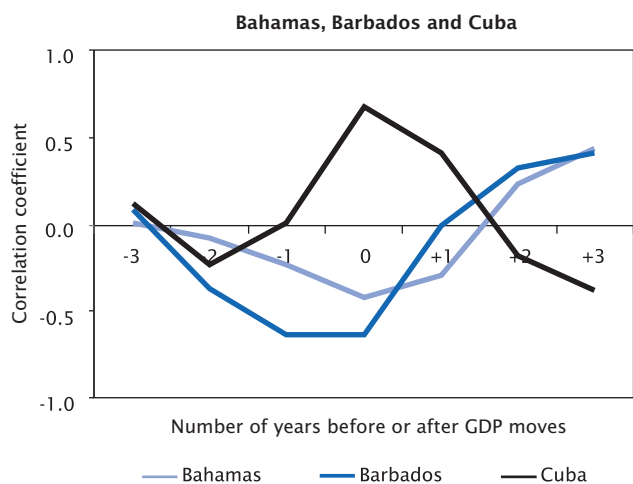
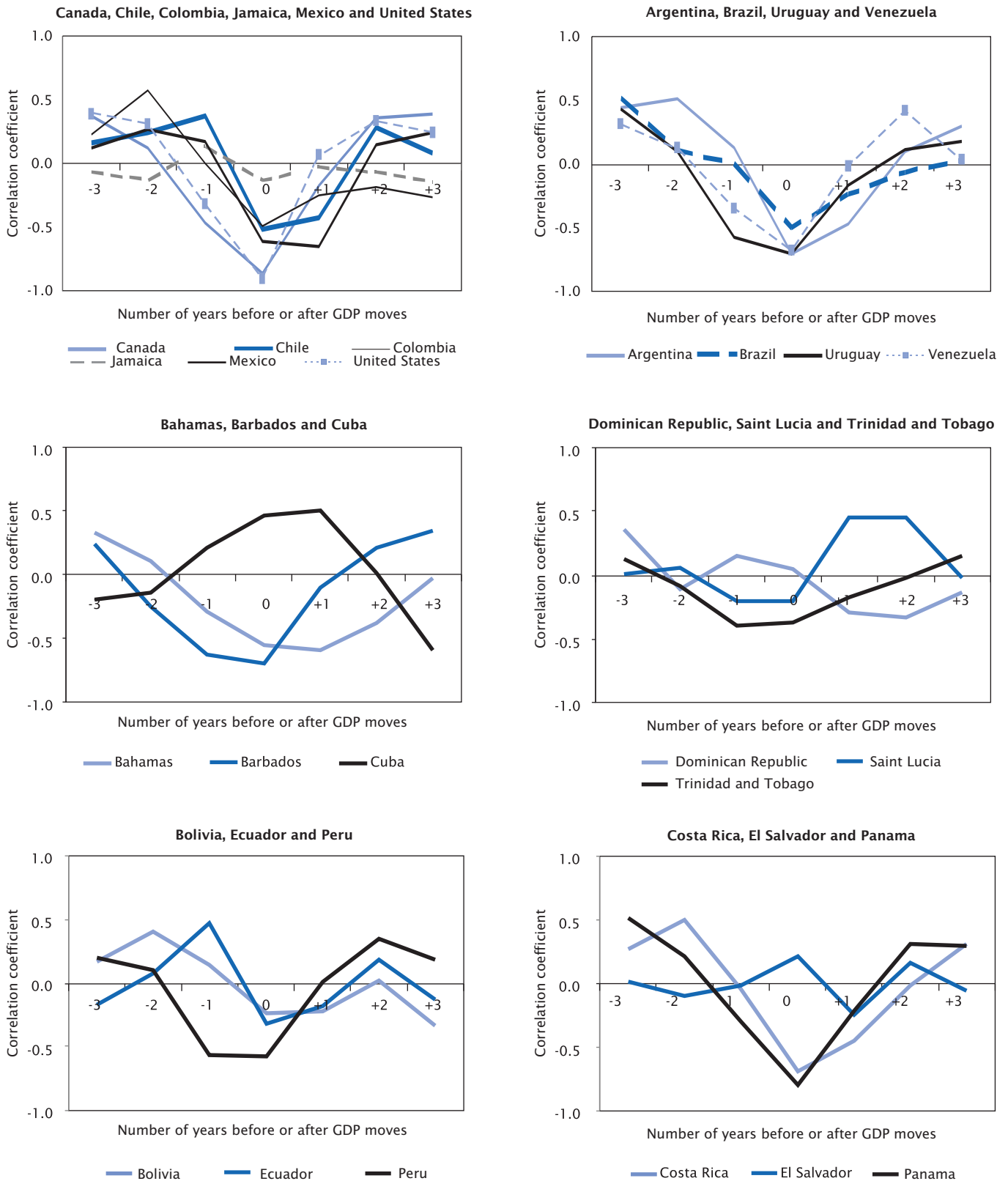


Figure II.2 (continued)



Source: CISS 2009a.

Figure II.3
Movement of the Male Unemployment Rates a Given
Number of Years before and after the Change in Real GDP



Source: CISS 2009a.

One phenomenon that has been observed in some countries is that expansions have been accompanied by minor changes in the unemployment rate. See, for example, the cases of El Salvador, Peru, Mexico, and the United States. This phenomenon coined "jobless recovery" has been analyzed in depth for the United States for recent recessions. This country showed a jobless recovery after the recessions in 1991-1993 and 2001-2003. This means that for some quarters after the economy hit bottom, while GDP had positive rates of growth, employment showed little change. Researchers are trying to understand the reasons responsible for this phenomenon (see for example Gordon, 1993, who emphasizes productivity growth). Groshen and Potter (2003) present evidence that the lack of growth in employment could be explained because many industries experienced "structural changes."

Structural change means something very specific in the life of workers. In "traditional" recessions—as were most of those that happened after World War II—firms would lay off workers during recessions and rehire the same people during the recovery, but not so in the jobless episodes. During recent recoveries,

firms have not rehired and workers have been stuck in long unemployment spells. The same authors present three hypotheses that could explain the structural change:

- i) the decline observed in many industries might be a reaction to a period of overexpansion;
- ii) improved monetary and fiscal policy may have reduced cyclical swings in employment, leaving structural shift as the prevailing form of change; and,
- iii) innovations in firm management may have promoted a structural shift toward leaner staffing (i.e. information technologies may seriously affect organization of work).

Whether the jobless recovery hypothesis applies to countries besides the United States is a question open to research. But, before finishing, we must recognize Gordon's (1993) statement: productivity should not be seen as a factor that contributes to increase long-term unemployment. On the contrary, higher productivity is associated with more production, employment, and a better standard of living, and the short-term effects of adjustment must be dealt with unemployment insurance and other tools available to contemporary states.

