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# 4 Unionization in Canada and the United States: A Tale of Two Countries

W. Craig Riddell

It was the best of times, it was the worst of times.  
Charles Dickens, *A Tale of Two Cities*

“Similar but different” provides a succinct yet reasonably accurate summary of many dimensions of life in Canada and the United States. This description certainly applies to the role played by unions and collective bargaining in the two societies. Countries vary greatly in their industrial relations systems—the legal and institutional arrangements affecting labor-management relations—and in the context of the differences among such countries as Australia, Germany, France, Japan, Sweden, and the United Kingdom, the Canadian and U.S. industrial relations systems are very similar. Yet there are important differences. Perhaps the most significant of these is the substantial differential that has emerged in the past two to three decades in the extent of union organization in the two countries. The purpose of this paper is to examine this differential. I begin by describing the salient features of the extent of unionization in Canada and the United States. I proceed to examine possible explanations for the differences in unionization that have recently emerged, including the role that public policies pursued in the two countries may have played in this phenomenon.

## 4.1 The Broad Picture

Between 1920 and 1960 union growth in Canada exhibited a pattern broadly similar to that in the United States (see table 4.1 and figure 4.1). The

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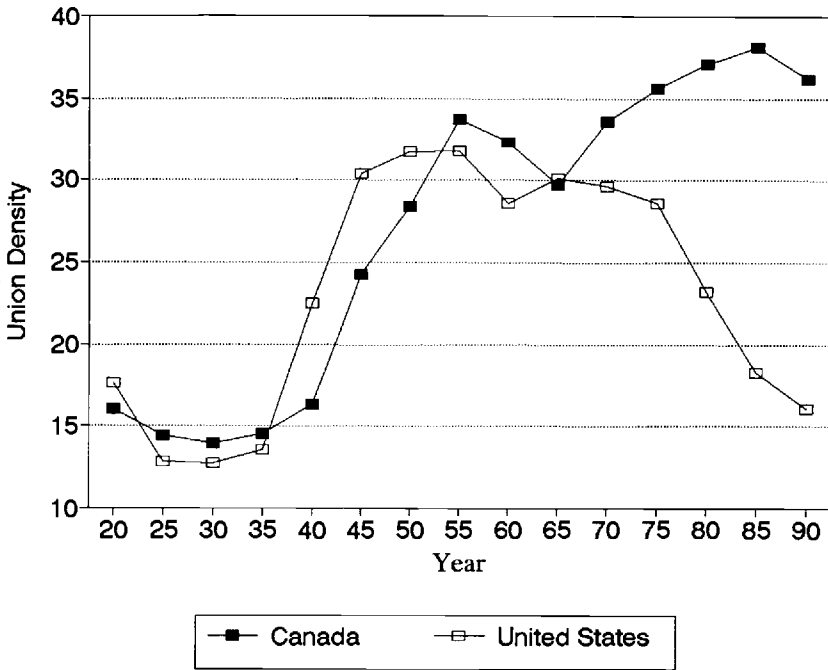
**Table 4.1 Union Membership as a Percentage of Nonagricultural Paid Workers in Canada and the United States, 1920–90**

Year	Canada (1)	U.S. (2)	Canada (3)	U.S. (4)	Canada (5)
1920	16.0	17.6			
1925	14.4	12.8			
1930	13.9	12.7			
1935	14.5	13.5			
1940	16.3	22.5			
1945	24.2	30.4			
1950	28.4	31.7			
1955	33.7	31.8			
1960	32.3	28.6			
1965	29.7	30.1			30.0
1970	33.6	29.6			33.1
1975	35.6	28.9			32.2
1980	37.1	23.2			32.2
1981	36.7	22.6	34.2		32.9
1982	37.0	21.9	—		33.3
1983	37.9	20.7	—	20.4	35.7
1984	37.9	19.4	37.5	19.1	35.1
1985	38.1	—	—	18.3	34.4
1986	37.7	—	35.7	17.8	34.1
1987	37.0	—	—	17.0	33.3
1988	36.5	—	35.5	17.0	33.7
1989	36.2	—	—	16.4	34.1
1990	36.2		33.1	16.1	

Sources: Column 1: Labour Canada, *Directory of Labour Organizations in Canada 1990/91* (Ottawa: Ministry of Supply and Services). The 1950 observation is for 1951. 2. L. Troy and N. Sheflin, *Union Source Book: Membership, Finances, Structure, Directory* (West Orange, N.J.: Industrial Relations Data and Information Services, 1985). 3. Data from the following special supplements to Statistics Canada's Labour Force Survey: Survey of Work History (1981); Survey of Union Membership (1984); Labour Market Activity Survey (1986–90). These observations include union membership in agriculture and are expressed as a percentage of all paid workers. 4. U.S. Bureau of Labor Statistics, *Employment and Earnings*, various years. 5. Statistics Canada, *Corporations and Labor Unions Returns Act*, various years. Due to amendments to the act that became effective in 1983, the pre-1983 observations are not comparable to subsequent observations. See Statistics Canada (1992a, 43) for the impact of these amendments. These data include union membership in agriculture and are expressed as a percentage of all paid workers.

extent of union organization—as measured by the proportion of nonagricultural paid workers who are union members<sup>1</sup>—fell during the 1920s in both countries, bottoming out at 12 to 14 percent at the beginning of the Great Depression. Union density grew modestly during the early 1930s and then dramatically—from about 14 percent to over 30 percent—between 1935 and

1. Other measures of the extent of union organization—such as union membership as a percentage of paid workers or collective agreement coverage as a percentage of nonagricultural paid employment—display similar qualitative trends in both countries.



**Fig. 4.1 Union density in the United States and Canada, 1920–90**

*Sources:* See table 4.1.

the early 1950s. During this period union growth in Canada lagged behind that in the United States, possibly reflecting the later passage in Canada of the key legislation providing workers with the right to form and join unions.<sup>2</sup> Nonetheless, by 1952 the extent of union organization in Canada had caught up with that in the United States. Subsequently, union density declined in a parallel fashion in both countries. This period of slower growth in union membership than in the labor force was sharply reversed in Canada in the early 1960s but continued—indeed accelerated—in the United States. Thus for most of the past three decades, a growing gap has developed in the quantitative significance of unions and collective bargaining in the two societies (fig. 4.1).

Until recently, Dickens's characterization that "it was the best of times, it was the worst of times" seemed as apt a description of the state of unions and collective bargaining in the two countries of North America as of the cities of London and Paris during the French Revolution. The challenge for social

2. The key legislation in Canada, the National War Labour Order, Order-in-Council P.C. 1003, enacted in 1944, was to a considerable degree modeled on the U.S. National Labor Relations Act (Wagner Act) of 1935.

scientists was to explain why organized labor was declining in importance in the United States yet evidently growing in importance in Canada.

As both figure 4.1 and table 4.1 indicate, however, the extent of unionization in Canada has been declining, albeit slowly, since 1985 when union membership reached a peak of 38 percent of nonagricultural paid workers, or about 30 percent of the civilian labor force. Union density also declined during the 1980s in a number of other countries—including Japan, the Netherlands, Italy, and the United Kingdom (Freeman 1990). This suggests that a common set of forces may be affecting collective bargaining in several countries, albeit having an earlier and more dramatic impact in the United States.

Whether or not this is the case, two key questions remain. First, after following a broadly similar pattern over much of this century, why have the fortunes of the Canadian and American labor movements diverged dramatically since the early 1960s? Second, what accounts for the substantial differential in union coverage that currently exists?

To complete the broad picture, cross-sectional evidence is presented in table 4.2. The data come from supplements to the Canadian Labour Force Survey (LFS) and the U.S. Current Population Survey (CPS), surveys that are very similar in terms of their methodology. Each survey provides two measures of the extent of union organization: union membership and collective agreement coverage. For most purposes, the latter is the preferred measure. A feature common to Canadian and American labor legislation is the principle of exclusive jurisdiction, which states that, once certified, the union represents all workers in the bargaining unit, whether or not they are union members. Thus if the purpose of the extent of union organization variable is to measure the proportion of workers whose wages and working conditions are determined by collective bargaining, the preferred statistic is collective agreement coverage.

Table 4.2 shows this preferred measure of unionization disaggregated by age, sex, full-time and part-time employment, occupation, and industry. The remarkable feature revealed by these statistics is that union density in Canada is approximately double that in the United States across a wide range of industries, occupations, and types of workers. These tabulations suggest that a good rule of thumb is that in the United States the probability of any particular type of worker being represented by a union is about half that of the same type of worker in Canada. This observation suggests that the current differential in union coverage is a pervasive phenomenon that is not confined to specific segments of the labour force.

Inspection of table 4.2 also reveals that the Canada-U.S. unionization differential widened during the 1984–90 period. Union density declined in both countries, but more rapidly in the United States, and thus the ratio of Canadian to U.S. union coverage increased from 1.9 to 2.1. In addition, these data indicate that the extent to which Canadian union coverage exceeds that in the United States is often greatest (and is increasing most rapidly) in those seg-

**Table 4.2 Percentage of Employed Paid Workers Covered by a Collective Agreement by Age, Sex, Employment Status, Occupation, and Industry in Canada and the United States, 1984, 1986, and 1990**

