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**Worksharing in Québec:
Five Case Studies**

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Worksharing in Québec: Five Case Studies*

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Résumé / Abstract

Cette étude évalue cinq expériences récentes de partage du travail au Québec depuis 1994 : Bell Québec, Alcan, Les papiers Scott, le Ministère de l'Environnement et de la Faune, et Sico. Le taux de participation aux programmes de partage du travail offerts sur une base volontaire était élevé dans les entreprises où les sacrifices que devaient consentir les travailleurs (les pertes salariales) n'étaient pas considérables et dans celles où les travailleurs avaient déjà fait l'expérience d'un horaire de travail flexible ou réduit. Dans les cas où le partage du travail était imposé, les programmes ont remporté moins de succès. Nous déduisons des conséquences en matière de politique publique. Entre autres, pour atteindre des taux de participation plus élevés et initier les travailleurs à un horaire réduit, les gouvernements peuvent jouer un rôle positif en finançant ou en aidant à démarrer des programmes de partage du travail.

This paper evaluates five recent experiences of worksharing in Québec since 1994: Bell Québec, Alcan, Scott Paper, the Ministère de l'Environnement et de la Faune and Sico. Participation in voluntary worksharing programs was high where workers' sacrifice (lost wages) was not great and where workers had previous experience with shorter or flexible work hours. Where worksharing was mandatory programs were less successful. We draw out implications for policy. To achieve higher participation rates and to give workers experience with shorter hours, governments can play a positive role in financing or kick-starting worksharing programs.

Mots Clés : Partage du travail, heures de travail, Bell Québec, Alcan

Keywords : Worksharing, work hours, Bell Québec, Alcan

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Introduction: Why case studies are important

In the wake of stubborn levels of unemployment the call for more flexible work arrangements and, in particular, worksharing has been renewed¹. Government policy, as ever, has not been isolated from these demands. The Quebec government in its attempt to reduce the unemployment rate by two percent by 2000 proposed in late 1996 a combination of measures concerning work hours, including the reduction of the legal work week, an increase in vacation time and non-paid sabbaticals. The response to these proposals like those elsewhere has been predictable: without proportional (downward) changes in wages, unions saw them as a means to gain a greater share of the economic surplus, while employers viewed them as an increase in their unit costs. As for policy makers, their reaction to these programs has been mixed. While some analysts saw it as long-term solution to create new jobs, others viewed it simply as a means to protect existing jobs. These varying views arose to some extent because 'worksharing' means different things to different people.

Is this simply a case of *déjà vu*? A cursory review of the history of worksharing reveals that demands for it have been made - and rejected - during many of the major crises in North America and Europe since 1850 (Cross, 1989)². Even during the Great Depression of the 1930s worksharing was rejected by groups of workers and firms, and in the U.S. it was endorsed without reservation only by Presidents Hoover and Roosevelt. But the context in North America today is different. Labour markets are more open to the forces of globalisation and the demographic profile of the labour market, as well as the degree and nature of unionisation, are much different today than they were in the 1930s. Worksharing practices in the 1990s, therefore, are a break from previous experience.

Despite growing interest in worksharing and theoretical analyses of some of the issues involved (Calmfors, 1985; Burdett and Wright, 1989; Fortin, 1989), there are few case studies of its implementation in the 1990s. The case study method is important because human resource departments tend to follow the lead of a few selected firms that have received high levels of publicity; and

¹ The recent conference on "Changes in Working Time in Canada and the United States," (Ottawa, June 1996) brought together a number of authorities on worksharing from academic institutions, trade unions, government agencies and public policy think-tanks.

² On Canada in the 1930s, see Struthers (1983); on the U.S., see Jacoby (1985); on Europe after 1945, see van Audenrode (1994).

because governments, at the federal and provincial levels, rely on the case study as a "testing ground" to monitor the effects of proposed initiatives.

