Abstract

This paper examines demand for union membership amongst young workers in Britain, Canada and the United States. The paper benchmarks youth demands for collective representation against those of adult workers and finds that a large and significant representation gap exists in all three countries. Using a model of representation advanced by Farber (1982) and Riddell (1993) we find that a majority of the union density differential between young and adult workers is due to supply-side constraints rather than a lower desire for unionisation on the part of the young. This finding lends credence to two conjectures made in the paper; the first is that tastes for collective representation do not differ among workers (either by nationality or by age) and second that union representation can be fruitfully modelled as an experience good. The experience good properties of union membership explain the persistence of union density differentials amongst youth and adults both over time and across countries.

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Youth-Adult Differences in the Demand for Unionisation: Are American, British, and Canadian Workers All That Different?

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1. Introduction

It is often asserted by many commentators that trade unions are outmoded institutions, unable to reach a new generation of workers imbued with individualist values that are at odds with the solidaristic ethos underpinning unionism. They are quick to attribute declines in union membership, observable across most of the Western industrialised world, to young people's reduced desire for union membership. It is certainly the case that the unionisation rate for young workers (those aged 15-24) is less than half than that of adult workers (those aged 25+). This youth-adult union density differential appears almost everywhere but is particularly striking in Anglo-Saxon economies where similar systems of workplace and statutory recognition prevail. In particular, Britain, Canada, and the United States all display youth unionisation rates that are two and a half times lower than those of adult workers. However, to establish that the union movement's future is at risk because young people are turning their backs on unions, one has to establish two things. First, that the youth-adult unionisation differential is growing and, secondly, that this is due to a reduced desire for membership on the part of the young. In this paper, we present evidence on both these points. We find that the youth-adult differential rose in Britain during the 1990s, but not in Canada or the United States. Furthermore, we show that the desire for union membership is actually higher among young workers than it is among adult workers. We go on to show how lower observed unionisation among young workers can co-exist with increased desire for membership due to the nature of union membership, which can be conceived of as an experience good, and by the costs and benefits of joining a union for young workers relative to those faced by older workers.

In our paper we assume – in the spirit of neo-classical economic theory – that employees of any age have the same underlying preferences.[1] What distinguishes their labour market behaviour are the differing constraints they face. In applying the similar-taste view of consumer theory to the question of youth-adult union density differentials, we arrive at a rather intriguing implication: that preferences for union representation at the workplace should be the same across all age groups. Given the assumption of homogeneous preferences, the divergence in the probability of being unionised can therefore be explained by either greater frustrated demand for unionisation amongst younger workers (under-

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[1] This view was most forcefully argued by Stigler and Becker (1977) who asserted that: 'Tastes neither change capriciously nor differ importantly between people. On this interpretation…the economist continues to search for differences in [constraints] to explain differences or changes in behaviour."

representation) or greater numbers of dissatisfied older-aged unionised workers (over-representation). Put simply, if workers have the same underlying preferences, but large differentials exist in the likelihood of being unionised, then at present one group of workers 'isn't getting what they want.'

Three testable propositions emerge from the queuing and experience good model of unionisation described below. The first proposition is that it should be more costly for younger employees to gain representation at the workplace. This is so because of differing levels of knowledge surrounding the process of union organizing and information concerning the potential costs and benefits of union membership. In a similar context, it should be relatively more costly for workers already employed in unionised environments to opt out of membership since representation is usually granted at the level of the workplace and employees not wishing to pay union dues still receive representation. Since, on average, the probability of being unionised peaks when workers are middle-aged, there may be a significant segment of older-aged workers who may be unionised, but who would otherwise desire to work in a non-unionised environment.[2]

The second proposition asserts that if informational impediments and opposition to union organising are greater for younger workers, then a majority of the density differential between youths and adults can be ascribed to supply side constraints and not to differences in demand.

Our last proposition argues that if tastes are indeed similar among workers, then estimating an equilibrium union density rate – given data on actual union density and voting intentions of union and non-union workers by age group – should yield a probability of being unionised that is statistically similar for both older and younger workers.

The paper begins in Section 2 with a description of Farber and Krueger's (1993) queuing model of union representation and how it can be applied to adult-youth union density differentials. We then show it can be extended with the use of the experience good model of union membership. In Section 3 the paper describes adult-youth union density differentials in Britain, Canada and the United States throughout the 1990s, and we then provide information on the data sources. In Section 4 a description of the empirical model used and the specific propositions to be tested are provided. In Section 5 the empirical results are presented and the paper ends with a summary of the findings.

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[2] Though this group of frustrated union members may be as large as the group of frustrated young workers desiring membership, it is a question that can only be answered by an appeal to the empirical evidence.