	1984			1986			1990		
	Canada	U.S.	Ratio	Canada	U.S.	Ratio	Canada	U.S.	Ratio
Both sexes	41.8	21.6	1.9	39.9	19.9	2.0	37.6	18.3	2.1
16-24*	23.0	9.5	2.4	20.9	8.4	2.5	19.7	7.7	2.6
25-34	44.4	21.3	2.1	40.8	18.4	2.2	36.8	16.1	2.3
35-44	50.6	27.4	1.8	48.1	25.3	1.9	44.4	22.8	1.9
45-54	49.2	28.8	1.7	48.4	27.4	1.8	48.3	25.0	1.9
55-64	49.4	27.8	1.8	47.0	26.5	1.8	45.4	24.3	1.9
Males	46.0	25.7	1.8	43.7	23.7	1.8	40.5	21.4	1.9
16-24*	25.6	11.6	2.2	22.8	10.3	2.2	20.8	9.5	2.2
25-34	46.8	24.5	1.9	42.8	21.4	2.0	38.6	18.5	2.1
35-44	55.3	32.5	1.7	51.8	30.2	1.7	47.4	26.1	1.8
45-54	55.4	34.3	1.6	54.2	32.8	1.7	54.1	29.8	1.8
55-64	54.7	32.7	1.7	53.3	31.4	1.7	52.1	28.7	1.8
Females	36.6	16.8	2.2	35.2	15.5	2.3	34.3	14.9	2.3
16-24*	20.3	7.3	2.8	18.9	6.4	3.0	18.4	5.8	3.2
25-34	41.5	17.2	2.4	38.5	14.7	2.6	34.9	13.2	2.6
35-44	44.8	21.3	2.1	43.5	19.7	2.2	41.5	19.2	2.2
45-54	40.8	22.0	1.9	40.6	21.1	1.9	41.8	19.8	2.1
55-64	40.9	21.7	1.9	36.4	20.5	1.8	35.8	19.2	1.9
Full-time	45.5	24.5	1.9	43.2	22.5	1.9	40.0	20.5	2.0
Part-time	23.4	9.0	2.6	24.6	8.4	2.9	27.6	8.4	3.3
Occupation									
Managerial, professional, technical	47.0	19.6	2.4	43.0	18.1	2.4	42.7	17.4	2.5
Clerical	35.3	17.4	2.0	36.0	16.3	2.2	31.5	16.1	2.0
Sales	12.1	7.4	1.6	12.1	7.1	1.7	11.2	5.9	1.9
Service	32.1	17.2	1.9	33.2	15.9	2.1	32.3	15.6	2.1
Primary, except mining	24.6	6.4	3.8	18.4	6.9	2.7	19.6	5.5	3.6
Processing, machining, laborers	54.2	34.6	1.6	51.6	32.2	1.6	49.6	28.1	1.8
Transportation, moving	49.4	37.0	1.3	50.4	32.8	1.5	42.4	30.7	1.4
Materials handling	52.0	29.4	1.8	50.0	26.5	1.9	47.9	24.5	2.0
Industry									
Agriculture	2.8	3.3	0.8	5.4	2.9	1.9	6.7	2.1	3.2
Mining	36.5	19.8	1.8	38.2	19.1	2.0	40.9	20.2	2.0
Construction	42.3	24.8	1.7	37.1	23.4	1.6	35.2	22.2	1.6
Manufacturing	49.0	28.4	1.7	46.8	25.8	1.8	43.5	22.2	2.0
Durable	52.2	30.0	1.7	50.4	27.3	1.8	44.4	23.7	1.9
Nondurable	45.9	25.8	1.8	42.8	23.5	1.8	42.8	20.0	2.1
Transportation	58.4	39.4	1.5	55.9	36.4	1.5	51.5	34.1	1.5
Communication, utilities	71.5	45.4	1.6	72.3	40.7	1.8	66.2	38.3	1.7
Wholesale trade	16.2	9.5	1.7	16.5	8.2	2.0	14.2	7.3	1.9
Retail trade	15.9	8.7	1.8	15.8	7.7	2.1	15.6	6.9	2.3

(continued)

Table 4.2 (continued)

	1984			1986			1990		
	Canada	U.S.	Ratio	Canada	U.S.	Ratio	Canada	U.S.	Ratio
Finance, insurance, real estate	12.9	4.0	3.2	11.7	3.6	3.3	13.1	3.4	3.9
Services	43.4	8.8	4.9	41.1	7.8	5.3	38.8	7.1	5.5
Public administration	74.7	43.9	1.7	75.1	43.2	1.7	72.3	43.3	1.7

Sources: Statistics Canada, unpublished data from the 1984 Survey of Union Membership and the 1986 and 1990 Labour Market Activity Surveys, supplements to the Labour Force Survey; U.S. Bureau of Labor Statistics, *Employment and Earnings*, January 1985, January 1987, and January 1992.

<sup>a</sup>In Canada, 15–24 years.

ments of the labor force that are growing quickly and that have typically had low degrees of unionization: females (2.3 in 1990); part-time employment (3.3 in 1990, up from 2.6 in 1984); managerial, professional, and technical occupations (2.5 in 1990); service industries such as retail trade (2.3), finance, insurance, and real estate (3.9), and services (5.5). These observations suggest that Canadian unions have been more successful in organizing those segments of the labor force experiencing the greatest net growth in employment.

#### 4.2 Alternative Explanations

The decline in U.S. union density in the past three decades has attracted considerable attention. This keen interest is certainly appropriate. Whether one believes it to be a good thing, a bad thing, or a bit of both, the substantial fall in union strength in the United States is one of the most significant social phenomena of the postwar period. Not all of the discussion has been about the causes of the decline in union strength—social scientists and others have also debated both the consequences of the decline and the role of public policies (e.g., labor law reform) to deal with consequences believed to be socially harmful (see, for example, Edwards 1986; Strauss, Gallagher, and Fiorito 1991; Weiler 1983, 1984). Nonetheless, a key aspect of any social phenomenon is understanding its origin(s); accordingly, there has been a good deal of research on the causes of the decline in unions in the United States (e.g., Dickens and Leonard 1985; Farber 1985, 1990; Freeman 1985, 1989; Neumann and Rissman 1984).

Much of the research initially focused exclusively on the United States. Beginning with Weiler (1983), however, the value of adopting a comparative Canada-U.S. perspective has increasingly been recognized. In particular, the many similarities between the two countries' economies and industrial relations systems may result in a situation with elements similar to a controlled experiment, thus perhaps enabling some explanations of the decline in unions

in the United States to be rejected because these explanations cannot account for the observed behavior in Canada. As stated by Richard Freeman (1988, 69): "A persuasive explanation of the decline in union density in the United States should also explain why density did not decline in Canada in the same time period [1970–85]." For this reason, the various explanations examined in this paper are phrased in terms of their potential ability to account for both the decline in union density in the United States and the divergence in the extent of union organization between the United States and Canada.

Perhaps the most common explanation has to do with the changing structure of the economy and the labor force. Specifically, most of the employment changes that have occurred in the past three decades—away from manufacturing and toward services; away from blue-collar and toward white-collar; away from male and full-time and toward female and part-time—represent declines in the relative importance of sectors that traditionally have been highly unionized and increases in the relative importance of sectors that traditionally have had low union density. Thus if union density remained constant in each sector or for each type of worker, the economy-wide extent of union organization would decline due to these structural shifts.

Another explanation involves changes in the U.S. legal regime (the laws, their interpretation, and their administration and enforcement) relating to unions and collective bargaining during the post–World War II period. Differences between Canada and the United States in such areas as certification and decertification procedures, bankruptcy and succession rights, first contract negotiation, and union security arrangements are argued to be factors contributing to the differential in union coverage.

A related view is that the decline in unionization in the United States can largely be attributed to the rise in management opposition, both legal and illegal, to unions (Freeman 1985, 1988). The dramatic rise in unfair labor practices is evidence of a broader attempt by U.S. management to operate in a "union-free environment." The rise in unfair labor practices is not surprising, given the incentives facing employers (Flanagan 1987). Increased management opposition to unions can be attributed in part to a more competitive economic environment and to the substantial union-nonunion wage differential.

A fourth hypothesis is that there has been a reduction in the desire for collective representation because of the growth of substitute services. There are two variants of this view. One is that governments have gradually provided more of the employment protection and nonwage benefits that were originally important factors underlying workers' desire for organizing collectively (Neumann and Rissman 1984). The other is that employers have become increasingly sophisticated in their human resource practices and now provide many of the services (e.g., grievance procedures) that workers previously received only in unionized firms (Kochan, Katz, and McKersie 1986).

A final explanation, which is in many ways the simplest and most pro-



found, is that there has been in the United States a reduction in public sympathy toward unions and collective bargaining (Lipset 1986). This shift in attitudes has resulted in a decline in workers' desire for collective forms of representation and a decline in the public support for achieving the goals of the labor movement via the political process. A corollary of this thesis is that the Canada-U.S. differential in union coverage can be attributed to fundamental value differences between the two societies—with Canada being a society that relies more on government, state intervention in the economy, and collective forms of organization and the United States being a society that emphasizes free enterprise and individual rather than collective rights and freedoms (Lipset 1986).

The remainder of the paper assesses these explanations, using the “natural experiment” provided by the differential experience of Canada and the United States. To as great an extent as possible, I attempt to use data and other information that are comparable between the two countries. The analysis begins by examining the extent to which the differential in union coverage can be attributed to differences between Canada and the United States in the demand for unionization versus differences in the supply of unionization.

#### **4.3 The Demand for and Supply of Collective Representation: A Canada-U.S. Comparison**

The growth and incidence of union organization can be analyzed using a demand and supply framework (Ashenfelter and Pencavel 1969; Pencavel 1971). The demand for union representation emanates from employees and depends on the expected benefits and costs of collective representation. The supply of unionization emanates from the organizing and contract administration activities of union leaders and their staff. Employers can affect the demand for union representation by altering the costs and/or benefits as perceived by unorganized employees. Employers can also alter the supply side by changing the costs and/or benefits to union leaders of representing existing members and organizing new members.

This framework may be useful in the present context because several of the hypotheses discussed above differ in their implications for the demand for and supply of unionization. For example, the “growth of union substitutes” view predicts that the observed behavior is due to a pure decline in demand, while the changes in the legal regime are expected to reduce both demand and supply. On the other hand, the structural shift hypothesis implies that there have been no changes in either demand or supply for a given type of worker (and union leader); rather, the aggregate behavior is due to the changing composition of the labor force.

For these reasons, this section provides an empirical analysis that attempts to determine the extent to which the Canada-U.S. differential in union cover-

age can be attributed to differences in the demand for union representation versus differences on the supply side.<sup>3</sup>

Unfortunately, it is generally difficult with the available data to determine the extent to which observed behavior is due to demand-side factors, supply-side factors, or both. For example, there is a strong relationship between union incidence and establishment size. This relationship could be due to a stronger desire for union representation among workers in large establishments—for example, because they have more need for a collective voice than do workers in small establishments. However, the relationship could also exist because union leaders target large establishments in their organizing drives in an attempt to maximize the number of potential new members per dollar of organizing expenditure. Similarly, the finding that, holding wages constant, workers with more education are more likely to be unionized could be due to these workers being more likely to choose jobs in the union sector or due to unionized employers choosing from the pool of applicants (for a job at a given wage) those with the most qualifications.

The problem here is one of identification. It is difficult to determine from observations on the union status of individual workers and such employee and employer characteristics as age, education, and establishment size the separate influences of the choices made by workers, employers, and union organizers. The additional information used here—as in Farber (1983, 1990)—is a measure of the desire for union representation by currently unorganized workers.

An individual worker will desire union representation if the expected net benefit of a union job is positive. Let  $z_i$  be the difference between the expected utility of a union and nonunion job for individual  $i$ . This (unobserved) utility gain or loss depends on certain observable and unobservable variables, including the wage differential between union and otherwise similar nonunion jobs.

$$(1) \quad z_i = X_i b + u_i$$

Let  $DES_i$  be a discrete variable that takes on a value of unity for individuals who prefer union status and zero for individuals who prefer nonunion status. Then

$$(2) \quad \text{Prob}(DES_i = 1) = \text{Prob}(z_i > 0) = \text{Prob}(u_i > -X_i b).$$

If it is known which individuals prefer to be unionized, the parameters in equation (2) can be estimated.

In most microdata sets only the union status of individual workers is observed. Let  $US_i = 1$  for individuals in the union sector and  $US_i = 0$  for non-

3. The methodology is due to Farber (1983) and was used by Farber (1990) to examine changes over time in the demand for and supply of unionization in the United States.

union workers. If individuals have sorted themselves into the sectors of their choice, then it would be the case that

$$(3) \quad \text{Prob}(US_i = 1) = \text{Prob}(z_i > 0) = \text{Prob}(u_i > -X_i b).$$

In this case the parameters determining the demand for unionization could be estimated with information on union status alone.