Figure II.4
Unemployment Rate and GDP Cycles

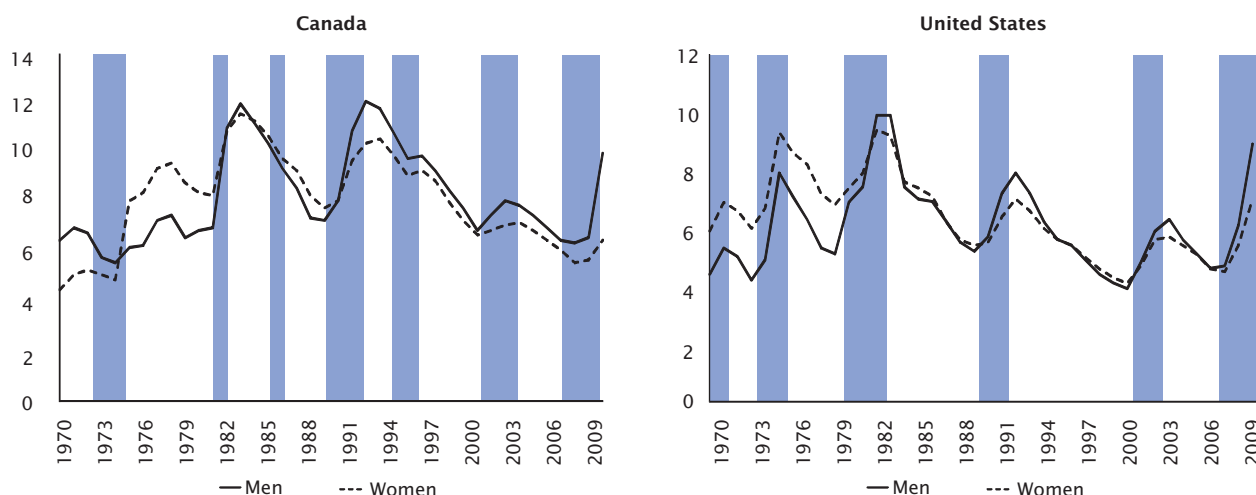


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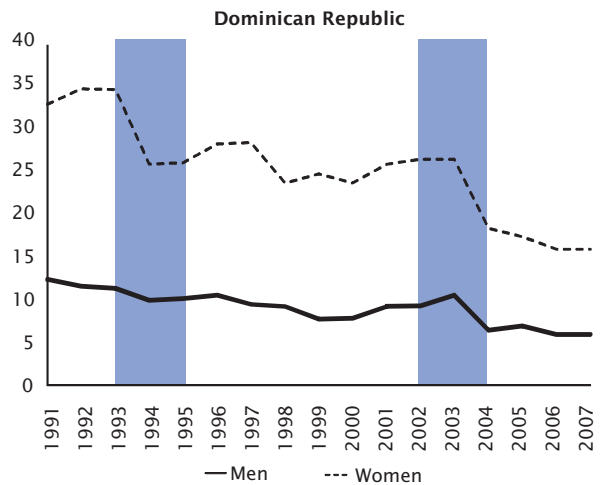
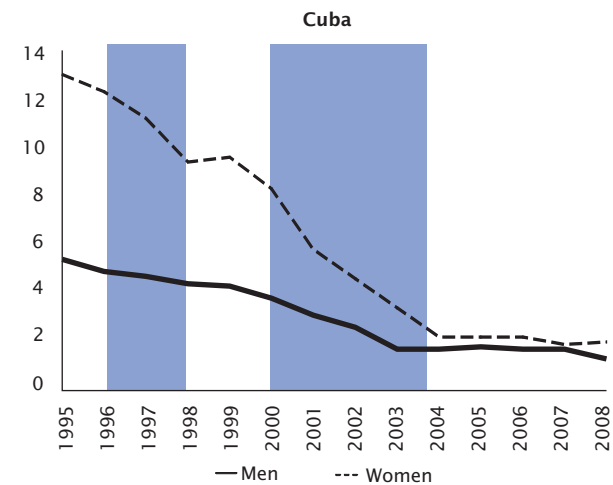
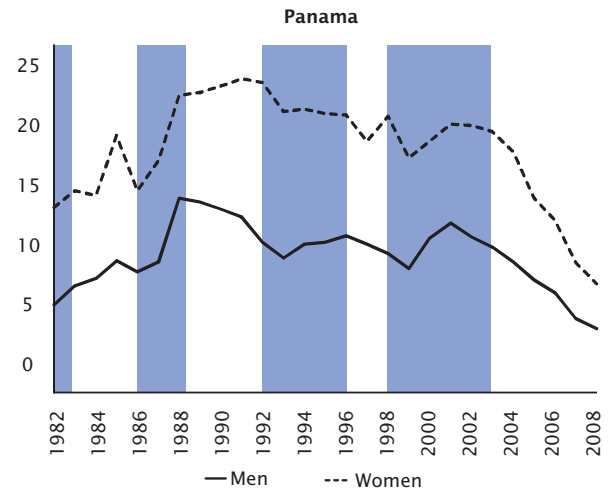
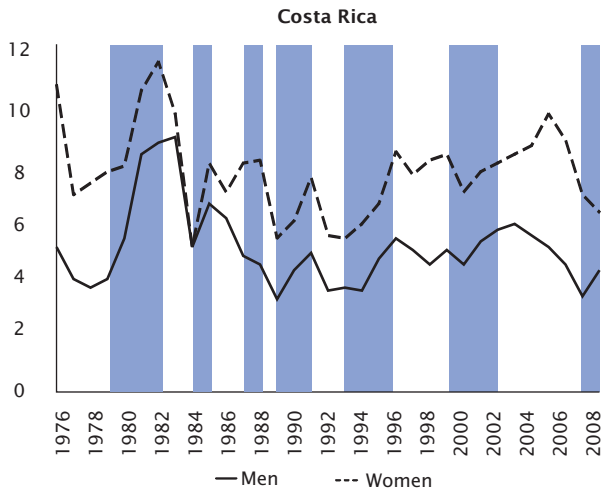
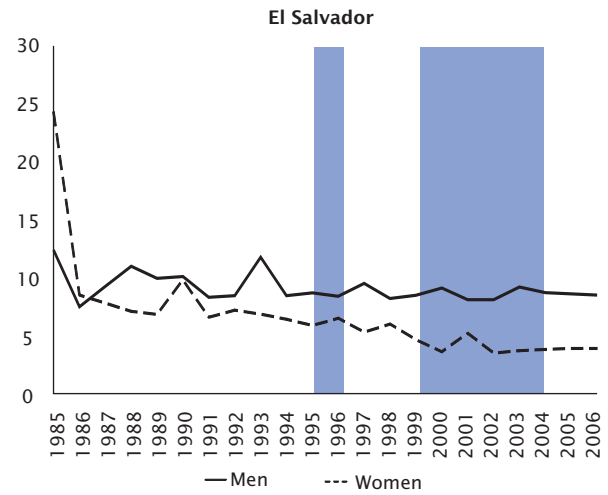
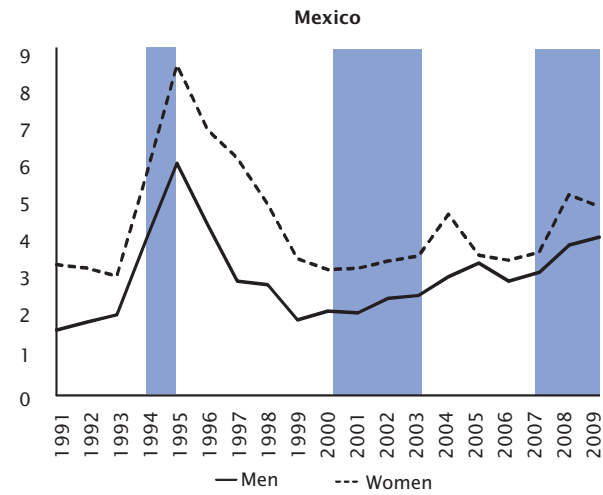