This paper draws on five recent worksharing experiences in Quebec - Bell Canada, Alcan, Scott Paper, Sico, and the Ministère de l'environnement et de la faune - in an attempt to assess the viability of public policy intervention in the area of work hours. Were successful worksharing programs associated with a particular type of worker or enterprise? Was the likelihood of success greater when the program was voluntary? Was the role of government critical to the success of these programs? The case studies cover a range of sectors, from the public to para public to private; to service and manufacturing; as well, the cases include both urban and rural based industries. These organisations are all large and unionised which in itself justifies their choice. Previous studies of worksharing in Canada in the 1980s document that the average size of firm with a worksharing program was generally small and non-unionised³. The enterprises we have chosen to study can be considered therefore to be on the vanguard of a new trend in the Canadian economy.

Our research suggests that worksharing is successful where organisational and wage changes are not too abrupt, hence permitting the preferences of workers and employers to coincide. This may not appear to be a surprising or novel conclusion, but it is consistent with some elemental truths about how labour markets operate that need to be considered when designing human resource strategies or government programs. Workers' preferences and firms' choices are consistent over time and they tend to be smooth. Economic agents can make small adjustments at the margin and these results are more or less predictable, but when large changes are demanded outcomes are uncertain. In this light, government programs can play a role in smoothing abrupt changes to life styles and to firms' organisation of work. But there is an additional role governments can play. Workers' preferences are linked to previous worksharing experiences and without past practice to draw upon, participation rates are generally low. Through the use of properly directed incentives, such as kick-start programs, policy can raise initial participation rates, thereby giving workers the needed experience to make programs successful.

This paper is divided in four sections. Section 1 offers some definitions of different approaches to worksharing. Section 2 provides background information on the case studies. Section 3 gives a comparative analysis of their

³ A survey (N = 953) by Employment and Immigration Canada (1993) reported that the average size of firm with a worksharing program employed about 130 workers (of which, on average, 30 workers actually participated in the program); 14 percent of firms were unionised.

successes and failures. Section 4 evaluates the role of government policy in the area.

The Dimensions of Worksharing

The literature on worksharing is diffuse because of the various ways the term has been applied. To some it is the reduction of work hours over the business cycle to save jobs; to others it refers to the reduction of work hours to create permanent long-term jobs. Of course, these types of worksharing programs are not mutually exclusive; but they can exhibit conflicting outcomes. Hoarding workers can reduce productivity and profitability and hence dampen the long-run potential of hiring additional workers. On the other hand, a successful program may lead to higher levels of productivity that could reduce the demand for workers at the firm level. It is important as well to distinguish between micro and macro aspects of worksharing. Owing to the reduction in aggregate demand, if all firms are encouraged to workshare, there may be fewer jobs to go around at the economy-wide level.

Because of its different varieties and outcomes, we have thought it best to distinguish between three dimensions of worksharing:

1) Worksharing can be seen as voluntary agreements between individuals and firms to reduce the length of the work week in order to give the employee more flexibility in her choice of work hours and the firm more choice in the type of worker that it wishes to hire⁴. In these circumstances, workers who prefer worksharing arrangements find firms offering this type of contract. These agreements can be found in all states (good and bad business years) and are not necessarily tied directly to the creation of new jobs, but if voluntary agreements held across the economy, rising productivity and lower unit costs could lead to higher levels of employment. There are limitations to these types of arrangements. Drolet and Morissette (1997), drawing upon evidence from the Survey of Work Arrangements for 1995, found that 66.6 per cent of Canadian workers preferred working the same hours; 27.1 per cent more hours at more pay; and only 6.4 per cent fewer hours at less pay. In Quebec, however, there is a greater preference (7.9 per cent) to work fewer hours.

⁴ These are worksharing agreements because they offer workers a shorter work week in the expectation that reduced hours per worker will translate into more jobs. See Rosen (1986) for an analysis of the matching of preferences with respect to work hours.

Overall, the results suggest that many Canadians are working **less** and not **more** hours than they desire⁵.