However, there are several reasons to expect that not all individuals who prefer a union job will in fact be represented by a union. It may be costly for an individual worker to initiate or help organize a union organizing drive, especially if the employer attempts to dissuade employees from attempting to organize. Thus even if the expected net benefits from union representation are positive, these may become negative when the costs of organizing the workplace are taken into account. In addition, not all the benefits of collective representation accrue to those employees who make the investment in organizing a union; some accrue to existing employees who “free ride” (i.e., do not participate in the organizing drive), while others accrue to future employees. Thus there may be workplaces that remain nonunion even though a majority of current and future employees would prefer collective representation in the absence of organizing costs.

There may also be workplaces in which a minority of the current employees prefer union status. In this case the workplace would remain nonunion even in the absence of organizing costs. If it were costless to change jobs, those employees who prefer union jobs would leave. Changing jobs is often not costless, however, especially when workers have considerable specific human capital. Thus an unsatisfied demand for union representation may remain in nonunion firms.

If union organizing is costly to individual employees, which is particularly likely when employers adopt strong anti-union strategies, a queue for high-paying union jobs will emerge—even in a situation of full employment.<sup>4</sup> Evidence that such queues exist in the United States is provided in studies by Abowd and Farber (1982) and Farber (1983). In these circumstances, union status is determined not only by the preferences of the individual worker (i.e., whether  $z_i > 0$ ) but also by which individuals are chosen from the pool of applicants by the unionized employer.<sup>5</sup> Thus there will be individuals in the nonunion sector ( $US_i = 0$ ) who would prefer a union job ( $DES_i = 1$ ).

Comparative evidence on the significance of this “unsatisfied demand” for union representation can be obtained from two surveys sponsored by union federations in the United States and Canada. The first, referred to here as the

4. Of course, there may be periods in which there are queues for most jobs, but that is another issue.

5. This discussion assumes that hiring decisions are made by the employer—by far the most common arrangement in North America. The analysis would need to be modified for situations in which employment decisions are made using union hiring halls.

AFL survey, was conducted in 1984 by Louis Harris and Associates, Inc., for the American Federation of Labor–Congress of Industrial Organizations.<sup>6</sup> The second, referred to here as the CFL survey, was carried out in 1990 by Decima Research for the Canadian Federation of Labour/Fédération Canadienne du Travail.

Both surveys ask respondents about their union status. Unorganized workers are also asked about their desire for union representation. However, individuals who are currently members of a union or covered by a collective agreement are not asked whether they would prefer their job to be nonunion. Thus  $US_i$  is observed for all respondents, and  $DES_i$  is observed for workers in the nonunion sector.

Although the AFL and CFL surveys are similar in a number of respects, three differences limit our ability to draw strong conclusions from a comparative analysis. First is the time lag between the two surveys. In effect the analysis represents a comparison between the United States in 1984 and Canada in 1990. Because union coverage was declining in both countries during the 1984–90 period, this comparison will overstate the Canadian-U.S. differential in 1990.

The two surveys were also conducted during very different phases of the business cycle in the two countries. The 1984 AFL survey was conducted at a time when the U.S. economy was just past the trough of a major recession, while the February 1990 CFL survey was carried out just prior to the peak of the 1983–90 business cycle in Canada.

The third factor involves differences between the two surveys in the critical (for this analysis) question of the desire for union representation among unorganized workers. The U.S. question is, for the purpose of this analysis, very precise: “If an election were held tomorrow to decide whether your workplace would be unionized or not, do you think you would definitely vote for a union, probably vote for a union, probably vote against a union, or definitely vote against a union?” Individuals who responded that they would definitely or probably vote for a union are assigned  $DES_i = 1$ , and those who responded that they would definitely or probably vote against a union are assigned  $DES_i = 0$ .

The Canadian question was, “Thinking about your own needs, and your current employment situation and expectations, would you say that it is very likely, somewhat likely, not very likely, or not likely at all that you would consider joining or associating yourself with a union or a professional association in the future?” Individuals who responded “somewhat likely” or “very likely” are assigned  $DES_i = 1$ , and those who responded “not very likely” or “not likely at all” are assigned  $DES_i = 0$ .

The measurement of the desire for collective representation among unorga-

6. See Farber (1990) for a more detailed discussion and analysis of this survey.

nized workers differs between the two surveys in two ways. One is the actual phrasing of the key question.<sup>7</sup> The CFL question is somewhat broader and vaguer and could be interpreted to involve a job other than the job currently held, whereas the AFL question is both precise and clearly focused on the existing job. For those not currently employed, the CFL question could be interpreted as asking about whether their job search will be focused on the union or nonunion sector. This difference in focus is not a problem in this paper because the analysis is restricted to those currently employed. Nonetheless, even among those currently employed, the CFL question may measure a somewhat broader concept of the desire for collective representation than does the AFL survey, which is more narrowly focused on the current job. The fact that the Canadian question is less precise may also bias the responses, although the direction of bias is unclear.

The second difference is that the AFL question was asked of all those not currently union members, whereas the CFL survey was structured such that this question was asked only of those not members of a union or professional association. Thus the concept of collective representation in the CFL survey is broader (those members of a union or professional association), and accordingly the question is only asked of a narrower group (those not members of a union or professional association).<sup>8</sup>

These two differences between the surveys may offset each other. The CFL question on the desire for collective representation is somewhat broader, which may result in a larger measured desire for union representation. The CFL question is asked of a narrower group, which will tend to reduce the measured desire for collective representation among the currently unorganized.

The two surveys differ in another respect. The CFL survey was designed to yield a representative sample of the Canadian labor force, whereas the AFL "quota sampled" union members because its primary purpose was to assess the attitudes of nonunion workers. Thus nonunion workers were oversampled (by about 10 percent) in the AFL survey. I deal with this in the same fashion as Farber (1990), by randomly omitting 10 percent of the observations on nonunion workers.

A feature common to the two surveys is that union members (and members of professional associations in the case of the CFL survey) were not asked if they would prefer a nonunion job. Because union representation is a majority decision, there may be some individuals covered by a collective agreement who would prefer nonunion status. The number of such individuals is un-

7. It is important to point out that, because union certification decisions in most Canadian jurisdictions are not based on voting, the U.S. question would probably not be appropriate in Canada even if both surveys were intending to measure the same phenomenon.

8. Unfortunately it is not possible to separate union members from members of professional associations because some workers report belonging to both. Furthermore, the critical question on the desire for union representation is only asked of those not members of either.

known, but their treatment in the same fashion by the two surveys should not significantly affect the comparative analysis.

As in Farber (1983, 1990), I assume  $DES_i = 1$  for all those with  $US_i = 1$ . Excluded from the analysis are those not currently employed, the self-employed, managers, and those who did not respond to the questions on union status, desire for union representation, public or private sector employment, and demographic variables common to the two surveys (age, education, sex). After these exclusions and the adjustment to the AFL survey for quota sampling, there are 517 observations from the CFL survey (out of 1,000 interviews) and 890 observations from the AFL survey (out of 1,452 interviews). Some of the key statistics are summarized in table 4.3. The top part of the table shows these statistics for each of the full samples while the bottom part splits the samples into the public and private sectors.

These surveys confirm that the probability that a randomly selected Canadian worker is unionized is more than double that of a U.S. worker (0.48 versus 0.22). To some extent this differential is overstated by the inclusion of members of professional associations in the Canadian data but not in the U.S. data.<sup>9</sup> The remainder of this large differential can be accounted for by three factors. First, the desire for union representation in Canada is about 28 percent higher than that in the United States ( $\text{Prob}(DES_i = 1)$  of 0.64 versus 0.50). There is also less unsatisfied demand for union status in Canada;  $\text{Prob}(DES_i = 1/US_i = 0)$  is 0.30 in Canada versus 0.36 in the United States. However, the most remarkable difference between the two countries is clearly the greater supply of unionization conditional on desire for union status;  $\text{Prob}(US_i = 1/DES_i = 1)$  is 0.76 in Canada versus 0.44 in the United States, that is, 73 percent higher in Canada. These summary statistics indicate that Canada's higher union density is due to both greater demand for and greater supply of union coverage in Canada, but that intercountry differences in the supply of union representation appear to be relatively more significant.

In order to assess the relative importance of demand and supply factors, the relationship  $\text{Prob}(US_i = 1) = \text{Prob}(US_i = 1|DES_i = 1) * \text{Prob}(DES_i = 1)$  can be decomposed into two components corresponding to differences in the demand for and supply of unionization:

$$\begin{aligned}
 \Delta\text{Prob}(US_i = 1) &= \Delta\text{Prob}(DES_i = 1) * \text{Prob}(US_i = 1|DES_i = 1) \\
 (4) \qquad \qquad \qquad &+ \text{Prob}(DES_i = 1) * \Delta\text{Prob}(US_i = 1|DES_i = 1) \\
 &= 0.14 * 0.6 + 0.565 * 0.32 \\
 &= .084 + .181 = 0.265,
 \end{aligned}$$

9. Union membership as a percentage of paid workers was 37 percent in Canada in 1984 and 16 percent in the United States in 1990, a differential of 21 percentage points. Collective agreement coverage as a percentage of paid workers was 42 percent in Canada in 1984 and 18 percent in the United States in 1990, a differential of 24 percentage points. The sources for these statistics are the surveys reported in table 4.2.

Table 4.3 AFL and CFL Surveys of Desire for Union Representation

	CFL Survey		AFL Survey	
Number of Observations				
Union		250		196
Nonunion		267		694
Total		517		890
Prob ( $US_i = 1$ )		0.48		0.22
Prob ( $DES_i = 1$ )		0.64		0.50
Prob ( $DES_i = 1 US_i = 0$ )		0.30		0.36
Prob ( $US_i = 1 DES_i = 1$ )		0.76		0.44

	CFL Survey		AFL Survey	
	Public	Private	Public	Private
Number of observations				
Union	125	125	63	133
Nonunion	54	213	153	541
Total	179	338	216	674
Prob ( $US_i = 1$ )	0.70	0.37	0.29	0.20
Prob ( $DES_i = 1$ )	0.84	0.54	0.62	0.45
Prob ( $DES_i = 1 US_i = 0$ )	0.46	0.26	0.46	0.31
Prob ( $US_i = 1 DES_i = 1$ )	0.83	0.69	0.47	0.44

where  $\Delta \text{Prob}(US_i = 1) = 0.26$  is the difference between the unionization rate in Canada and that in the United States,  $\Delta \text{Prob}(DES_i = 1) = 0.14$  and  $\Delta \text{Prob}(US_i = 1|DES_i = 1) = 0.32$  are Canadian minus U.S. differences, and  $\text{Prob}(US_i = 1|DES_i = 1) = 0.60$  and  $\text{Prob}(DES_i = 1) = 0.565$  are averages of the U.S. and Canadian levels.<sup>10</sup>

This decomposition implies that about two-thirds of the Canada-U.S. differential in union coverage is due to the difference in the supply of union representation (the second term in the above decomposition) and one-third to differences between Canada and the United States in the demand for union representation (the first term).<sup>11</sup>

Both the CFL and AFL surveys permit identification of public versus private sector respondents, and the bottom part of table 4.3 contains the same analysis for the private and public sectors separately. This analysis is worthwhile for two reasons. Explanations of Canadian-U.S. differences in the extent of union organization have often stressed the relative importance of Can-

10. Evaluating the approximation at the averages of the U.S. and Canadian levels gave a smaller approximation error than did using either country as the base.