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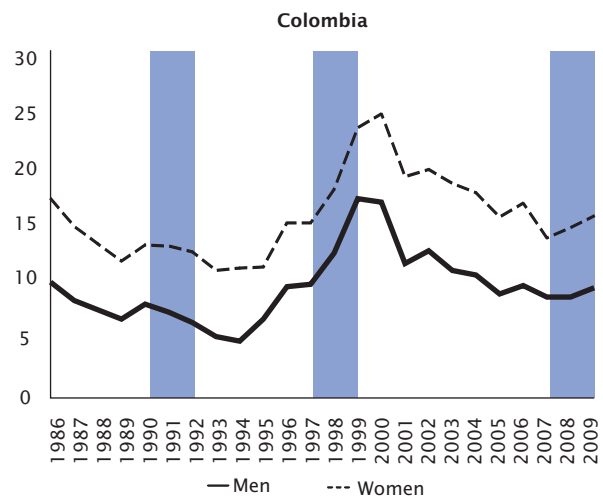
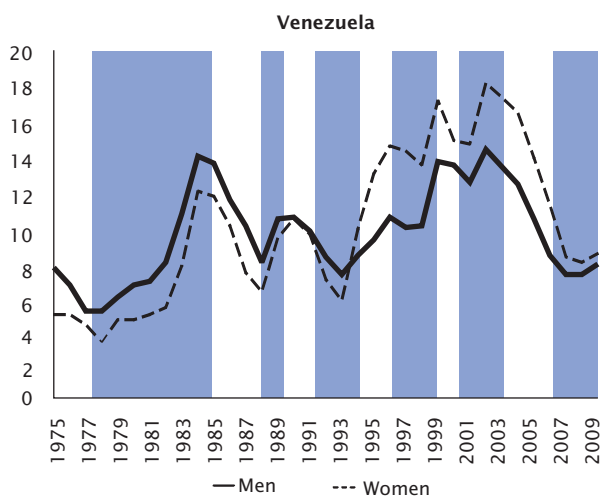
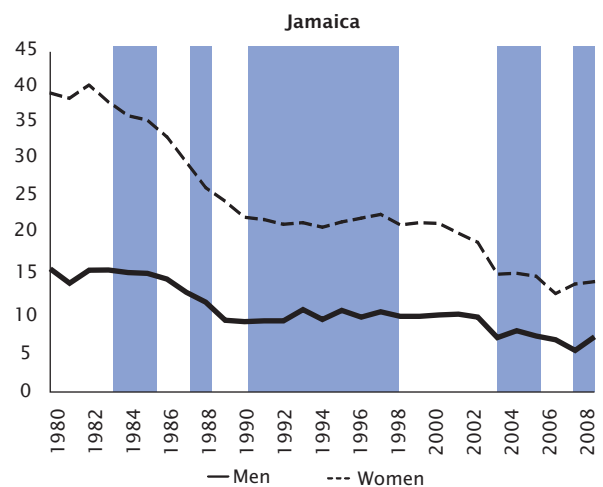
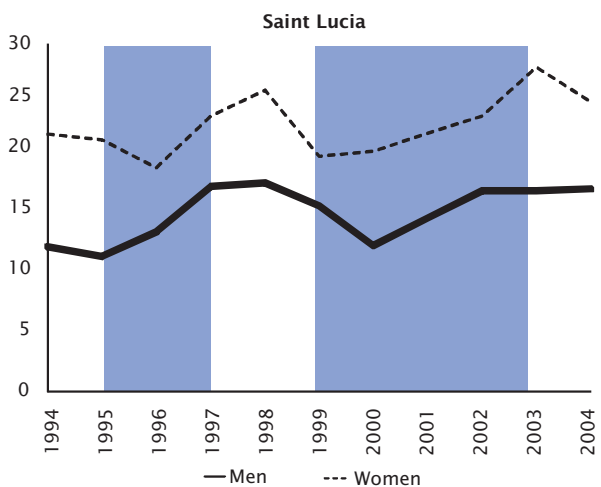
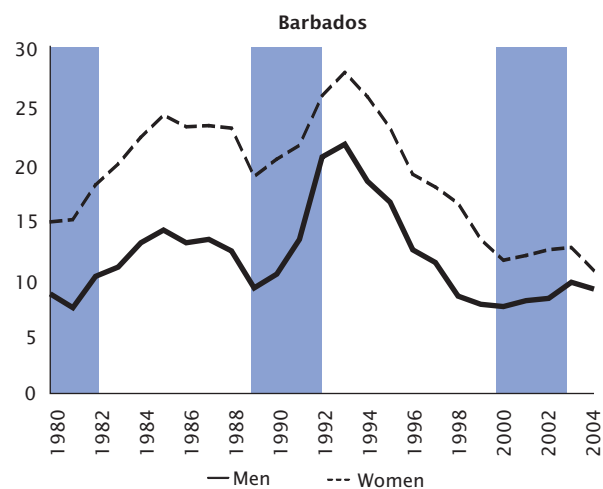
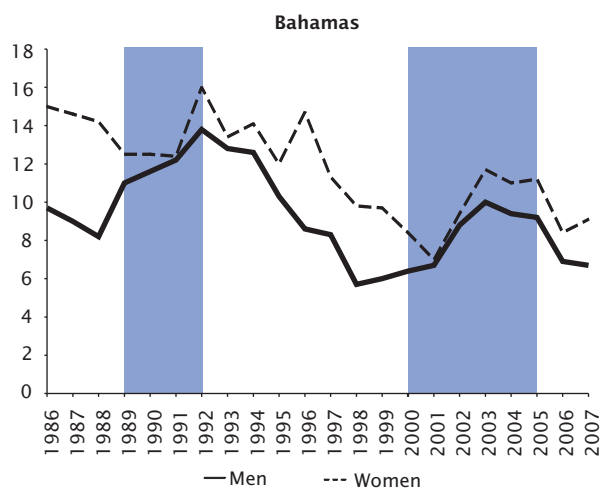