2. What is Union Membership?

A useful framework for analyzing union density differentials and testing propositions regarding the effects of preferences and constraints in determining union membership is the queuing model of union representation. This model is also known as the supply and demand framework of collective representation (Farber, 1982; Farber and Krueger, 1993 and Riddell, 1993). In this model some workers may prefer to be unionised, but for various reasons, they are not. The reasons for remaining non-union, in spite of a willingness to be unionised, are multifaceted but are ultimately reducible to the fact that workplaces are costly to organize. However, once organized, they are more likely to remain unionised into the future. This produces two sets of union membership costs and probabilities: (i) the cost and probability of entering a unionised environment and (ii) the cost and probability of organizing a non-unionised workplace. These two concepts will be formalized below and then applied to the question of youth-adult union density differentials.

2.1 The queuing model applied to youth-adult union membership differentials

Following Riddell (1993), let z_i represent the difference between the expected utility of any job (union or non-union) for individual i. The utility loss or gain, which is unobserved, is dependent on a host of variables (X_i) such as differences in working conditions, job security and the wage differential between otherwise similar union and non-union jobs.

(1) $z_i = X_i \, b + \varepsilon_i$

If we let D_i be a dichotomous variable taking on the value 1 for individuals who would prefer to belong to a union, and hence prefer unionisation, and zero for those who do not, then,

(2) $\text{Prob} (D_i = 1) = \text{Prob} (z > 0) = \text{Prob} (U_i > - X_i b)$.

Now let $U_i = 1$ for individuals who are unionised and $U_i = 0$ for non-union workers. Assuming that labour markets are in equilibrium implies that individuals have sorted themselves into the jobs of their choice. If this is so, then it would be the case that

(3) Pro$b$ (U$_i$ =1) = Pro$b$ (z>0) = Pro$b$ (U$_i$ >- X_ib).

This equation implies that the factors determining the demand for unionisation could be estimated using information on union status alone.

However, as discussed above there are several reasons why unions do not necessarily represent all individuals who prefer to be in a union job. One of the most obvious reasons relates to the costs of organising a union for an individual worker in systems where there exists a Wagner Act model of representation. If employers actively oppose union organizing attempts in environments where statutory recognition is the typical route by which workers gain collective representation, then from an employee's perspective, the costs of unionising may outweigh the benefits. Thus, even if a majority of current workers in a workplace prefer unionisation, they may remain non-unionised as a result of organising costs.[3]

Following Farber (2001) we can denote the cost of organizing an unorganized workplace by C_o and the cost of taking a job in an already unionised establishment by C_e so that $C_o > C_e$. A worker will therefore desire a unionised job when the perceived benefits V of unionisation outweigh the costs $V_i > C_e$. However, they will be willing to invest in organizing activity only when $V_i > C_o$. Since the actions of management determine whether a workplace will be easy or difficult to organize, the observable stock of union jobs is a function of more than just desired membership on the part of workers, since there will be workers who would like to be union members but for whom the cost of organizing is too high and therefore are unwilling to invest in organizing a union themselves. Formally these are workers for whom $C_e < V_i < C_o$ and the result is that there will be more workers who desire a union job than there are existing union jobs, resulting in frustrated demand for unionisation and an implicit queue.

The queuing model has important implications for estimating models of differing union status probabilities between different segments of workers. Since a worker will only be unionised if the worker prefers union employment to nonunion employment *and* a union employer hires the worker *or* the worker is part of a successful organizing drive, then one can imagine that certain workers have an easier time being hired into existing union jobs or have lower costs associated with union organizing.

In what follows, we argue that the cost of union membership is higher for young workers than for older aged workers. This is partially due to the traditional reasons cited in

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[3] Equally there may be workers who are unionised but are dissatisfied with membership and therefore unlikely to be members in the coming period.

the literature (*e.g.* unions tend to favour the organizing of older workers and thus pour greater resources in organizing older aged workers) but more importantly because of the nature of union representation itself. It turns out that if modeled from a consumer theory perspective – as any other product or service would be modeled – union representation has properties of what in standard industrial economic and marketing textbooks is known as an <u>experience good</u>. The experience good properties of union membership serve to raise both the cost of organising a union C_o^y and the cost of entering a unionised environment C_e^y for young workers as compared to older workers with similar tastes for unionisation. This leads to a situation where two workers (one young and one older) with equal perceived benefits of unionisation $V_i^y = V_i^o$ nevertheless displaying differing union status probabilities $\Pr ob(U_i^o = 1) > \Pr ob(U_i^y = 1)$ simply because $C_o^y > C_o^o$ or $C_e^y > C_e^o$.

So why is it that young workers find it more costly to organize or be hired into a unionised environment? For an answer, we begin with a more precise definition of experience goods and their properties.