11. In a recent contribution, Farber and Krueger (1992) employ an alternative decomposition:  $\text{Prob}(US_i = 1) = \text{Prob}(DES_i = 1) - \text{Prob}(DES_i = 1 \text{ and } US_i = 0)$ . The first term constitutes intercountry differences in demand and the second intercountry differences in "inverse supply," or the amount of unsatisfied demand for union representation as a fraction of the entire labor force. This decomposition attributes 0.14 (or 54 percent) of the intercountry unionization differential of 0.26 to differences in demand and 0.12 (or 46 percent) to differences in inverse supply.

ada's public sector (Meltz 1985; Troy 1990). In addition, some explanations of the decline in unionization in the United States imply different outcomes in the U.S. private and public sectors (Freeman 1986, 1988).

The two surveys differ in their questions about public sector status. The AFL survey asked, "Do you work for federal, state or local government?" Those who answered yes are regarded in what follows as being in the public sector; the remainder are treated as being in the private sector. The CFL survey asked, "Do you work in a large business, small business, or the public sector?" Thus the meaning of "public sector" in the Canadian survey is both self-reported and potentially broader than that of federal, provincial, or local government employment. As discussed in more detail later, the broader notion of public sector in Canada is to an important extent an appropriate reflection of the greater government involvement in the Canadian economy. However, the differences between the two surveys in this respect also imply that caution is appropriate in interpreting the results.

According to these surveys, the Canada-U.S. unionization gap is larger in the public than in the private sector; a Canadian public sector worker is more than twice as likely to be unionized than the U.S. counterpart, whereas a Canadian private sector worker is somewhat less than twice as likely to be covered by a collective agreement (table 4.3).<sup>12</sup> These differences in the extent of union organization can be attributed in part to a greater demand for union representation in Canada;  $\text{Prob}(DES_i = 1)$  is 35 and 20 percent higher in the Canadian public and private sectors, respectively. There is also less unsatisfied demand for union representation in the Canadian private sector than in the U.S. However, it is interesting to note that the amount of unsatisfied demand for unionization is the same in the Canadian and U.S. public sectors. In both sectors, the largest relative intercountry differences are those related to supply conditional on demand;  $\text{Prob}(US_i = 1 | DES_i = 1)$  is 77 and 57 percent greater in the Canadian public and private sectors, respectively.

As before, decomposition (4) can be used to indicate the relative importance of demand and supply factors. This decomposition attributes 0.05 (or 29 percent) of the 0.17 private sector differential to the demand side and 0.12 (or 71 percent) to the supply side. In the public sector the contributions of the demand and supply components are 35 and 65 percent, respectively.

Thus the conclusion that about two-thirds of the Canada-U.S. unionization gap is associated with intercountry differences in supply conditional on demand continues to hold when one disaggregates into the public and private sectors.

These general findings also continue to hold after controlling for individual characteristics such as gender, age, and education. These results are shown in tables 4.4 and 4.5. In table 4.4 the dependent variable is  $DES_i$ ; the estimated

12. Intercountry differences in unionization in the public and private sectors are examined in detail later, using comparable surveys that are representative of the respective labor forces.



Table 4.4 Probit Model of Demand for Unionization

Variable	AFL	CFL	Pooled
Constant	-0.14 (-0.5)	-0.34 (-0.9)	-0.35 (-1.6)
Male	0.13 (1.6)	0.16 (1.4)	0.14 (2.0)
Age 25-34	0.12 (0.9)	-0.13 (-0.7)	0.02 (0.2)
Age 35-44	0.14 (1.0)	0.32 (1.5)	0.21 (1.9)
Age 45-54	0.08 (0.5)	0.22 (1.0)	0.15 (1.2)
Age 55-64	0.16 (0.9)	0.30 (1.1)	0.21 (1.4)
Age 65 +	-0.03 (-0.1)	-0.35 (-0.7)	-0.18 (-0.6)
Some high school	0.28 (1.0)	0.30 (0.9)	0.23 (1.1)
High school graduate	0.17 (0.7)	0.49 (1.5)	0.31 (1.6)
Some college	-0.17 (-0.6)	0.57 (1.7)	0.13 (0.6)
Some university	-0.24 (-0.8)	0.34 (0.9)	-0.0 (-0.0)
University graduate	-0.30 (-1.1)	0.74 (2.2)	0.1 (0.3)
Canada			0.33 (4.7)
<i>N</i>	890	536	1426
Correctly predicted (%)	59	63	59

relationship can thus be interpreted as the demand for unionization. In table 4.5 the dependent variable is  $US_i$  (conditional on  $DES_i$ ); this estimated relationship can thus be interpreted as the supply of unionization function. These demand and supply functions are estimated for each country separately and for the pooled sample. The latter includes a dummy variable for the Canadian observations. The control variables are individual characteristics observed in both surveys (gender, age, and education).<sup>13</sup>

Males are more likely to desire union status in both countries, as is also the case for individuals between 35 and 44 years of age. Otherwise, the demand for collective representation is independent of personal characteristics. When the observations from both countries are pooled, the probability of desiring

13. The age and education groups were adjusted to make them comparable in the two surveys.

**Table 4.5** Probit Model of Supply of Unionization

Variable	AFL	CFL	Pooled
Constant	-1.71 (-4.1)	-0.02 (-0.0)	-1.32 (-4.0)
Male	0.60 (4.7)	0.06 (0.4)	0.39 (4.0)
Age 25-34	0.62 (3.0)	0.60 (2.3)	0.59 (3.7)
Age 35-44	0.88 (4.0)	0.60 (2.3)	0.73 (4.4)
Age 45-54	0.79 (3.4)	1.10 (3.4)	0.89 (4.8)
Age 55-64	1.33 (4.8)	1.38 (3.4)	1.30 (5.9)
Age 65 +	-5.09 (-0.0)	5.59 (0.0)	0.15 (0.3)
Some high school	0.70 (1.7)	-0.37 (-0.6)	0.17 (0.5)
High school graduate	0.51 (1.3)	0.10 (0.2)	0.30 (1.0)
Some college	0.50 (1.2)	0.35 (0.5)	0.42 (1.3)
Some university	0.15 (0.3)	-0.17 (-0.3)	0.06 (0.2)
University graduate	0.74 (1.9)	0.06 (0.1)	0.42 (1.4)
Canada			0.84 (8.5)
<i>N</i>	443	339	782
Correctly predicted (%)	65	77	69

unionization is 0.33 higher in Canada than in the United States, a difference that is statistically significant.<sup>14</sup>

The supply of union representation (conditional on demand) depends on two individual characteristics: gender and age. Among those who desire unionization, males are more likely to achieve this status in the United States but not in Canada. Individuals between the ages of 25 and 64 who desire collective representation are more likely to achieve union status than are younger workers (16-24-year-olds). Educational attainment has little impact on the supply of unionization in either country.

The most striking result in table 4.5 is that the probability that a Canadian

14. Adding interaction terms to allow the slope coefficients to differ between Canada and the United States makes little difference to the estimates in table 4.4. Only the university graduate coefficient differs significantly between Canada and the United States.

worker who desires union status will in fact be unionized is 0.84 higher than the equivalent likelihood for an American worker. This finding reinforces the conclusion based on the sample averages in table 4.3: although both the demand for and supply of union representation is higher in Canada, intercountry differences in supply (given the desire for union coverage) are relatively greater than are intercountry differences in demand.

These demand and supply relationships were also estimated separately for the public and private sectors. Appendix tables 4A.1 and 4A.2 contain these estimates. The main finding continues to hold: supply-side differences between Canada and the United States are relatively larger than demand-side differences. These differences are especially large in the private sector. In the pooled sample, the probability of demanding union representation is 0.19 higher in Canada than in the United States (controlling for gender, age, and educational status). In contrast, the probability of being unionized, conditional on desiring union status, is 0.67 higher in the Canadian private sector.

I interpret the results of this demand-supply analysis as providing some—albeit modest—support for the hypothesis that differences between Canada and the United States in the laws governing union organization and collective bargaining, and the administration and enforcement of these laws, together with less overt management opposition to unions in Canada are important factors accounting for the intercountry differential in union coverage. The more favorable legal and administrative environment and less management opposition (itself possibly due to the differences in laws and their enforcement) reduce the cost to workers of union representation, resulting in greater demand even if the underlying preferences of workers on both sides of the border are otherwise identical on average. These same factors also lower the costs to union leaders and organizers of union formation, member representation, and contract administration, thus increasing the supply of unionization. These implications of the hypothesis are consistent with the evidence in this section.

Other explanations of the unionization gap are less easily reconciled with this evidence. Strictly interpreted, explanations based on differences in the structures of the economies and labor forces would imply that intercountry differences in demand and supply would disappear upon controlling for individual and employer characteristics. This clearly does not happen, although admittedly the controls available on a comparable basis are far from comprehensive. Similarly, a pure demand-side explanation (for example, because Canadian workers have stronger underlying preferences for collective forms of representation) is difficult to reconcile with the apparent relative significance of supply considerations (conditional on demand) and the lower excess demand for union coverage in Canada.

The support for the “legal regime/management opposition” view is modest for two reasons. First, the link between the hypothesis and the finding that the intercountry unionization gap is due to greater Canadian demand for and sup-

ply of unionization is clearly indirect. Second, the two surveys used in this section differ in several potentially significant ways, as described above. More convincing comparative evidence requires better data.<sup>15</sup> The analysis to which I now turn meets this requirement.

#### 4.4 Structural Explanations

As noted earlier, many of the changes that have been occurring in the structure of the economy and the labor force—away from employment that is predominantly full-time, blue-collar, male, in large firms or enterprises, and in manufacturing or primary industries, toward employment that is increasingly part-time, white-collar, female, in small firms or enterprises, and in service industries—represent shifts from sectors that are typically highly unionized to sectors that have generally been characterized by low degrees of unionization. In the United States there has also been a relative shift of employment away from the highly unionized North to the less unionized South. The only significant development tending to increase the extent of unionization is the relative growth in employment—together with the substantial increase in union density—in the public sector.