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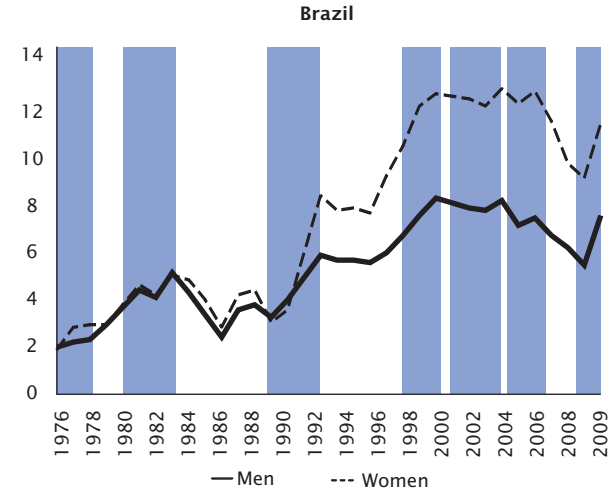
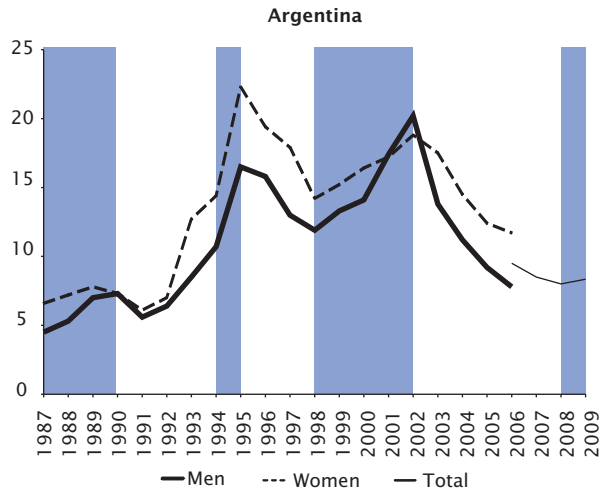
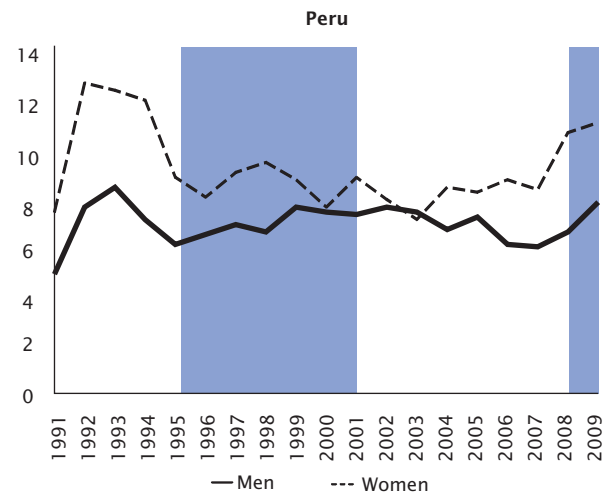
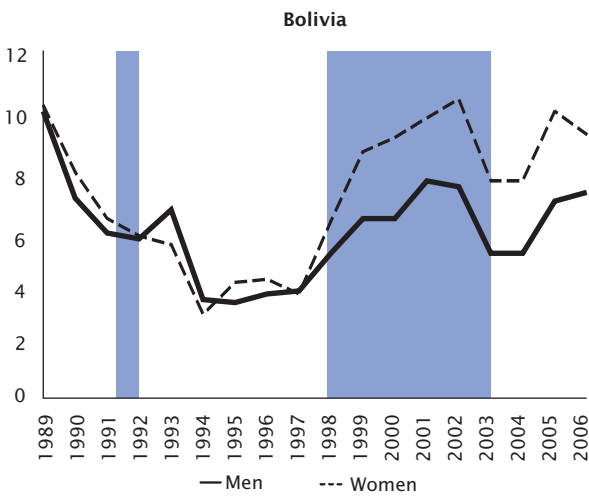
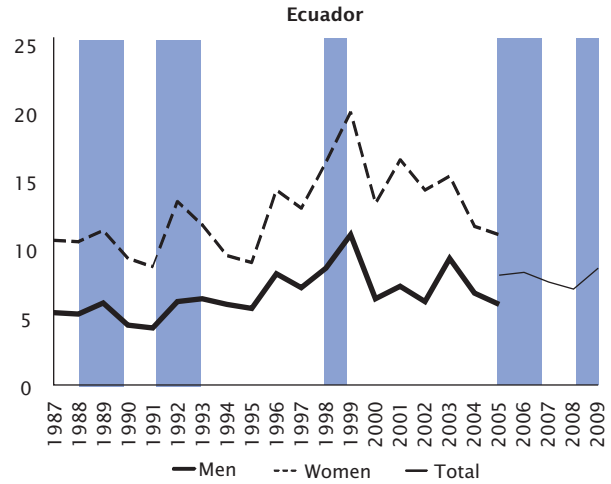
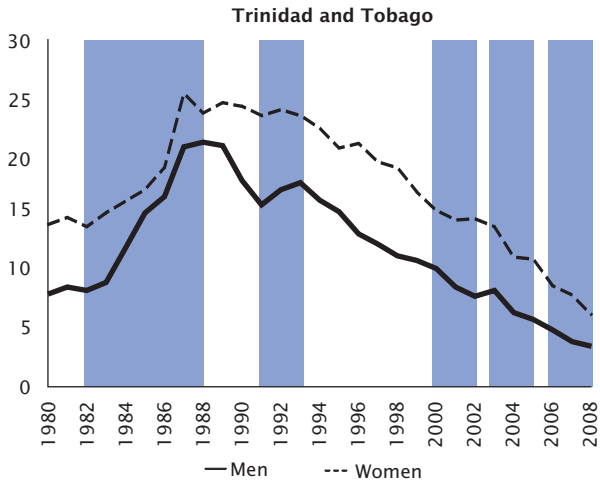