2.2 Extending the queuing model: union membership as an experience good

Diamond and Freeman (2001) have recently identified the <u>incumbency effect</u> as one of the strongest determinants of whether or not workers develop favorable attitudes towards unions. The authors hypothesize that workers tend to 'like the workplaces that they have' as long as they meet some minimum threshold of acceptability in terms of working conditions and pay. Their model helps explain the cross-sectional difference in attitudes among workers towards unions at union and non-union work sites.

Another way of accounting for the Diamond and Freeman (2001) finding is to view union representation (or lack of representation) as an experience good. Experience goods are products or services whose characteristics and utility can only be fully assessed after 'purchase'.[4] Studies of consumer satisfaction suggest that consumers are more likely to 'learn to like what they buy' than 'buy what they like', especially if they purchase an experience-good. This is due to what social psychologists term 'attribution error' and can occur even when consumers carefully weigh their options before purchase. For example, if Bob thinks

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[4] By way of contrast, a search good, is one in which upon fairly simple inspection prior to actual purchase (*e.g.* clothing which can be tried on), quality and potential utility are easily assessed.

brands X, Y, and Z are equally attractive before purchase, his positive judgment of Y, if selected, will rise after purchase merely because of its selection.

2.3 Implications of the experience good model of union membership

Three implications with pertinence to youth-adult union density differentials fall out of the experience good model of union membership. These implications pertain to (1) informational asymmetries; (2) uncertainty and risk; and (3) attribution errors. These properties are of use in explaining union density differentials between groups and also the persistence of non-union enclaves at the regional, occupational and industry-wide level (Bryson and Gomez, 2001). Experience good properties exert their effect on observed age differentials in union membership by either lowering the perceived advantages of being a union member V_i or by raising the costs of becoming a union member, either by entering a unionised workplace C_e or by organizing to become unionised C_o.

2.3.1 Informational asymmetries

Theories drawn from the field of industrial economics imply that the amount of information supplied to consumers should be greater for experience goods than for search goods, because this is where information is most necessary, and hence, garners its highest returns. Advertising outlays, however, do not conform to the expectations of the model. In one of the earliest studies, Porter (1974) found that low-priced, frequently purchased 'search goods' receive more than twice the advertising outlays than do experience goods. This apparent anomaly can be explained by the fact that consumers are more likely to be informed about experience good product-quality through word-of-mouth referrals, rather than through paid advertising (Kotler, 2000).

A formal model of why word-of-mouth referrals are the preferred channel by which to disseminate information about experience goods is still largely unexplored.[5] However, the implication of word-of mouth referrals for union membership is relatively straightforward. As a service provided to workers, the value of union representation can only be judged after purchase. As such, personal referrals and social interactions are required in order to discern the potential benefits of working in a unionised environment. For young workers, the needed

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[5] Montgomery (1991) has a model applied to the labour market, as to why personal referrals are more likely to lead to a job offer than are otherwise comparable referrals.

social interactions and work experience are lacking, so that although many young workers may have a latent desire for union representation, it may not be sufficiently large to overcome managerial opposition or lack of knowledge concerning the effects of union membership. These informational asymmetries, in turn, generate higher perceived costs of organizing or becoming a union member for young workers as compared to otherwise similar but older-aged workers.[6]

2.3.2 Uncertainty and risk

There is greater uncertainty associated with the purchase of experience goods than equivalently priced search goods since one cannot discern quality before purchase. Uncertainty here is to be distinguished from 'risk'. Risk perceptions have to do with tolerances for mean-variance tradeoffs, whereas uncertainty refers to the absence of knowledge surrounding the expected value of a 'project' (in this case the payoff gained from becoming a union member and gaining access to union services) and the volatility associated with those expectations.

The degree of perceived uncertainty attached to the 'purchase' of union membership may be a function of a worker's age. As exposure to union and non-union environments increases with age, older workers are better able to select workplaces that fit their appropriate tolerances for risk and insurance, and also to gauge the effects of unionisation if required to vote for representation. Thus, two workers with the same underlying risk preferences may differ in their union status simply because of the uncertainty regarding the payoffs from joining a unionised environment, or voting for unionisation at the workplace. These uncertainties serve, once again, to raise the costs of organizing or choosing a unionised workplace in which to be employed.

2.3.3 Attribution error

Studies of consumer behavior demonstrate that most individuals do not learn to buy what they like after random sampling, but instead learn to like what they buy without trial and error purchasing. This is especially true of experience goods. Experience goods often display higher than expected 'post-purchase' satisfaction, which is not consistent with the

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[6] Similar in this context simply means workers with the same desire for membership and costs refer to such things as fear of job loss, fear of strike action, and managerial opposition.

rational model of consumer behavior (Greer, 1992). Such behavior is often termed attribution error, in that people rationalize their behavior after undertaking it, rather than engaging in a clear and rational pre-purchase survey of options.