Although some studies have concluded that these changes in labor force composition contributed to the decline in unionization in the United States (Dickens and Leonard 1985; Farber 1985, 1990), this “structuralist” view has been challenged because many of the same compositional changes have also occurred in Canada, where union density continued to increase until the mid-1980s (Lipset 1986; Freeman 1988). However, Troy (1990, 1992) has argued that structural changes have indeed led to a decline in private sector unionization in both countries, albeit one that occurred later in Canada because of differences in the timing of key changes in economic structure (e.g., the shift from manufacturing and primary industries to services). Troy’s analysis is based on data on unionization by industry—data that have important limitations. This section provides an analysis of the structuralist hypothesis using comparable microdata from both countries. In particular, I examine the extent to which differences in the composition of the respective labor forces can account for intercountry differences in the extent of unionization.

The data come from very similar surveys carried out at the same time (December 1984) in each country. The Canadian data source is the Survey of Union Membership (SUM), carried out as a supplement to the LFS, and the U.S. source is the CPS earnings file, a supplement to the CPS. These data sources were chosen for three main reasons. First, the LFS and CPS are

15. Farber and Krueger (1992) carried out a survey of U.S. workers’ attitudes toward union representation. They asked both the CFL and AFL questions and in half the survey randomly reversed the order in which the two questions were asked. They find that the responses are very sensitive to the order in which the questions are asked. These results indicate another reason for caution in interpreting the results of the comparative demand-supply analysis.

monthly household surveys that are very similar in terms of their underlying methodology and structure. Furthermore, the supplements have almost identical questions relating to union membership and collective agreement coverage. For the purposes at hand, collective agreement coverage is the preferred measure of union status and is accordingly used throughout; however, none of the qualitative conclusions would be altered by the use of union membership.

Second, both surveys provide information on whether each paid worker is employed in the private or the public sector. The concept of public sector used here is a broad one—corresponding to whether the employing organization is owned or primarily financed by government—and the two surveys use a very similar methodology for classifying workers into paid public and paid private employment.<sup>16</sup> Later Canadian surveys that provide information on union status (for example, the Labour Market Activity Surveys of 1986–90) do not, unfortunately, provide this information on public-private sector status. The third reason for choosing these sources is that both provide, when the data are appropriately weighted, representative samples of the respective labor forces.<sup>17</sup>

As discussed previously, union status is determined by the decisions made by individual workers, employers, and union leaders and organizers. Let

$$(5) \quad US_{ij} = 1 \quad \begin{cases} \text{if } y_{ij} > 0, \\ 0 \text{ otherwise,} \end{cases} \quad j = c, u,$$

where  $c$  and  $u$  refer to Canada and the United States, respectively, and

$$(6) \quad y_{ij} = Q_{ij} d_j + e_{ij}, \quad j = c, u.$$

Equation (5) is a reduced-form equation that reflects the combined outcome of demand and supply factors on union status.  $y_{ij}$  is an unobserved variable that incorporates the net utility gain of union coverage to worker  $i$  ( $z_i$  in equation [1]) in addition to influences of employer and union-organizer behavior.  $Q_{ij}$  are variables that influence unionization decisions, and  $d_j$  is the associated parameter vector. The error term  $e_{ij}$  is assumed to be normally distributed, so the parameters  $d_j$  can be estimated by a probit model.

The variables available on a comparable basis for both countries are gender, age, part-time employment, public sector employment, occupation, and industry. Table 4.6 reports the sample means of these variables for the two samples, together with the estimated parameters  $d_j$ .<sup>18</sup> Excluded from the em-

16. The LFS definition of paid workers (government) is "those who work for a local, provincial or federal government, for a government service or agency, a crown corporation, or a *government owned* public establishment such as a school or hospital" (Statistics Canada 1992b, 12). This coding takes place at the same time as industry and occupation coding. The CPS definition is also based on government ownership. Paid government employees are coded by the interviewer; federal, state, and local employees are identified separately. See Bureau of Labour Statistics, *CPS Interviewers Manual*, item 23E.

17. Unless otherwise noted, the analysis in this paper uses the weighted data.

18. The Canadian sample of 3,995 observations is a one-eighth random subsample of the SUM (after exclusions noted), while the U.S. sample of 4,372 observations is a one-third random subsample of the December 1984 CPS earnings file (after exclusions).

**Table 4.6**                      **Determinants of Unionization in Canada and the United States, 1984**

	Canada		U.S.		Interaction Terms
	Sample Means	Parameter Estimates	Sample Means	Parameter Estimates	
Constant	1.00	-1.45 (-9.1)	1.00	-1.74 (-8.1)	0.29 (1.1)
Female	0.45	-0.15 (-2.8)	0.47	-0.11 (-2.0)	-0.04 (-0.5)
Age 25-34	0.31	0.40 (5.9)	0.30	0.30 (3.7)	0.11 (1.0)
Age 35-44	0.24	0.53 (7.2)	0.22	0.51 (6.1)	0.02 (0.2)
Age 45-54	0.15	0.48 (5.9)	0.14	0.64 (7.2)	-0.16 (-1.3)
Age 55-64	0.08	0.42 (4.4)	0.10	0.33 (3.3)	0.08 (0.6)
Age 65 +	0.005	-0.34 (-0.8)	0.03	-0.06 (-0.3)	-0.28 (-0.6)
Part-time	0.16	-0.33 (-4.7)	0.20	-0.41 (-5.2)	0.08 (0.7)
Public	0.23	0.99 (12.3)	0.17	0.94 (11.3)	0.06 (0.5)
Clerical	0.19	0.40 (5.2)	0.17	0.13 (1.6)	0.27 (2.4)
Sales	0.07	0.08 (0.6)	0.12	0.04 (0.3)	0.03 (0.2)
Serving	0.14	0.56 (6.3)	0.14	0.31 (3.5)	0.25 (2.0)
Primary	0.02	0.57 (2.9)	0.02	-0.41 (-1.4)	0.98 (2.8)
Processing	0.21	0.96 (11.9)	0.20	0.70 (8.7)	0.26 (2.3)
Transportation, handling	0.08	0.80 (8.2)	0.09	0.66 (6.9)	0.14 (1.0)
Manufacturing	0.21	0.40 (2.7)	0.21	0.29 (1.4)	0.11 (0.4)
Construction	0.04	0.13 (0.7)	0.06	0.09 (0.4)	0.04 (0.1)
Transportation, communication, utilities	0.09	0.76 (4.7)	0.07	0.79 (3.7)	-0.02 (-0.1)
Trade	0.16	-0.06 (-0.4)	0.21	-0.26 (-1.2)	0.20 (0.8)
Finance, insurance, real estate	0.05	-0.53 (-2.7)	0.06	-0.59 (-2.3)	0.07 (0.2)
Education, health	0.19	1.22 (7.8)	0.21	0.22 (1.0)	1.00 (3.8)
Other services	0.14	-0.23 (-1.4)	0.10	-0.05 (-0.2)	-0.18 (-0.7)
Public administration	0.08	0.59 (3.3)	0.05	-0.06 (-0.3)	0.65 (2.2)
$R^2$ (Cragg-Uhler)		0.42		0.28	0.42
$N$		3,995		4,372	8,367

pirical analysis are those who are not paid workers (e.g., the self-employed and unpaid family workers), those not employed in the reference week, and those for whom information on variables of interest was missing.

Although the two labor forces are clearly very similar, some differences are evident. The proportion of females in the labor force is somewhat higher in the United States, as is that of part-time workers. More of the Canadian labor force is under age 55. Public sector employment is substantially higher in Canada (23 percent versus 17 percent in the United States), an aspect examined in more detail below. The occupational distribution of employment is remarkably similar, the only noticeable difference at this level of aggregation being the larger proportion of the U.S. labor force in sales occupations. There are a number of differences in the industrial distribution of employment, although none of these could be described as dramatic. More of the Canadian labor force is employed in transportation, communication, and utilities, public administration, and services, while more of the U.S. labor force is employed in construction and trade.

A number of the estimated parameters are also quite similar across the two countries. However, there are several notable exceptions. The difference in the respective constant terms indicates that the same individual would be 0.29 more likely to be covered by a collective agreement in Canada than in the United States. Public sector workers are much more likely to be unionized in both countries, but the impact of public sector status on the probability of unionization is almost identical in each country. The effects of age, gender, and part-time employment are also very similar in the two countries. However, several of the industry and occupation coefficients differ substantially.

In order to examine these differences more systematically, the two samples were pooled and a Canada dummy (equal to unity for observations from Canada and zero otherwise) was interacted with each of the  $Q$  variables.<sup>19</sup> The last column of table 4.6 reports the estimated interaction terms. The only significant differences are in the impacts of the occupational and industrial distributions, the probability of unionization being higher in Canada (other things being equal) in clerical, serving, primary, and processing occupations and in education and health and public administration. Each of these differences is positive; the largest differences are those associated with the coefficients of the education and health industry and of primary occupations.

How much of the Canada-U.S. unionization differential can be attributed to differences in the characteristics of the respective labor forces and how much to differences between the two countries in the likelihood of a worker with the same set of characteristics being unionized? In order to address this question,

19. When the data are weighted, the Canadian observations constitute 14 percent of the pooled sample. For this analysis, it is more appropriate to have equal numbers of observations from each country; thus the weights are scaled so that half of the observations come from each country.

the intercountry gap in the probability of union coverage is decomposed into two terms, one associated with intercountry differences in the characteristics of the respective labor forces, and the second with differences in the impacts of those characteristics on the probability of unionization.<sup>20</sup> Let  $h(\cdot)$  denote the value of the standard normal distribution at  $(\cdot)$ . The estimated probability that individual  $i$  of country  $j$  is covered by a collective agreement is

$$(7) \quad p_{ij} = h(Q_{ij} \hat{d}_j), \quad j = c, u.$$

The average estimated probability of unionization in each country is given by

$$(8) \quad \bar{p}_j = 1/N_j \sum_i h(Q_{ij} \hat{d}_j), \quad j = c, u,$$

where  $N_j$  is the number of observations for country  $j$ . Define

$$(9) \quad \bar{p}_o = 1/N_u \sum_i h(Q_{iu} \hat{d}_c).$$

$\bar{p}_o$  is the U.S. union density that would be predicted if each U.S. worker retained his or her unionization-determining characteristics but the impacts of those characteristics on the probability of union coverage were those estimated for Canadians. The intercountry unionization gap can then be decomposed into two terms, the first representing the portion of the gap associated with intercountry differences in characteristics that influence union status and the second associated with differences in the impacts of those characteristics on the probability of union coverage:

$$(10) \quad \bar{p}_c - \bar{p}_u = (\bar{p}_c - \bar{p}_o) + (\bar{p}_o - \bar{p}_u).$$

This decomposition is shown in column 2 of table 4.7. The average predicted union densities equal the actual densities for each country; thus the predicted gap equals the actual gap (0.26). Eighty-five percent of the gap (0.22 of 0.26) is associated with intercountry differences in the parameter vectors, and only 15 percent is associated with intercountry differences in the characteristics of the respective labor forces.