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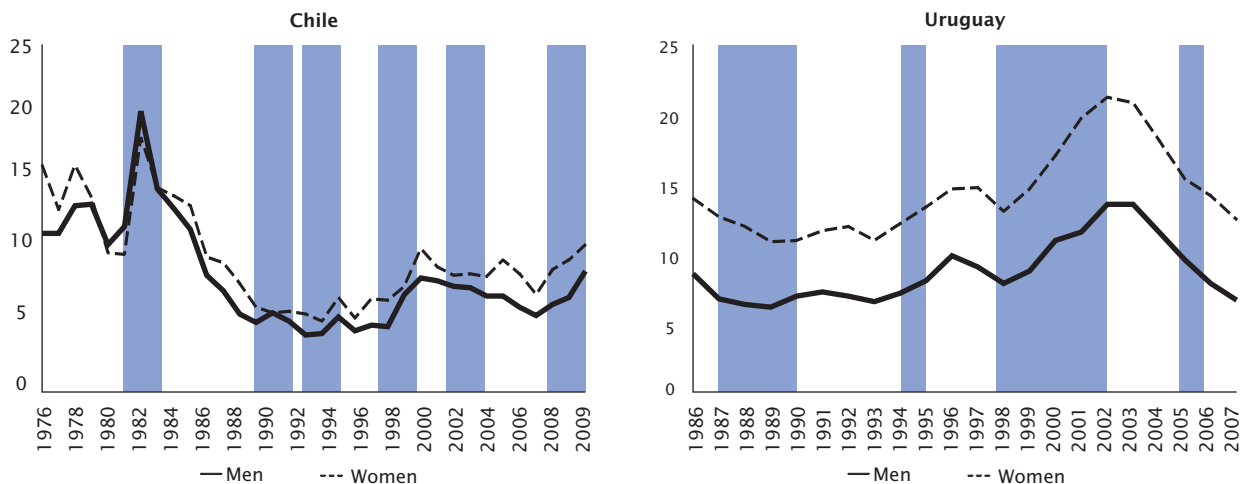
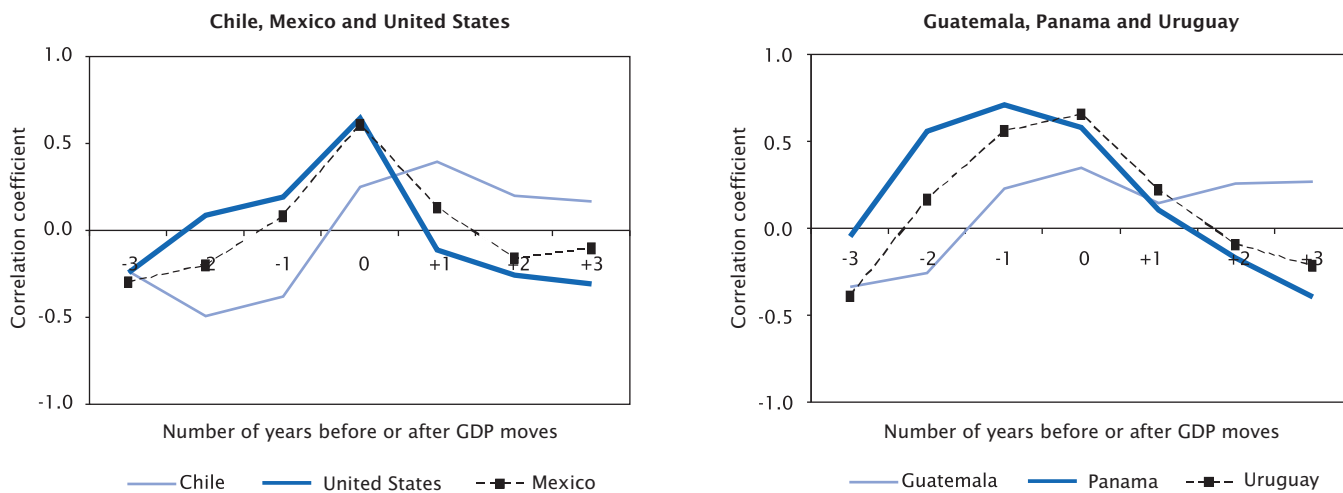


Figure II.5
Movement of the Number of Affiliates a Given Number of Years before and after the Change in Real GDP



Source: CISS 2009a.

II.2.2 Wages

In this section we focus on the relation between real wages and the economic cycle. There are two main conclusions. First, real wages do not relate to the business cycle in a way as simple and predictable as the unemployment rate. Second, when countries are grouped according to the relation between wage movements and GDP movements we find that participation in a trading block is associated with common wage behavior (Figure II.7).

Figure II.6, shows the real wage index in the same format that has been used in unemployment: not shaded areas are periods of economic expansion while shaded areas represent slowdowns. From here, it is not possible to find simple patterns within regions. Nevertheless, it can be mentioned that several of the large economic falls for the countries in our analyses are associated to large devaluations of the national money and inflation. That happened more often in Latin America during the eighties and less frequently but still to an important degree during the nineties. Thus, it is possible that the relation between wages and the economic cycle be even lower for the whole region during periods of monetary stability. A more in-depth investigation of this issue is unfortunately beyond the scope of this Report.

Figure II.7, in which we have grouped the countries according to the combination of wages and GDP growth, shows the behavior of wages and their correlation with GDP performance for the countries on which consistent data exist. Talking about contemporaneous correlation, as we did in the case of unemployment rate, we can classify countries in two groups (here, no country shows important increases in wages during periods of GDP slowdown). Again, most large countries show increases in wages during upswings in GDP (Chile, Mexico, United States, all the countries in MERCOSUR,

Costa Rica, Paraguay, and Peru). The other group is comprised of those that show low relation between the wage and the GDP cycles (Canada, Guatemala, Nicaragua, Panama, Colombia, and Bolivia). We must note, however, that even for countries grouped as pro-cyclical the correlation between GDP cycles and wage is lower than that of GDP cycles and unemployment.

Figure II.7 also shows the behavior of lagging and leading wages and how they affected GDP. The results are the following:

- i) wages peak one period before GDP peaks in Chile, Guatemala, Mexico and Uruguay;
- ii) wages peak simultaneously to GDP in Peru, Costa Rica, the United States, and in all MERCOSUR except Uruguay; and,
- iii) there is no marked relation between peak wage growth and peak GDP growth in Bolivia, Colombia, Nicaragua, Panama, and Canada.

Unfortunately, a full explanation of this result requires analysis beyond this study.