Applying this logic to the persistence of low union density enclaves, one finds that historical or path dependent labour market processes have an underlying micro-economic foundation. Being 'born' into a non-union workplace – and assuming that the non-union environment meets some minimum level of acceptability in terms of pay and working conditions – makes the chances of remaining non-unionised much higher. Non-union representation is one type of working arrangement (or one kind of experience good). This non-union status remains even if workers display a desire for representation, since the organization of a union is not costless and workers will simply rationalize their non-union status by claiming that they are 'better off' and 'happier' working in a non-union environment. Since most young workers today are employed in 'greenfield sites' with little or no union presence (see Figure 2), it is likely that the attribution error effect is at work, thus explaining why higher levels of frustrated demand for unionisation can co-exist with little or no organizing activity.

3. Unions and Young Workers in the 1990s: Britain, Canada, and the US

3.1 Union density by age group

Table 1 shows the percentage of union members in the labour force by age group for the 1990s in Britain, Canada, and the United States. It shows a steady decline in union density across adult age groups in all three countries, with the largest decline in absolute percentage point terms occurring in Britain. In Canada there was a slight increase in union density amongst youth in 2000 as compared to 1995, but still lower than the figure estimated in 1990. In all three countries, adults were more likely to be unionised than youth.

In Figure 1, the adult-youth density differential for each country is plotted against three time periods taken in the 1990s. Interestingly, three distinct patterns emerge. In Britain, the differential has steadily increased, whereas in the US the differential has steadily declined. In Canada the differential rose between 1990 and 1995, only to fall back to its 1990 level in 2000.

3.2 Data on desired union membership

Our analysis of preferences for unionisation in Canada and the United States utilises data drawn from the Lipset and Meltz (1997) survey of Canadian and American worker attitudes toward work, social policy and unions. The survey generated a representative sample of Canadian and American workers. The purpose of the survey was to probe the views of the population in general and of employees in particular toward work, institutions and social policy. More specifically, information was provided on general values of workers, including views on individualism versus group or communitarian orientation, the role of governments, confidence in institutions, and perceptions of labour market outcomes such as whether they expected to be laid off in the near future.

The Angus Reid Group, one of Canada's leading public opinion survey firms, administered the survey through telephone calls – which averaged 20-26 minutes per respondent – in June and early July 1996. The survey was conducted in French in the province of Quebec and in Spanish in the US to obtain a representative sample of respondents. In all cases, the results in this paper are drawn from interviews with randomly generated samples of working age adults in Canada and the US.

Both union and non-union respondents were asked a variety of questions about their attitudes towards unions and specifically whether they would prefer to belong to a union. Preferences for union membership differed across age groups, with youths aged 15-24 more interested in belonging to a union than adults aged 25-64 in Canada (57 versus 48 percent) while in the US adults had a slightly higher preference for unionisation (47 versus 53 percent). Our measure of preferences for unionisation is based on the response to the survey question "All things considered, if you had a choice, would you personally prefer to belong to/remain in a labour union or not?"

For Britain, the British Social Attitudes Survey (BSA) was employed since the 1998 BSA contains two data items which relate to the demand for unionisation. The first measure is based on hypothetical questions asked of employees in non-unionised and unionised workplaces. Employees in unionised workplaces are asked: 'Do you think that your workplace would be a better or worse place to work in if there was no trade union/staff association, or would it make no difference?' Employees in non-unionised workplaces are asked whether their workplace would be a better or worse place to work in if there *was* a union or staff association. In both cases, responses are coded along an ordinal scale from 'a lot better' to 'a lot worse'. We combined the two measures so that, for each employee, we

have an indicator of whether or not the employee thinks the workplace is, or would be, a better place to work in where a union is present. Where employees say the presence of a union makes, or would make, the workplace 'a lot better' or 'a little better' to work in, this is treated as a desire for unionisation.

The second measure of desire for unionisation in BSA 1998 is a question asked of employees in workplaces without a union or staff association recognized by the employer for pay bargaining. It asks: 'If there were a trade union at your workplace, how likely or unlikely do you think you would be to join it?' Answers range from 'very likely' to 'not at all likely'.

4. The Empirical Model

The queuing model presented in Section 2 depicted a more realistic portrait of the nature of union membership, where the true or 'total' demand for union jobs is defined by the fraction of workers who are either union members and who would remain so if a vote were held, or if non-union, who would vote for unionisation at their workplace. The supply of union jobs relative to demand is measured by the fraction of workers who are union members compared to those demanding union representation. If there were no queues for union jobs, the fraction would be one. To the extent that there are non-union workers who prefer union representation, this fraction will be less than one. The fraction of individuals in the non-union sector $U_i=0$ who would vote for unionisation at their workplace $D_i=1$ therefore constitutes a measure of "frustrated demand" (or an inverse measure of relative supply).