An alternative, and simpler, procedure decomposes the unionization differential at the mean of the data; that is, for the individual with average characteristics for each country (denoted by  $\bar{Q}_c$  and  $\bar{Q}_u$ ),

$$(11) \quad h(\bar{Q}_c \hat{d}_c) - h(\bar{Q}_u \hat{d}_u) = \{h(\bar{Q}_c \hat{d}_c) - h(\bar{Q}_u \hat{d}_c)\} \\ + \{h(\bar{Q}_u \hat{d}_c) - h(\bar{Q}_u \hat{d}_u)\}.$$

20. The procedures outlined below involve decomposing a nonlinear function in a fashion similar to the Oaxaca type of decomposition of a linear relationship. See Even and Macpherson (1993) and Doiron and Riddell (1993) for details of these procedures and their application to male-female earnings differences.



**Table 4.7** Decomposition of the Canada-U.S. Unionization Differential

A. Overall decomposition									
	Total Economy			Private Sector			Public Sector		
	Actual <sup>a</sup> (1)	Predicted <sup>b</sup> (2)	(3)	Actual <sup>a</sup> (1)	Predicted <sup>b</sup> (2)	(3)	Actual <sup>a</sup> (1)	Predicted <sup>b</sup> (2)	(3)
Canada	0.45	0.45	0.43	0.34	0.34	0.30	0.81	0.81	0.83
United States	0.19	0.19	0.14	0.15	0.15	0.11	0.41	0.41	0.39
Unionization differential	0.26	0.26	0.29	0.19	0.19	0.19	0.40	0.40	0.44
Approximated gap <sup>c</sup>			0.27						
Approximation error			0.02						
Due to differences in characteristics (%)		0.04 (15)	0.04 (13)		0.0 (0)	0.0 (0)		0.02 (5)	0.02 (5)
Due to differences in impacts of characteristics (%)		0.22 (85)	0.24 (87)		0.19 (100)	0.19 (100)		0.38 (95)	0.42 (95)

B. Contribution of each variable to the Canada-U.S. unionization differential			
Variable	Due to Characteristics	Due to Returns to Characteristics	Due to Both
Constant	0	.088	.088
Age	.006	.005	.011
Gender	.001	-.006	-.005
Part-time	.005	.005	.010
Public sector	.019	.003	.022
Occupation	.002	.052	.054
Industry	.002	.092	.094
Total	.035	.239	.274
Percentage	13	87	100

<sup>a</sup>Sample average using weighted data.

<sup>b</sup>Column 2 predicted using the method shown in equation (7). Column 3 predicted at the mean of the data in each country (method shown in equation [11]).

<sup>c</sup>Based on a Taylor series approximation to equation (11).

The results of this decomposition are shown in column 3 of part A of table 4.7.<sup>21</sup> The conclusions are very similar: 83 percent of the Canada-U.S. unionization gap is attributed to intercountry differences in the parameters affecting the probability of unionization, and only 17 percent to differences in the characteristics of the respective labor forces.

Associated with this simpler decomposition is a straightforward procedure

21. Note that this method underpredicts the extent of unionization in both countries. The extent of underprediction is greatest for the United States, so the predicted gap is underestimated. The difference between the two methods is a function of the degree of nonlinearity in the probit function. The U.S. union density is underpredicted more because of the greater degree of nonlinearity in the probit function at low levels of unionization.

for assessing the contribution of each variable.<sup>22</sup> These breakdowns are shown in part B of table 4.7. Although the Canadian labor force has more of each of the characteristics that make unionization likely, the only characteristic that makes a substantial contribution to the gap in union coverage is public sector employment, which accounts for .019 (or 6.9 percent) of the gap.

All of the estimated probit coefficients except gender contribute to a widening of the intercountry gap in union coverage. However, about 85 percent of the gap is associated with three sets of coefficients: industrial composition (34 percent), the constant term (32 percent), and occupational distribution (19 percent). Thus about one-third of the intercountry unionization differential can be accounted for by the fact that an individual with the same characteristics is 0.29 more likely to be covered by a collective agreement in Canada. An additional half (34 percent + 19 percent) of the gap can be attributed to the fact that workers employed in particular industries and occupations in Canada are more likely to be unionized than are U.S. workers with the same personal characteristics employed in those industries and occupations. Finally, almost 7 percent of the gap is associated with the fact that more of the Canadian labor force is employed in the public sector (broadly defined).

In summary, this analysis indicates that the structuralist hypothesis explains very little of the Canada-U.S. unionization differential. Differences in the structure of the respective labor forces account for about 15 percent of the differential; the remaining 85 percent is due to the greater likelihood of union coverage of a Canadian worker with a given set of characteristics. The only structural difference that makes a significant contribution to the unionization gap is the greater extent of public sector employment in Canada, a feature that is now examined in more detail.

#### **4.5 Private versus Public Sector Differences**

From part B of table 4.7, the total contribution of the public sector employment variable is .022, or 8.0 percent, of the Canada-U.S. unionization gap. Most of this contribution (6.9 percent) is associated with the larger fraction of Canada's labor force employed in the public sector; the remaining 1.1 percent arises because, other things being equal, Canadian public sector employees are slightly more likely to be unionized than their U.S. counterparts. Despite the evident conclusion that the search for greater understanding of the intercountry unionization gap should be focused elsewhere, there are several reasons why a more detailed examination of public-private sector differences is

22. See Doiron and Riddell (1993). The procedure involves a Taylor series approximation to the left-hand side of equation (11). The approximation error is shown in table 4.7. The Taylor series approximation was evaluated at the mean of the Canadian and U.S. union densities. Evaluating the approximation at either the Canadian or the U.S. level resulted in substantially larger approximation errors.

worthwhile. Perhaps the most important reason is simply that many observers believe that a substantial amount of the unionization differential is associated with intercountry differences in the importance of the public sector and in the relationship between the public sector and unionization.

In addition, in both countries the public sector has been in recent decades the main source of growth in unionization, in contrast to the private sector, where union density has either grown slowly or declined. A full understanding of intercountry differences in the role of collective bargaining requires an analysis of each country's public and private sectors.

Unfortunately, the publicly available data make it difficult to analyze this issue. Data are available on employment and unionization by industry. However, outside of public administration (which is entirely in the public sector in each country), both publicly and privately owned enterprises coexist in many industries—especially in Canada, where federal and provincial governments have numerous Crown corporations operating in industries such as transportation, communications, and natural resource exploration and extraction (Economic Council of Canada, 1986). Researchers have dealt with this problem by making various adjustments to the published data, adjustments that are clearly imperfect.<sup>23</sup>

The problems associated with data on unionization by industry can be overcome by the use of microdata in which both public-private sector status and union status are observed. The two surveys described above (SUM and CPS earnings file) provide comparable measures of union status and public versus private sector employment in the two countries as of December 1984.

Table 4.8 shows the percentage of employed paid workers in the public sector in each country by gender, full-time and part-time employment, occupation, and industry. Overall, 23 percent of paid workers are in the public sector in Canada versus 18 percent in the United States.<sup>24</sup> Public sector employment in Canada is particularly more significant in the transportation, communication and utilities, and finance, insurance, and real estate industries and in the transportation and moving and managerial, professional, and technical occupations. Differences between the two countries in the amount of public sector employment in the education, health, and welfare industries are not large. Table 4.8 also highlights the dangers associated with public versus private sector breakdowns based on industry classifications. In both Canada and the United States, many industries contain a mixture of publicly and privately owned enterprises.

23. For example, Troy (1990) includes all employment in education, health, and welfare services as being in the public sector in Canada. Because many employees in health and welfare services—and to a lesser extent in education—work for private employers, these adjustments probably overstate the size of Canada's public sector. Meltz (1989) also includes all education and health in Canada in the public sector.

24. The tabulations in tables 4.8 and 4.9 are based on the full samples (after exclusions), whereas the tabulations and parameter estimates in table 4.6 are based on random subsamples. Thus small differences in the reported statistics may exist.

**Table 4.8** Percentage of Employed Paid Workers in the Public Sector, Canada and the United States, December 1984

	Canada	U.S.
All workers	23	18
Males	22	15
Females	23	20
Full-time	24	18
Part-time	15	14
Occupation		
Managerial, professional, technical	38	32
Clerical	25	24
Sales	3	2
Service	22	22
Primary	12	10
Processing, machining, laborers	9	5
Transportation, moving	23	6
Materials handling	11	10
Industry		
Agriculture	0	3
Forestry, fishing	14	54
Mining	5	0
Construction	0	9
Durable manufacturing	0	1
Nondurable manufacturing	1	0
Transportation	40	24
Communication, utilities	59	15
Wholesale trade	1	0
Retail trade	2	1
Finance, insurance, real estate	8	1
Education, related services	75	80
Health, welfare services	25	20
Other services	1	3
Public administration	100	100

*Sources:* Tabulated from Statistics Canada, Survey of Union Membership, supplement to the Labour Force Survey, December 1984; and U.S. Bureau of Labor Statistics, CPS earnings file, supplement to the Current Population Survey, December 1984. Excluded from the sample are nonpaid workers (self-employed, unpaid family workers), armed forces, those not employed in the reference period, and observations with missing values for the relevant variables.

Table 4.9 shows the extent of union organization among public and private sector employees by gender, full-time and part-time employment, occupation, and industry. In both countries there are very substantial differences in union density between the public and private sectors. Using the preferred measure of union status (collective agreement coverage), 81 percent of Canadian public sector paid workers are unionized versus 34 percent in the private sector. For the United States the comparable union densities are 41 percent in the public sector and 16 percent in the private sector. Thus in both countries pub-

**Table 4.9** Extent of Union Organization of Government and Private Employed Paid Workers in Canada and the United States, December 1984

	Percentage of Paid Workers Who Are Union Members				Percentage of Paid Workers Covered by a Collective Agreement			
	Public Sector		Private Sector		Public Sector		Private Sector	
	Canada	U.S.	Canada	U.S.	Canada	U.S.	Canada	U.S.
All workers	74	34	29	15	81	41	34	16
Males	75	40	35	20	81	45	39	21
Females	72	29	23	9	80	37	27	10
Full-time	77	39	32	17	84	46	37	19
Part-time	49	11	15	6	60	16	19	6
Occupation								
Managerial, professional, technical	73	36	24	6	80	42	30	8
Clerical	74	30	19	9	83	37	23	11
Sales	66	11	8	5	72	19	11	6
Service	67	37	21	7	74	42	23	8
Primary	70	21	25	4	73	26	27	4
Processing, machining, laborers	86	39	52	31	89	47	56	33
Transportation, moving	89	42	36	29	92	42	41	30
Materials handling	80	40	50	30	83	41	55	32
Industry								
Agriculture	n.a.	0	2	1	n.a.	0	3	2
Forestry, fishing	63	8	37	0	67	8	40	0
Mining	42	n.a.	34	21	50	n.a.	38	21
Construction	n.a.	39	41	22	n.a.	40	45	23
Durable manufacturing	100	51	50	29	100	56	55	32
Nondurable manufacturing	71	75	47	22	77	86	51	24
Transportation	84	69	39	33	86	73	44	35
Communication, utilities	74	36	59	42	80	51	63	47
Wholesale trade	9	0	14	6	9	0	18	6
Retail trade	60	19	13	6	80	27	16	7
Finance, insurance, real estate	55	14	6	4	63	14	9	5
Education, related services	81	38	44	10	89	46	56	13
Health, welfare services	72	24	53	6	78	28	60	8
Other services	44	13	9	6	45	18	12	7
Public administration	69	29	n.a.	n.a.	78	35	n.a.	n.a.