Figure II.6
Real Wage Index and GDP Cycles

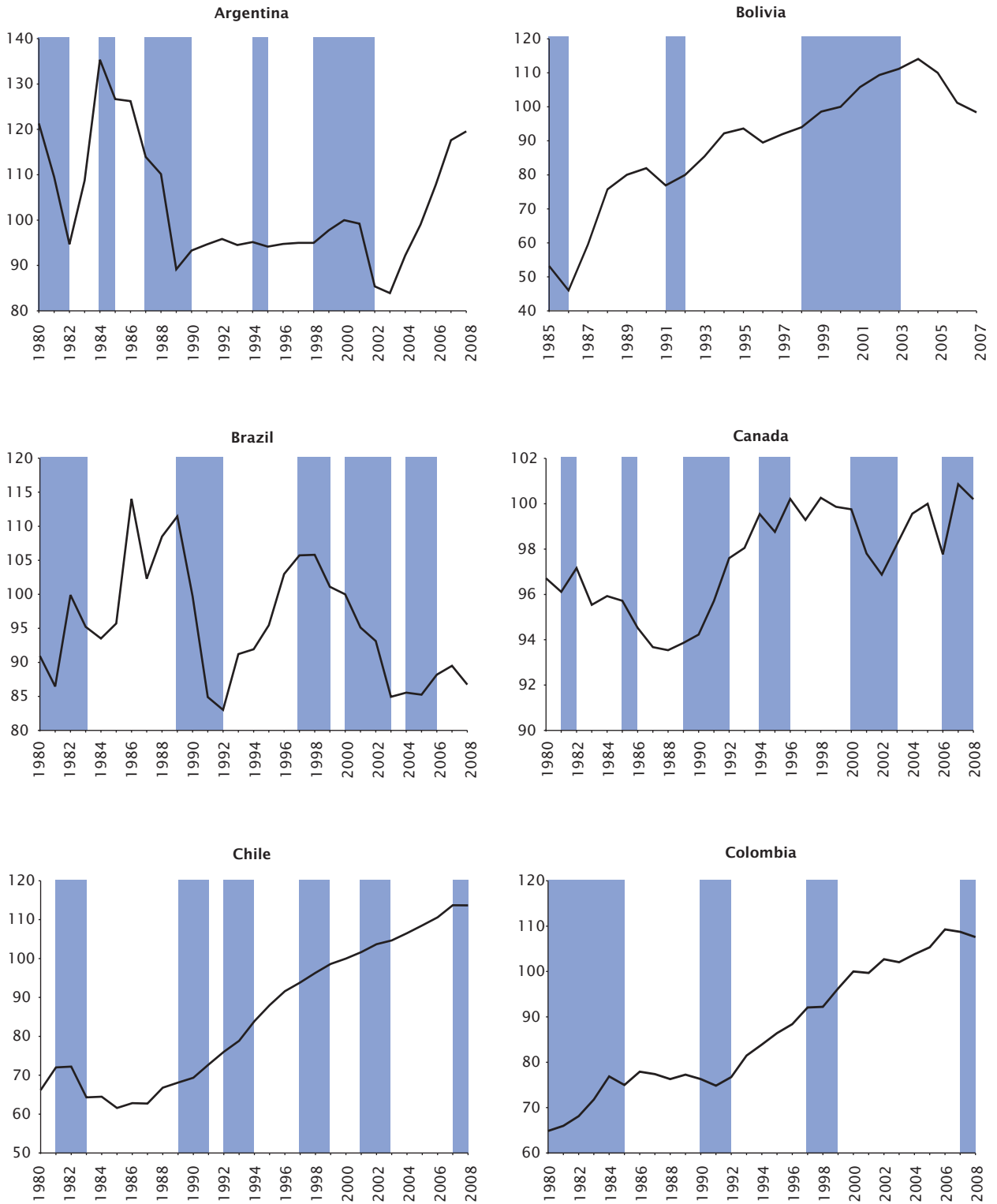


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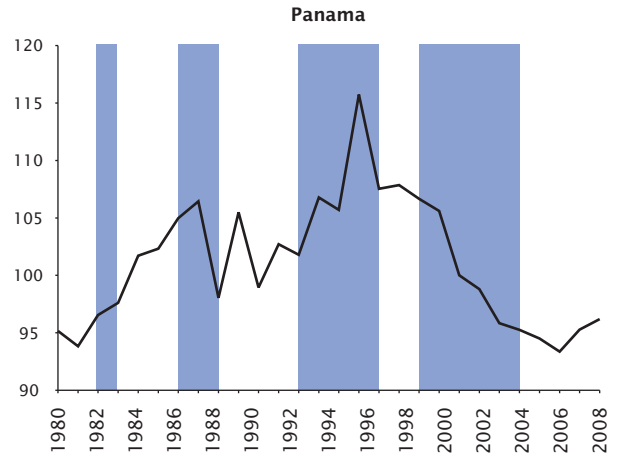
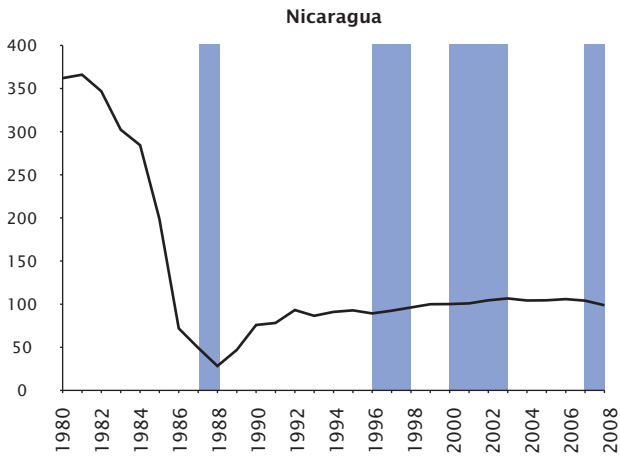
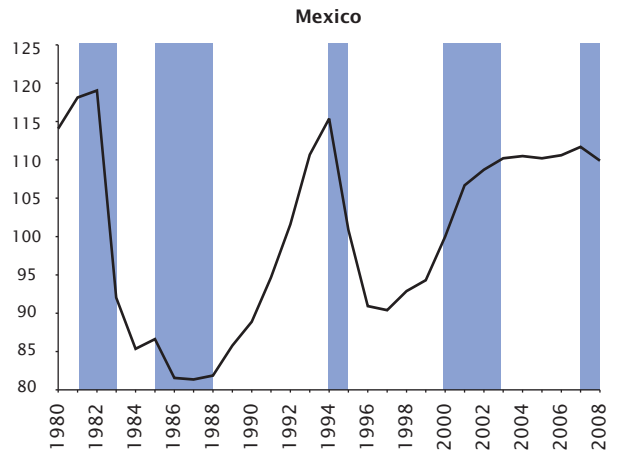
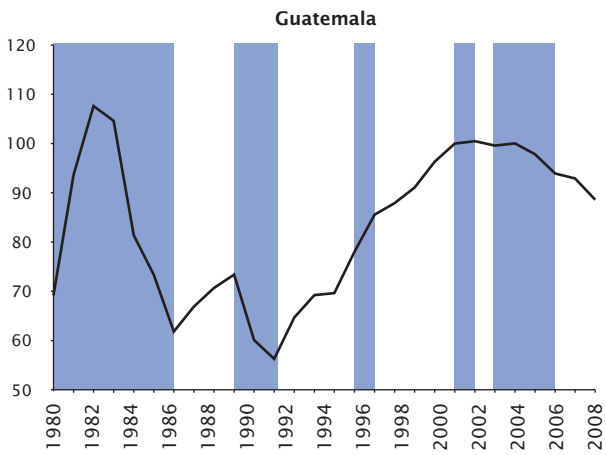
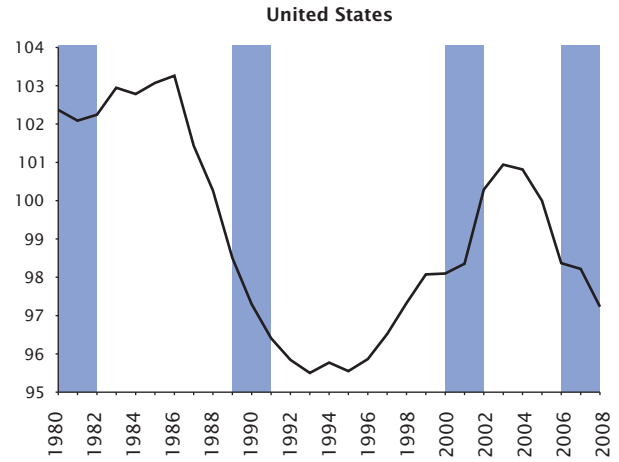
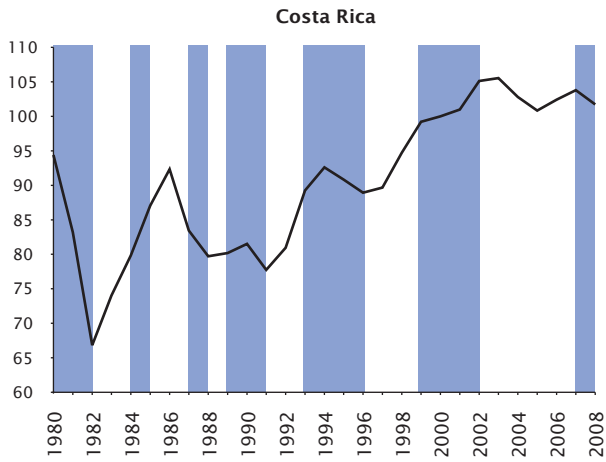