These two components can be more formally specified. Following Farber and Krueger (1993), the probability that a worker is unionised is given by

(4) $\mathrm{Pro}b(\mathrm{U}=1) = \mathrm{Pro}b\ (\mathrm{D}=1) - \mathrm{Pro}b\ (\mathrm{D}=1, \mathrm{U}=0)$.

The first term on the left hand side is the desire for unionisation among union and non-union workers and therefore represents the demand for union representation. The second term is what Riddell (1993) terms frustrated demand. The probability that a worker is unionised, therefore, is equal to the probability that she desires union representation minus the probability that the worker desires union representation but is not working in a unionised job.

4.1 The supply-demand framework applied to youth and adult workers

The demand and supply framework is useful in evaluating competing explanations for the difference in unionisation rates among different groups or categories of workers.[7] Taking the case of youth-adult differences in the probability of being unionised, an equation analogous to (4) can be specified,

(5) $\text{Pro}b\ (U_o=1) - \text{Pro}b\ (U_y=1) = [\text{Pro}b\ (D_o=1) - \text{Pro}b\ (D_y=1)]$
$$- [\text{Pro}b\ (D_o=1, U_o=0) - \text{Pro}b\ (D_y=1, U_y=0)]$$

where the subscript the subscripts o and y refer to older and younger workers respectively. The term in the first brackets measures the difference in demand for unionisation between older and younger workers. The term in the second brackets measures differences in the relative supply of unionisation. The second term can also be thought of as a direct measure of frustrated demand for unionisation. Based on (5) we can now test our first proposition (formalized below), by comparing levels of frustrated demand across all three countries.

Proposition 1a: Given a higher rate of unionisation amongst older workers and our assumption of similar preferences for union representation, there should be more frustrated demand (less relative supply) for unionisation amongst younger workers. That is, there are relatively more young non-union workers who would prefer to be unionised but who are not currently being represented.

Proposition 1b: Given a higher rate of unionisation amongst older workers and our assumption of similar preferences for union representation, there should be relatively more frustrated older aged union members. That is, there are relatively more unionised workers aged 25+ who would prefer not to be unionised but who are currently being represented.

If we take the difference in the probability of being unionised for both youth (15-24) and adults (25-64) in Britain, Canada and the US in and around 1996 (the time of the Canada-US Angus Reid survey and also the 1998 BSA survey) – *e.g.* the term on the left hand side of (5) – and decompose it into differences associated with the desire for unionisation (demand)

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[7] Recently, Gomez, Lipset and Meltz (2001) have employed this approach in an analysis of Canadian and American union differentials Bryson and Gomez (2001) have done the same for Britain.

versus differences in relative supply (frustrated demand) then we can provide an estimate for the first and second terms on the right hand side of (5). Once again, based on (5) our second testable proposition can now be formalized:

Proposition 2: Given our assumption of greater informational barriers, fewer union organizing activities and greater constraints on young workers desiring representation, if one were to decompose the difference in union density between the young (15-24) and adult workers (25+) according to supply and demand factors, a majority of the density differential can be ascribed to supply side constraints.

Clearly, if we find evidence of a supply side constraint for young workers, then the idea of a hypothetical level of union density that would be more or less equal across both groups in all three countries emerges. As a consequence our third proposition is the following:

Proposition 3: If one were to construct a potential equilibrium rate of unionisation – given data on actual union density and voting intentions of union and non-union workers combined with similar preferences and greater frustrated demand for unionisation amongst older workers – then the probability of being unionised should be statistically similar across age groups and countries.

Such a proposition can easily be tested by constructing a hypothetical union density rate based on the following equation:

(6) $(U^*=1) = [Prob(U=1) \cdot Prob(D=1 \mid U=1)] + [Prob(U=0) \cdot (D=1 \mid U=0)]$

where U^* is potential union demand as function of the proportion of existing union members who would prefer to remain unionised (first term in brackets) plus the proportion of non-union workers who would vote to become unionised (the second term in brackets).

5. Results

5.1 Is frustrated demand for unionisation higher amongst young workers?

In accounting for the union density gap, an important factor does seem to be greater frustrated demand for unionisation on the part of youth in all three countries (see Row 5 Table 2). Our results also confirm that by far the greatest difference between young and adult workers is the greater supply of unionisation for adult workers. This can been seen by examining union status conditional on a worker's desire for union membership (see row 6 Table 2). That is, an older worker in all three countries who desires union representation has a far greater chance (133 percent higher in Britain and Canada, and 121 percent higher in the US) of being unionised than a younger worker who desires the same representation.