Sources: See table 4.8.

Note: N.a. means that there were no paid workers (covered or not covered) in the category.

lic sector employees are more than twice as likely as their private sector counterparts to be represented by a union. Even within the same industry or occupation, workers in publicly owned enterprises in both countries are much more likely to be organized than their counterparts in privately owned enterprises. These differences explain the large and highly significant coeffi-

cient on public sector status in the unionization equation estimates reported in table 4.6.

Also noteworthy is the finding that the rule of thumb discussed in the context of table 4.2—that a randomly selected Canadian worker is about twice as likely to be unionized as his or her U.S. counterpart—continues to hold when the data are broken down into the public and private sectors. For the public sector as a whole, union density is 81 percent in Canada versus 41 percent in the United States. The comparable statistics for the private sector are 34 percent for Canada and 16 percent for the United States. Thus, although the extent of union organization is higher in each country's public sector, the Canada-U.S. relative unionization differential is the same (i.e., a ratio of approximately two to one) in both the public and private sectors.

Because the determinants of union coverage may differ between the private and public sectors in each country, separate probit models were estimated for the two sectors. The parameter estimates were then used to decompose the intercountry unionization differential by sector into a component associated with differences in the characteristics of the respective labor forces and a component associated with the impacts of those characteristics on the probability of union coverage. These decompositions are shown in part A of table 4.7.<sup>25</sup> In the private sector, all of the intercountry gap in unionization is due to differences in the impacts and none to differences in the characteristics of the respective labor forces. In the public sector, 95 percent of the gap is associated with differences in the estimated probit parameters, and only 5 percent with intercountry differences in characteristics. Thus these results further strengthen the conclusion reached in the previous section that—apart from the greater extent of public sector employment in Canada—differences in the structures of the respective labor forces account for very little of the large intercountry differential in union coverage.

The decompositions for each sector reported in column 3 of part A of table 4.7 were also broken down to show the contribution of each variable, as done for the full sample in part B of table 4.7. In the private sector approximately half of the total gap is attributed to the larger Canadian constant term; about 30 percent is attributed to larger Canadian coefficients associated with particular industries (especially education, health, and welfare) and about 8 percent to larger Canadian coefficients associated with particular occupations (especially primary occupations). In the public sector more than two-thirds of the gap is attributed to the higher constant term in the Canadian probit equation and about one-third to the occupational coefficients, especially clerical, processing, transportation and moving, and materials handling occupations.

In summary, analysis of the public and private sectors separately does not alter the conclusions reached from the analysis of the full samples. Within

25. Estimated parameters for the public and private sectors separately are available on request from me, as are the breakdowns showing the contributions of each variable.

each sector differences in the structural characteristics of the Canadian and U.S. labor forces account for very little of the intercountry unionization gap. Almost all of the differential is due to the greater likelihood of union coverage of a Canadian worker with a given set of characteristics. In each sector, most of the gap can be accounted for by the fact that an employee with the same set of characteristics is much more likely to be covered by a collective agreement in Canada. The remainder of the differential in each sector can largely be attributed to the fact that Canadian workers employed in particular industries and occupations are more likely to be unionized than are U.S. workers with the same personal characteristics employed in the same industries and occupations.

#### **4.6 Social Attitudes toward Unionization**

Explanations of the substantial Canada-U.S. gap in unionization must confront the difficult task of distinguishing between endogenous and exogenous forces. For example, beginning with Weiler (1983, 1984), several scholars have identified intercountry differences in the legal framework governing union formation and the practice of collective bargaining as being important contributors to the unionization differential. However, do the laws in each country not simply reflect the underlying values held by the citizens of the respective societies? Canada-U.S. differences in the legal framework governing collective bargaining and in the extent of union organization may thus be jointly endogenous outcomes of fundamental value differences between the two societies.

The thesis that the gap in unionization is due to differences between Canada and the United States in underlying social values has been stated most forcefully by Lipset (1986). It is certainly possible to make a persuasive case that the values and institutions of Canada and the United States differ in important and apparently enduring ways (Lipset 1990). Canadians are more inclined to favor collective forms of organization and state intervention in the economy than are Americans, who place more importance on individual rights and freedoms and free enterprise. On the surface, these apparent differences in social values are consistent with the differences between Canada and the United States in the role played by unions. If underlying social attitudes are an important source, however, why did the Canada-U.S. unionization differential emerge only in the past three decades? Why did the two countries display very similar trends in union density until the 1950s? Clearly Lipset's hypothesis requires a more careful examination.

Comparative evidence on social attitudes toward unions is available from similar public opinion polls in both the United States and Canada. The U.S. data have been used by Lipset (1986) to support the view that postwar changes in American attitudes toward unions are responsible for the decline in union density in that country. In particular, there is a strong correlation between

American attitudes toward unions (as measured by the responses to the question, "In general, do you approve or disapprove of labor unions?") and union density. As can be seen from table 4.10 and figure 4.2, since the early 1950s there has been a steady decline in the percentage of Americans with favorable attitudes toward unions and a steady increase in the percentage who disapprove of unions.

However, inspection of table 4.10 and figure 4.3 reveals that these same trends have occurred in Canada. Indeed, both the percentage who approve or disapprove of unions at each point in time and the changes in these levels over time are remarkably similar in the two countries. A more formal test of this

**Table 4.10 Attitudes toward Unions in Canada and the United States, Percentage of Respondents**

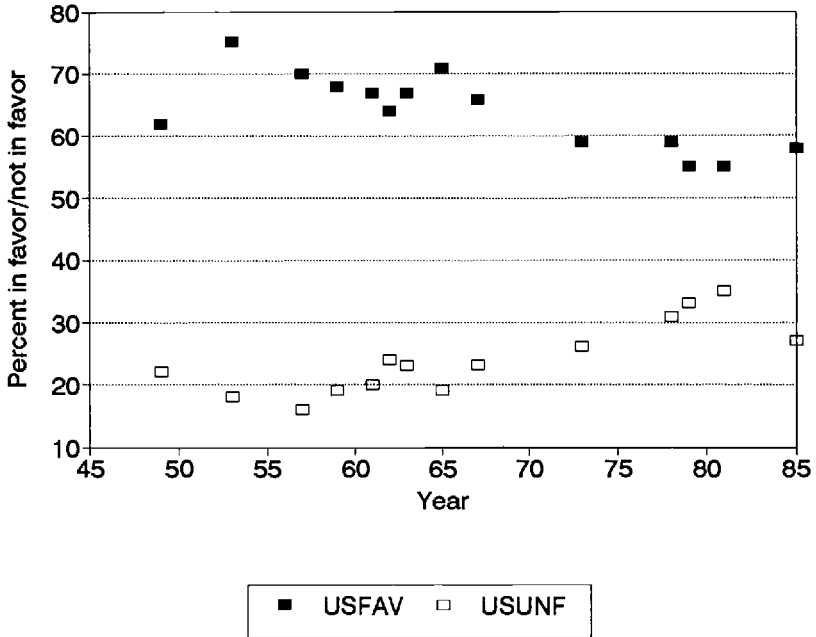
	Canada		U.S.	
	Favorable	Unfavorable	Favorable	Unfavorable
1949	—	—	62	22
1950	62	14	—	—
1952	60	15	—	—
1953	—	—	75	18
1956	69	12	—	—
1957 <sup>a</sup>	—	—	70	16
1958	62	20	—	—
1959	—	—	68	19
1961 <sup>a</sup>	66	23	67	20
1962	—	—	64	24
1963	—	—	67	23
1965 <sup>a</sup>	—	—	71	19
1967	—	—	66	23
1970	54	30	—	—
1973	—	—	59	26
1975	57	26	—	—
1976	42	36	—	—
1978	46	41	59	31
1979	50	35	55	33
1980	54	30	—	—
1981	—	—	55	35
1982	48	32	—	—
1984	51	35	—	—
1985	—	—	58	27

Sources: Canadian Institute of Public Opinion, *The Gallup Report* (Toronto: various years); Gallup Poll, *The Gallup Report* (Princeton, N.J.: various years).

Notes: For Canada the question posed was, "Generally speaking, do you think that labour unions have been a good thing or a bad thing for Canada" (1950 to 1958 and 1976 to 1985). During the period 1961 to 1975 the question posed was, "In general do you approve or disapprove of labour unions?" For the United States the question posed was, "In general, do you approve or disapprove of labor unions?"

<sup>a</sup>U.S. data are averages of the two surveys conducted in these years.





**Fig. 4.2 Attitudes toward unions, United States, 1949–85**

Sources: See table 4.10.

Note: USFAV = percent in favor, United States; USUNF = percent not in favor, United States.

similarity was carried out by regressing the percentage in favor of unions in each country on a constant term and a time trend. The hypothesis that the responses were drawn from a population with the same attitudes toward unions cannot be rejected.<sup>26</sup> A similar result obtains when the percentage who disapprove of unions is used as the dependent variable.

In summary, although the two societies differ in many ways, Canadians and Americans evidently have very similar attitudes toward unions. Changes in these attitudes during the past four decades have also been remarkably similar in the two countries. Thus there is no empirical support for the view that the

26. The downward trend in favorable attitudes toward unions is actually steeper in Canada than in the United States, although the differences are not statistically significant. The estimated equations are

$$\text{USFAV} = 92.6 - 0.43 \text{ TIME}$$

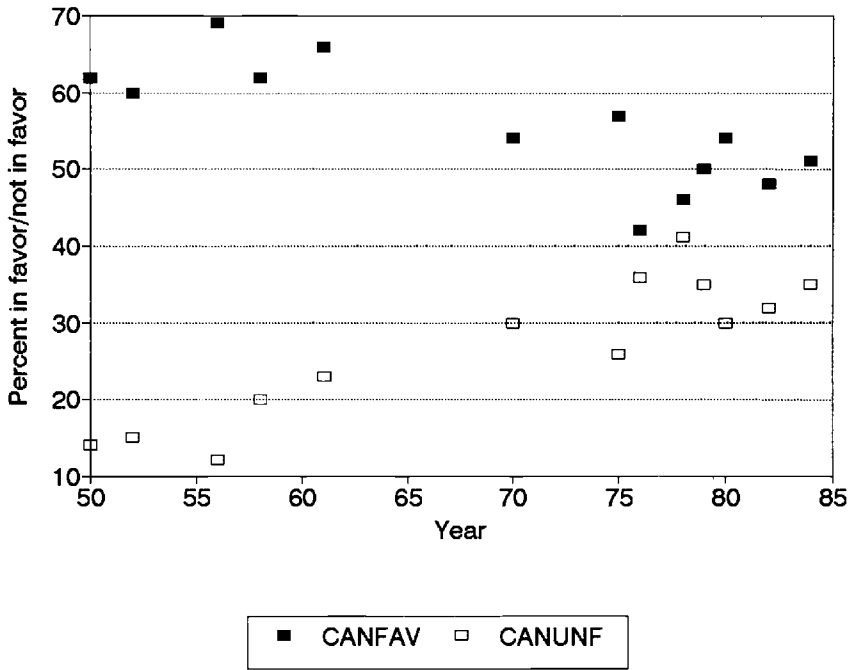
(13.3)    (-4.2)

and

$$\text{CANFAV} = 92.0 - 0.53 \text{ TIME},$$

(10.8)    (-4.3)

where USFAV and CANFAV are the percentage who approve of unions in the United States and Canada, respectively, and TIME is a time trend. Figures in parentheses are *t*-statistics.