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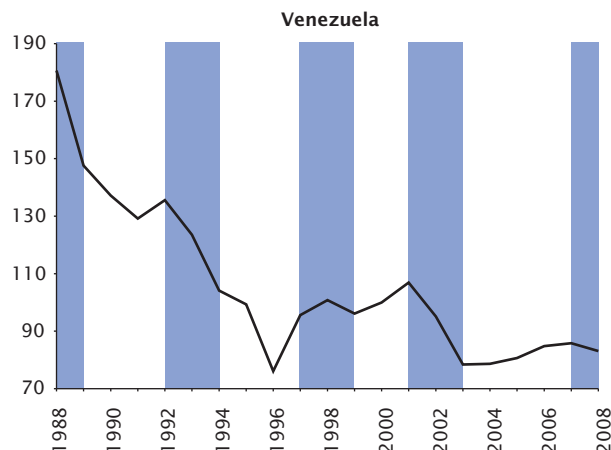
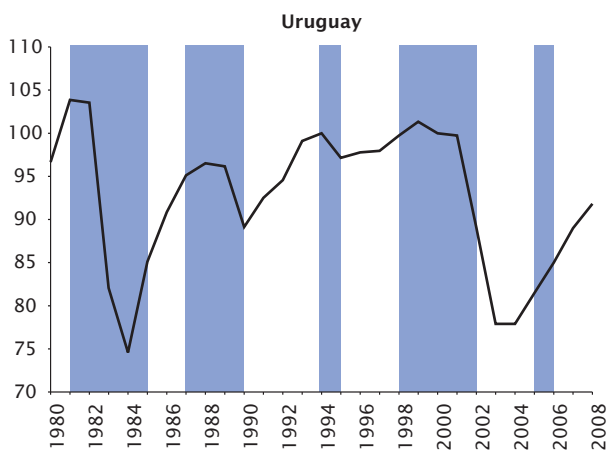
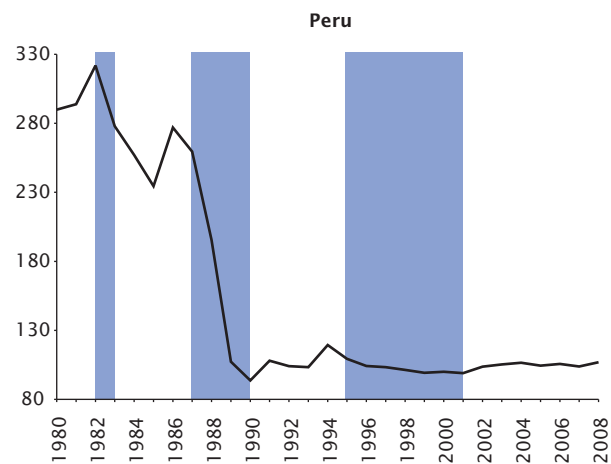
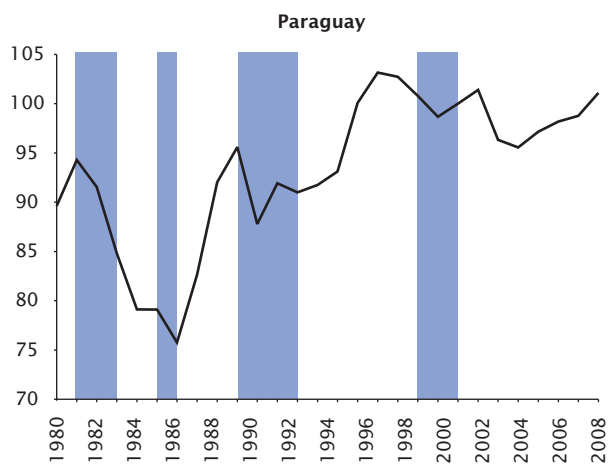
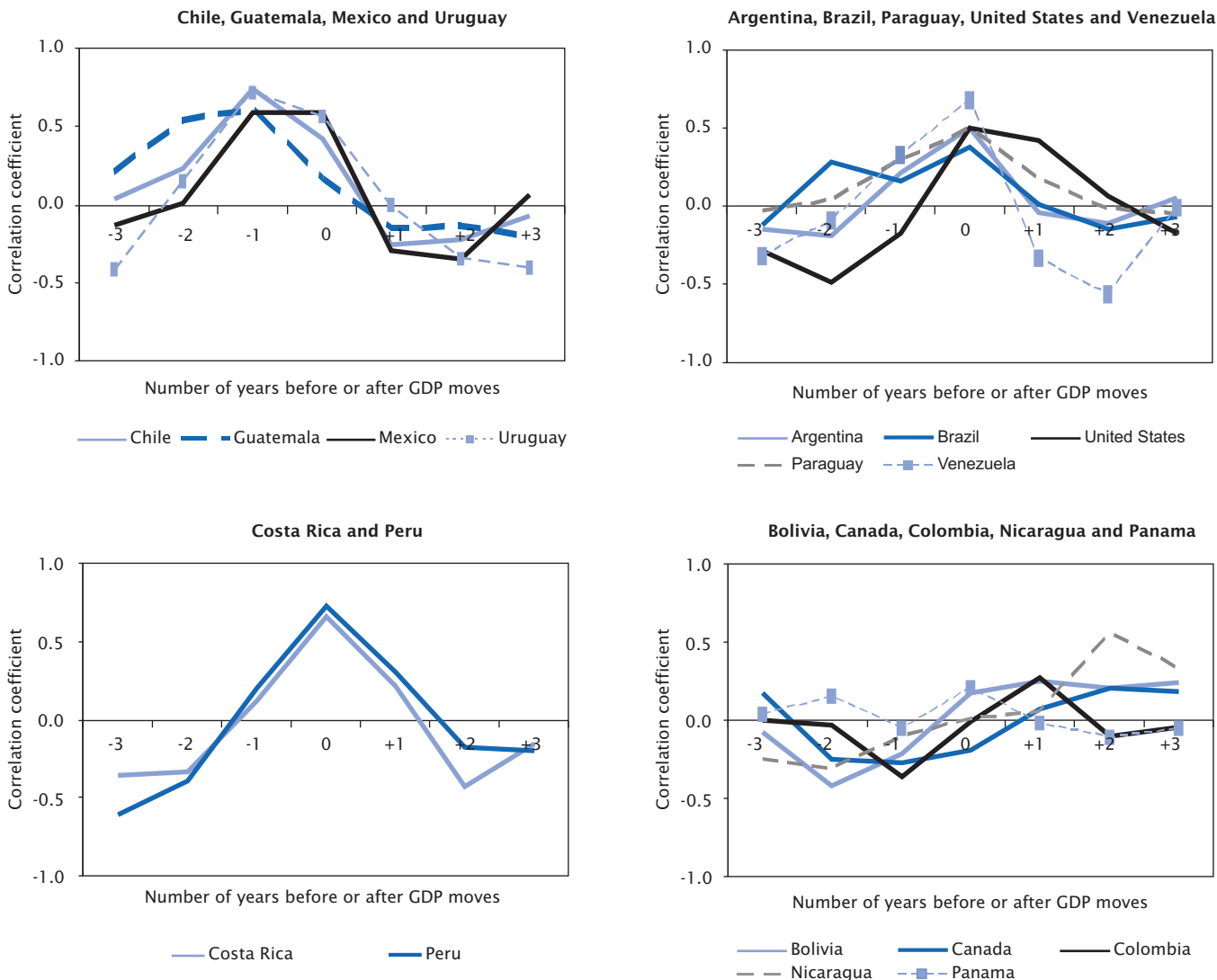


Figure II.7
Movement of Wage Index a Given Number of Years
before and after the Change in Real GDP



Source: CISS 2009a.