This may appear like a rather tautological finding since most young workers are employed disproportionately in 'young' workplaces or in private services, where the chance of having a recognized union present is very low, thus leaving no scope for youngsters to become unionised. We agree with this response, but it is important to note that this was not always the case. If one looks at British data from the BSA (the only data set with a consistent question going back to 1983) we find that in the early 1990s roughly 50 percent of youths were employed in establishments with a recognized union in place. By 1998 that figure had fallen to 32 percent, a drop of nearly 20 percent in less than a decade (see Figure 2). This is indicative of a shortfall in the supply of union jobs for young workers that one would be hard pressed to categorize as an equilibrium response to lower demand. The fall in the supply of union jobs is more indicative of a systematic policy by employers to forestall the union option for young workers, leading to a shortfall in knowledge of where to find union jobs and how to organize unions in new workplaces.

5.2 Is the youth-adult union density differential a supply-side phenomenon?

In order to assess the relative importance of demand and supply factors, the gap in union density between adults and youths can be decomposed using (5) for all three countries. The difference in union density between adults and youths in Britain, Canada and the US was 19, 23 and 11 percentage points respectfully (Table 2 column 3 row 1). Using our estimate of Pr $(D=1|U=0)$, then Pr $(D=1,U=0)$ equals 18, 23 and 06 (Table 2 column 3 row 5) for all three

countries. Using Britain as an example of how to read the tables, 18 points of the 19-point gap in union density between young and old workers in Britain is attributable to less relative supply. The remaining difference (1 point) is due to greater demand for unionisation by adult workers. Therefore, a full 94 percent of the adult-youth difference in union density is accounted for by supply-side factors, while only 6 percent is attributable to demand side differences. This result is in line with the Canadian data where a full 100 percent of the differential is attributable to supply side constraints. In the US the figures are lower, with just over half (55 percent) of the total 11 percentage point differential in union density attributable to demand side factors.

5.3 Are equilibrium union density rates the same for both adults and youth?

In terms of equilibrium or potential representation U* a striking pattern emerges: <u>potential levels of union membership are very similar across all three countries for both youth and adult workers</u> (Table 2 row 2). Levels all hover around the 50 percent mark for both groups with youth having slightly higher propensities to unionize in Britain and Canada than adults while the pattern reversing itself in the US. These results are suggestive that while union organizers may have a harder time overcoming managerial resistance to collective bargaining than in the past, workers themselves have a latent desire for representation. The problem, of course, occurs at the workplace level. Under statutory recognition, unions need to convince a majority of workers in each workplace of the need for representation and this desire has to be matched by employees with a willingness to expend time and effort into organising and voting for unionisation.[8]

6. Conclusions

In this paper we presented the experience good model of union membership in combination with an assumption borrowed from an often cited but controversial paper, in which consumer

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[8] These results are slightly at odds with previous estimates by both Riddell and Farber and Krueger that pointed to greater demand for unionisation in Canada than the US and a lower base level of support in both countries. The reason for the upward bias in Canada is also partly attributable to the fact that previous studies were working with separate Canada-US data sets and differently worded questions. Whereas the US question in the Riddell and Farber and Krueger studies was similar to our own survey, the Canadian question was slightly more ambiguous.

preferences were treated "…as stable over time and similar among people"(Stigler and Becker, 1977:76). Based on this interpretation of consumer preferences and the empirical application to a queuing model of union membership, we were able to answer the question of why the union density rate for young workers is less than half of that of older aged workers. In the paper we produced three testable propositions, and in each case our propositions were confirmed. We found the following:

- there is greater frustrated demand for unionisation amongst young workers (substantial under-representation) as compared to older workers in Britain, Canada and the US

- a full 94, 100 and 55 percent of the gap in union density between youths and adults at the time of the surveys in Britain, Canada and the US respectively could be accounted for by unsatisfied demand for unionisation (supply-side constraints). That is, an older aged worker desiring union representation had a far greater chance (two and a half times more likely in Britain and Canada and twice as likely in the US) of being unionised than a younger worker who also desired union representation.

- potential levels of union density U* are higher than presently observed in all three countries and that the levels are very similar in all three countries (*e.g.* approximately 50 percent of the workforce could potentially be unionised).

We consider these results as direct confirmation that workers, at least in terms of preferences for representation at the workplace, are similar across age groups and borders and conform to the 'naïve' model of consumer choice. In all three countries close to half of the working age population desires representation. In Britain and Canada roughly 60 percent of adult workers desiring representation are covered whereas amongst youth only 26 percent receive the same representation (in the US it was 51 and 23 percent respectively).