**Fig. 4.3 Attitudes toward unions, Canada, 1950–84**

*Sources:* See table 4.10.

*Note:* CANFAV = percent in favor, Canada; CANUNF = percent not in favor, Canada.

Canada-U.S. unionization differential can be attributed to fundamental differences in social attitudes toward unions and collective bargaining.

#### 4.7 Costs of Unionization to Employers

Several studies have noted that Canada appears to have significantly less overt management opposition to unions in the form of unfair labor practices and significantly more union organizing activity (Freeman 1986; Kumar 1991). The reasons for lower levels of management opposition to unions are not clear, however, especially given the close corporate linkages between the two countries. One view is that the Canadian legal framework and the associated administration and enforcement mechanisms reduce the incentives to oppose unions relative to the United States (Flanagan 1987; Kumar 1991). However, another possible explanation is that unionization is less costly to Canadian employers than to their U.S. counterparts.

Evidence relating to possible intercountry differences in the costs associated with unionization is presented in table 4.11. The union-nonunion wage

**Table 4.11** Union-Nonunion Wage Differentials in Canada and the United States, December 1984

Sector	Estimated Differential (%)	
	Canada	U.S.
Total economy	24.0	23.3
Private sector	27.0	27.4
Public sector	7.9	-3.9

*Sources:* See table 4.8.

*Notes:* Based on log earnings equations estimated by OLS separately on the covered and uncovered sectors. Differentials are evaluated at the mean of the data in the sector and country. Controls included gender, part-time, age, education, public sector (total economy estimates), industry, and occupation.

differentials are estimated using the 1984 SUM and CPS earnings file; both data sets contain comparable information on hourly earnings.

These estimated union wage impacts indicate that the costs of unionization are very similar in the two countries, particularly in the private sector, where possible management opposition to unions is most relevant. Thus this evidence does not support the position that lower levels of overt management opposition to unions in Canada are due to Canadian unions having less impact on wages than their U.S. counterparts do.

#### 4.8 Conclusions

Canada and the United States displayed similar patterns of union growth from the early 1900s until the mid-1950s. Since that time, trends in unionization have diverged sharply, with union density declining steadily in the United States but growing in Canada until the mid-1980s and subsequently declining modestly. As a consequence, a huge Canada-U.S. gap has emerged in the extent of union organization—so that in recent years the fraction of the Canadian labor force represented by unions has been approximately double that of the United States. The dramatic decline in union strength in the United States and the emergence of a substantial Canada-U.S. unionization differential are important developments affecting these two societies. This paper has been concerned with contributing to our understanding of the causes of these dramatic developments, taking advantage of the “natural experiment” yielded by two countries with not only similar economies but also similar histories of union development and industrial relations systems. To as great an extent as possible I have used data sets that are comparable between the two countries, so that differences in observed outcomes are due mainly to differences in underlying behavior rather than to differences in survey or questionnaire design.

The main findings of this comparative analysis are the following:

1. The intercountry differences in union coverage are pervasive rather than being concentrated in specific sectors of the economy or segments of the labor force. Whether individuals are classified by gender, age, industry, occupation, public or private sector employment, or education, a Canadian worker is approximately twice as likely to be represented by a union as his or her American counterpart.

2. A comparative demand-supply analysis indicates that the gap in unionization can be attributed to the greater likelihood that a Canadian worker who wishes to be represented by a union will in fact be unionized (supply conditional on demand) and to the greater desire for union representation by Canadians. This finding is consistent with the view that differences between Canada and the United States in overt management opposition to unions and the legal framework governing union formation and the practice of collective bargaining contribute to the unionization differential.

3. A comparative microanalysis of union incidence concludes that structural differences in the respective economies and labor forces account for about 15 percent of the intercountry differential in unionization. Eighty-five percent of the differential is attributed to the fact that a Canadian worker with given characteristics is much more likely to be covered by a collective agreement than a U.S. worker with the same characteristics.

4. The only quantitatively important structural difference arises from the fact that the fraction of paid workers employed in government-owned enterprises is about 30 percent higher in Canada than in the United States. In both countries, public sector employees are substantially more likely to be unionized than their private sector counterparts in the same industry or occupation. The greater involvement of publicly owned enterprises in the Canadian economy accounts for about 7 percent of the intercountry differential in union density.

5. There is no empirical support for the hypothesis that the Canada-U.S. gap in union coverage is due to differences between the two countries in the underlying social attitudes toward unions.

6. The impact of unions on wages in the private sector is very similar. Thus intercountry differences in the costs to employers associated with unionization cannot account for differences in the amount of overt management opposition to unions.

On the whole these findings support the hypothesis that much of the Canada-U.S. unionization gap can be attributed to intercountry differences in the legal regime pertaining to unions and collective bargaining and to differences in overt management opposition to unions (itself possibly a consequence of differences in collective bargaining laws and their administration). Only a modest portion of the differential in union coverage is associated with the greater extent of public sector employment in Canada. Other explanations of the differential that have been advanced receive little, if any, support.

## Appendix

Table 4A.1 Demand for Unionization in the Public and Private Sectors

Variable	AFL Survey		CFL Survey		Pooled Sample	
	Public	Private	Public	Private	Public	Private
Constant	0.18 (0.3)	-0.48 (-1.5)	-1.28 (-1.6)	0.31 (0.6)	-0.68 (-1.6)	-0.29 (-1.1)
Male	0.11 (0.6)	0.08 (0.8)	0.08 (0.3)	0.37 (2.6)	0.08 (0.6)	0.17 (2.1)
Age 25-34	0.19 (0.7)	0.05 (0.4)	0.20 (0.4)	-0.25 (-1.1)	0.15 (0.6)	-0.03 (-0.2)
Age 35-44	0.08 (0.3)	0.14 (0.9)	0.56 (1.1)	0.11 (0.5)	0.22 (0.9)	0.16 (1.2)
Age 45-54	0.46 (1.3)	0.03 (0.2)	1.01 (1.7)	-0.08 (-0.3)	0.62 (2.1)	0.02 (0.2)
Age 55-64	-0.14 (-0.4)	0.24 (1.2)	1.37 (1.8)	-0.11 (-0.3)	0.30 (0.9)	0.10 (0.6)
Age 65+	-0.01 (-0.0)	-0.18 (-0.4)		-0.61 (-1.0)	-0.05 (-0.0)	-0.34 (-0.9)
Some high school	0.30 (0.5)	0.71 (2.2)	1.34 (2.0)	-0.43 (-0.9)	0.82 (2.0)	0.24 (0.9)
High school graduate	0.08 (0.2)	0.48 (1.6)	1.86 (2.9)	-0.33 (-0.7)	0.83 (2.3)	0.22 (0.9)
Some college	-0.10 (-0.2)	0.07 (0.2)	2.02 (3.0)	-0.32 (-0.7)	0.87 (2.2)	-0.05 (-0.2)
Some university	-0.42 (-0.7)	-0.04 (-0.1)	2.12 (2.7)	-0.58 (-1.1)	0.61 (1.4)	-0.22 (-0.7)
University graduate	-0.15 (-0.3)	-0.34 (-1.1)	1.76 (2.8)	-0.29 (-0.6)	0.66 (1.8)	-0.34 (-1.3)
Canada					0.65 (4.4)	0.19 (2.2)
<i>N</i>	216	674	179	338	395	1,012
Currently predicted (%)	62	62	85	58	72	58

**Table 4A.2 Supply of Unionization in the Public and Private Sectors**

Variable	AFL Survey		CFL Survey		Pooled Sample	
	Public	Private	Public	Private	Public	Private
Constant	-2.12 (-2.6)	-1.61 (-2.9)	6.24 (0.0)	-0.53 (-0.7)	-1.23 (-2.0)	-1.22 (-2.9)
Male	0.18 (0.7)	0.93 (5.8)	0.24 (0.9)	0.21 (0.9)	0.21 (1.2)	0.63 (5.0)
Age 25-34	1.41 (2.5)	0.47 (2.0)	-0.12 (-0.2)	0.62 (2.0)	0.85 (2.4)	0.47 (2.6)
Age 35-44	1.85 (3.2)	0.67 (2.6)	-0.24 (-0.4)	0.67 (2.1)	1.05 (2.9)	0.56 (2.9)
Age 45-54	1.50 (2.5)	0.62 (2.3)	-0.03 (-0.1)	1.41 (3.3)	0.99 (2.6)	0.79 (3.6)
Age 55-64	1.97 (2.9)	1.39 (4.1)	-0.23 (-0.3)	6.19 (0.0)	1.16 (2.7)	1.51 (5.2)
Age 65+	-3.99 (-0.0)	-5.4 (-0.0)		-6.01 (0.0)	-4.89 (-0.0)	0.13 (0.2)
Some high school	0.26 (0.4)	0.62 (1.1)	-5.6 (-0.0)	-0.15 (-0.2)	-0.24 (-0.4)	0.09 (0.2)
High school graduate	0.30 (0.5)	0.35 (0.7)	-5.5 (-0.0)	0.47 (0.7)	-0.05 (-0.1)	0.20 (0.5)
Some college	0.32 (0.4)	0.39 (0.7)	-4.2 (-0.0)	0.33 (0.5)	0.46 (0.8)	0.17 (0.4)
Some university	0.18 (0.2)	-0.06 (-0.1)	-5.5 (-0.0)	0.07 (0.1)	-0.11 (-0.2)	-0.04 (-0.1)
University graduate	0.86 (1.4)	0.41 (0.7)	-5.1 (-0.0)	-0.09 (-0.1)	0.48 (0.9)	-0.01 (-0.0)
Canada					1.02 (5.8)	0.67 (5.1)
<i>N</i>	133	302	150	181	283	483
Currently predicted (%)	64	69	83	70	73	69

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