If we combine information on wages and unemployment, we can observe that across the business cycle the labor market adjusts mostly through the quantity of hours worked: unemployment increases when the economy goes sour, but while wages fall in some countries with recessions, they do not fall by much and in several cases they move in a basically neutral way with respect to the cycle.

There may be data measurement arguments leading to statistical biases; while we do not explore them here, we have no reason to believe they should affect the conclusion stated in last paragraph. Our main concern is to explore the cause of this result and its implications on social insurance. A more or less obvious question is whether more flexible wages would help a national economy eliminate the unemployment produced during a recession faster. We may notice also that low employment levels during the business cycle do not affect all families in the same proportion: some are unemployed for a long time and thus lose periods of contribution to pension plans or lose parts or all of their entitlement to health insurance. By contrast, given that wages have a low relation to the economic cycle, those that keep their employment during a downturn lose less relatively, and may even not lose at all in terms of household income and social security benefits.

Why wages do not move as much as unemployment is also relevant to gauging adequate public response to recessions. A conclusion can be that special care must be taken with respect to those groups that lose employment or have trouble finding a job during a downturn. Among the first are usually workers in manufacturing, workers in services industries with specialized skills, and workers in industries affected in a special way, such as those

in mining after the fall in price of a particular commodity or those in tourism after the influenza scare. In the second group, we often find women re-entering the labor market and youths that need on-the-job training before being considered by employers for more permanent positions. More over, wage support may not be as needed as support to the unemployed, because wage support helps both those who are suffering and those who may not be.

However, the conclusion in last paragraph is not a prescription. Evidently, the different responses across countries depend upon the response of the labor market to common shocks, the composition of the labor market and the industrial sector in the economy, the links with the rest of the world as exporter of manufactures, services or commodities, country-specific events in each recession, the countercyclical fiscal and monetary policies, and probably the regulatory and structural framework.¹ Additionally, national governments may think about wage and employment support not only in terms of social protection, but also in terms of support to aggregate expenditures. Finally, the issue of labor market regulation and employment is likely to resurface in some countries as part of debates on the economic crisis. Is employment protection legislation a hurdle to the recovery or is it an adequate institutional framework to protect workers precisely during recessive times? This is not an easy question, and Box II.1 ponders on the issues around it.

¹ Messina et al. (2008) finds, for example, for the case of OECD countries with economies more open to foreign trade and countries with larger unions tend to have less pro-cyclical movements of wages.

Box II.1

Labor Markets Regulations and Employment

Regulations on labor contracts are believed to affect the performance of the labor market across the economic cycle. Specifically, for microeconomic employment and unemployment they can affect the costs and likelihood of dismissal or employability of a worker. On the other hand, these regulations may serve to protect jobs during a recession.

Across the continent, the cost to hire or to dismiss a worker can vary significantly. The following table shows the cost of regulation following the approach of Heckman and Pages (2004): the cost of regulation is the sum of the cost of payments to social security plus the cost of the provisions to remain in the job. This last component includes the rules that increase the cost of dismissing a worker, which in turn is classified in three categories: advance notification, indemnities for dismissal, and seniority pay. There are also costs of trial, but we do not consider them here. Costs of remain in the job are calculated as a percentage of wages at the moment of hiring a worker; and the social security costs as a percentage of wage. If the regulation can affect the behavior of the employment across the economic cycle, then we can hypothesize that the variation that we observe between the different countries can have as one of its explanatory variables the different cost to hire and to dismiss workers. Moreover, this effect can be influenced by the prohibition explicit in some countries to dismiss workers during economic downturns.

Measures of Labor Market Regulations Equivalent to Monthly Payments, 2009

	Advance Notice	Indemnities for Dismissal	Seniority pay	Total Cost of Employment Protection Regulation	Social Security Costs as Percent of Salary
Argentina	0.90	2.84	0.00	3.74	0.41
Bolivia	1.77	2.97	0.00	4.74	0.26
Brazil	1.18	3.30	9.43	13.91	0.33
Chile	0.59	2.79	0.00	3.38	0.25
Colombia	0.29	3.10	9.43	12.82	0.49
Costa Rica	0.59	2.49	0.00	3.08	0.24
Dominican Republic	0.59	2.20	0.00	2.79	0.23
Ecuador	0.59	3.30	1.53	5.42	0.20
El Salvador	0.15	2.99	0.00	3.14	0.24
Honduras	1.00	2.49	0.00	3.49	0.11
Jamaica	0.47	1.73	0.00	2.20	0.05
Mexico	0.59	2.50	0.13	3.22	0.22
Nicaragua	0.29	1.81	0.00	2.10	0.19
Panama	0.59	1.81	3.29	5.69	0.21
Paraguay	1.26	1.49	0.00	2.75	0.23
Peru	0.00	4.26	9.43	13.69	0.23
Uruguay	0.00	2.23	0.00	2.23	0.35
Venezuela	0.78	1.89	12.21	14.88	0.14

Source: Own elaboration using information from the Labor Ministries and Labor Codes of each country and AISS (2009).

Box II.1 (continued)

An answer to the question about how these regulations affect welfare during a recession is not straightforward. Not only must costs be balanced against the gains in job stability, but regulations may benefit some workers while affecting others (for example, the employed against the unemployed, or the unionized against the non-unionized).

It is also key to consider that while this calculation standardizes the value of rules, each rule can affect the behavior of workers and employers in different ways. In particular, much of this cost is compensated by social security benefits or by cash transfers to workers. Similarly, the indemnities for dismissal are sometimes paid in advance and in cash, as is the case in Colombia, while in other cases they are paid until the separation from employment is forthcoming and are often contested.

II.3 Conclusions

Currently, the world is suffering the worst recession in decades. While information from Chapter I indicates that this recession will probably not be as deep as the Great Depression, we observe that for the majority of the countries of the Continent, labor market variables are affected by the business cycle. Employment is substantially reduced during recessions. Wages fall, but not as consistently as unemployment rises. Recovery is likely to be slow, and if recent recessions are an indication of long term trends, several large countries will be facing a jobless recovery.

While these results are simple, the value of the analysis performed lies in measuring how the responses varies between countries to get an idea of what can we expect during late 2009 and early 2010, when the world economy probably will start recovering. We will see that employment in most countries will recover slowly, and with it the coverage of social insurance programs. Wages do not seem to be losing much ground, but this news is only good for those who keep their jobs. The unemployed and new entrants to the labor market may find themselves trapped in a long period of stress. In some countries, the incidence

of long-term unemployment is likely to increase. The next chapter deals with the tools available to social insurance to deal with the unemployment issue.