We interpret these results as providing powerful, albeit indirect, confirmation that facets intrinsically related to the nature of union membership pose greater obstacles to the gaining of union membership for young workers than similar older-aged workers. Conceptualizing union membership as an experience good may hold the key to understanding why preferences for unionisation are not being realized for young workers. As a subject of future research it may be useful to construct models where the ability to become unionised is more formally presented as an individual 'search cost', which requires some knowledge that has to be obtained (perhaps knowledge about whom to contact or how to circumvent employer

obstacles) in order for worker preferences (frustrated demand) to become realized. With some workers displaying the same desire for membership but lower search costs than otherwise similar workers, one can formalize and explain the persistence of non-union enclaves at the socio-demographic, regional, occupational and industry-wide level.

Table 1: Percentage of Union Members in the Labour Force by Age Group: 1990-2000

Canada

Age group	1990 %	1995 %	2000 %
1. All employees	35.6	31.1	30.4
2. Adult (25+)	39.5	37.2	35.5
3. Youth (16-24)	17.5	10.7	12.6
4. [Adult-Youth]	22.0	26.5	22.9

United States

Age group	1990 %	1995 %	2000 %
1. All employees	15.8	14.1	13.5
2. Adult (25+)	19.0	16.8	15.9
3. Youth (16-24)	5.8	5.2	5.0
4. [Adult-Youth]	13.2	11.0	10.9

Britain

Age group	1990 %	1995 %	2000 %
1. All employees	43.0	36.0	33.0
2. Adult (25+)	48.0	43.0	37.0
3. Youth (16-24)	34.0	27.0	19.0
4. [Adult-Youth]	12.0	16.0	18.0

Source: Information on union density rates for Canada was obtained from the Labour Force Survey, Statistics Canada and Perspectives on Labour and Income, Statistics Canada. Information on union density rates for the US was obtained from Bureau of Labour Statistics. Information on union density for Britain was obtained from the British Social Attitudes survey, various annual waves. British Data for 2000 contains the latest figures available which were for 1998.

Table 2: Relative Supply and Demand For Union Membership Across Age Groups: 1996

Canada

	Youth	Adult	[Adult-Youth]
1. U=1	.13	.36	.23
2. U*=1	.57	.48	-.06
3. D=1¦ U=1	.73	.67	-.06
4. D=1¦ U=0	.50	.32	-.18
5. D=1, U=0	.44	.21	-.23
6. U=1¦ D=1	.27	.63	.36

United States

	Youth	Adult	[Adult-Youth]
1. U=1	.05	.16	.11
2. U*=1	.47	.53	.06
3. D=1¦ U=1	.67	.73	.06
4. D=1¦ U=0	.42	.40	-.02
5. D=1, U=0	.39	.33	-.06
6. U=1¦ D=1	.23	.51	.28

Britain

	Youth	Adult	[Adult-Youth]
1. U=1	.16	.35	.19
2. U*=1	.50	.46	-.04
3. D=1¦ U=1	.50	.62	.12
4. D=1¦ U=0	.51	.37	-.14
5. D=1, U=0	.42	.24	-.18
6. U=1¦ D=1	.26	.62	.36

Source: Information for Canada and the US was obtained from the 1996 Lipset-Meltz Angus Reid Survey of union members. Information on union density for Britain was obtained from the British Social Attitudes survey, 1998.

Pr (U=1): The probability that a worker is a union member.

Pr(U*=1): Hypothetical level of union density or the probability that a worker desires and receives union representation. This is the sum of the probability that a worker is a union member and desires to retain union membership plus the probability that worker desires union representation but is not employed on a union job (union membership plus frustrated demand). Formally, this is Pr (D=1│U=1)*Pr(U=1) + Pr (D=1, U=0).

**Pr (D=1 êU=1): The probability that a union worker demands union representation.**

Pr (D=1 êU=0): The probability that a non-union worker demands union representation.

Pr(D=1,U=0): The probability that a worker demands union representation but is not employed on a union job (frustrated demand). Computed as Pr (D=1│U=0)*Pr(U=0).

Pr (U=1 êD=1): The probability of being unionised conditional on the desire to be unionised. This represents the ease of obtaining a union job given that a worker desires a union job. Riddell (1993) interprets this as a measure of relative supply.

Figure 1: Adult-Youth Union Density Differentials in the 1990s
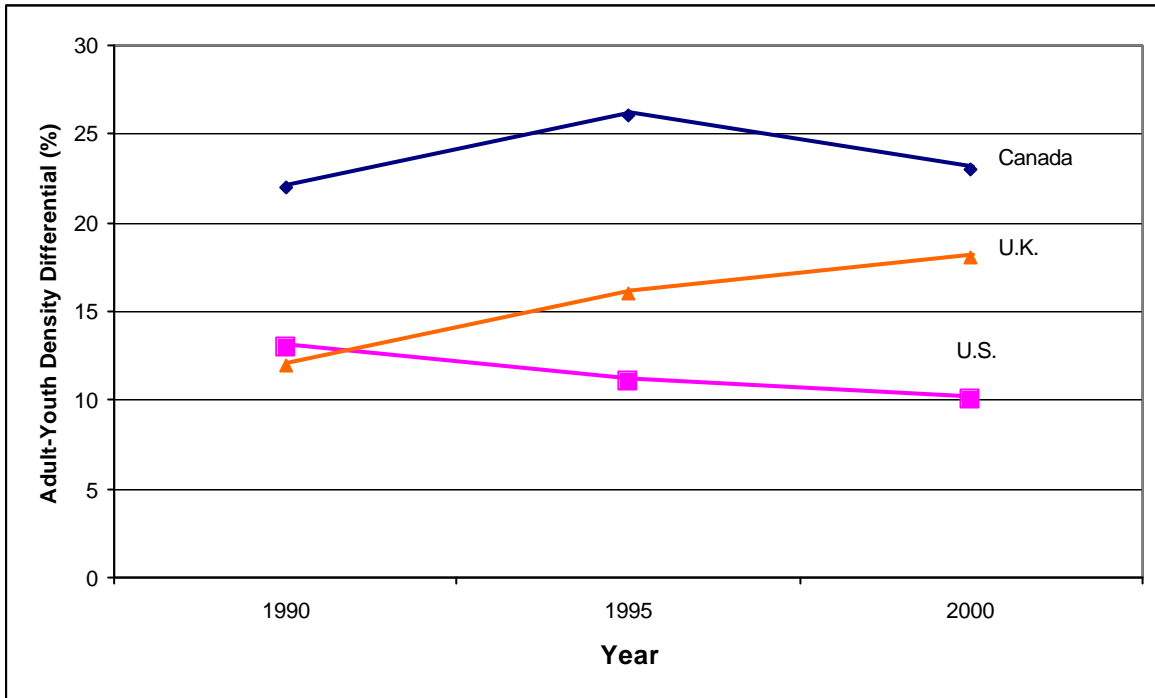
Source: Row 4 Table 1 for each country.

Figure 2: Percentage of Youth Employed in Establishments with a Recognized Union: Britain 1990s
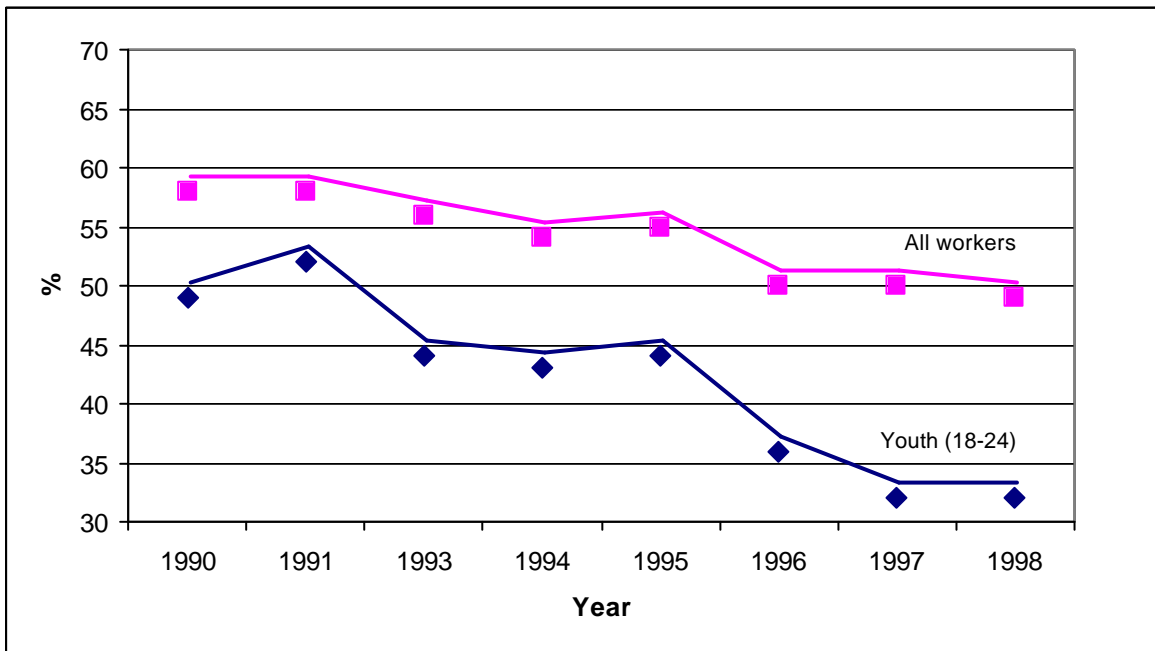
Information on union density for Britain was obtained from the British Social Attitudes survey, various annual waves.

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