2) Worksharing can be used as business strategy to hoard labour during an economic downturn⁶. In the nineteenth century and into the depression of the 1930s, this type of initiative was often referred to as 'short time.' As its name implies, this is short-term policy which does not create new jobs, although it does reduce layoffs. Nor does it necessitate major changes in the organisation of work or changes in attitudes towards work. Firms make investments in their workers and they want to avoid incurring high costs of search when business recovers⁷. This type of worksharing program is defensive and like any labour hoarding scheme entails lower productivity and higher unit costs for the firm. Some workers would be willing to take some reduction in earnings (as long as their salary remained above some alternative level, say the amount provided by unemployment insurance), if they were assured that firms would resume working full hours when business improved. Still there would be others who would seek employment at firms working full-time. If these are firms' best workers (workers with higher opportunity costs), productivity at the plant level could decline for this reason as well.

3) Governments and firms have conceived of introducing worksharing as a means to moderate the effects of structural change⁸. Whether initiated by firms or government, this policy is long-term in nature and it may not be voluntary. Governments could set limits on the number of work hours per week or per year (including overtime) in the hope that the reduction in hours worked per person would translate into more jobs. Faced by declining market share or a general fall in demand, and constrained by their inability to cut wage rates or layoff workers, firms may introduce a reduced work week on a permanent basis in order to lower labour costs. Whether these initiatives create new jobs or preserve old ones depends on the substitution of hours and workers, but even assuming a favorable elasticity employers and policy makers are faced with the problem of persuading employed workers to take cuts in their earnings (due to fewer hours worked). Moreover, a long-term policy to work

⁵ The Drolet and Morissette (1997) findings suggest as well that the characteristics (location, age, sex, and education) of workers preferring more or less work hours are different, making any transfer between the two groups unlikely and unfeasible. See also Kahn and Lang (1995).

⁶ See Okun (1981) for a discussion of labour hoarding.

⁷ However, it is often speculated that where employees work long hours a reduction in the work week may raise their performance levels. This begs the question why firms would not always and everywhere work shorter hours.

⁸ For examples of this approach, see the recent recommendations in the Report of the Advisory Group on Working Time and the Distribution of Work (1994).

fewer hours would compel firms to make the necessary changes in scheduling and in their organisations. Under a government initiative of a reduced work week to reduce unemployment, firms would incur the additional costs of hiring new workers. The net effect on productivity may not be neutral. Workers' morale might deteriorate if they were forced to take a cut in earnings; firms may not make the appropriate changes in work schedules, and, combined with the effects of hiring new and untrained workers, productivity may deteriorate.

The three dimensions of worksharing need to be separated because of their varying impact on workers' wages, productivity and on firms' organisation. The voluntary dimension of worksharing poses no problem in that the sorting of workers and firms is efficient because it matches like and like. A labour hoarding policy, usually initiated by firms, may be acceptable to workers, if they knew that their earnings would be restored during the subsequent upturn. High-seniority workers, however, may be more reluctant because their labour contracts often guarantee them a certain number of hours. For firms, because of its temporary nature, a labour-hoarding policy would not call for important organisational changes, such as major adjustments of work schedules. Worksharing in the context of structural change is more problematic because it entails the greatest adjustment: workers have their income reduced while firms have to make organisational changes.

The three dimensions of worksharing pose different sets of options for government. In the hope of improving a better match of workers and firms governments can facilitate the diffusion of information about jobs. Using their existing manpower centres, provincial and federal authorities have made attempts to this end. In order to encourage firms to hoard labour and not to penalise part-time or short-time workers, governments might consider making hours and not complete weeks worked the basis for unemployment insurance eligibility. Reid (1985) identified some ways this could be achieved and the last round of changes in unemployment insurance has moved in this direction. Finally, to promote long-term adjustment governments may need to regulate work hours in combination with financial incentives. A long-term policy to workshare and to stabilise if not add to the workforce is not necessarily unfeasible at the plant level, but it must be recognized that additional resources have to be expanded to smooth over changes confronted by both sides of the labour market. The danger is, as the following cases make clear, that if additional resources are not expanded then worksharing may have perverse results.

Five examples of worksharing

Bell Canada:

Until changes in the regulatory environment threatened its market share, Bell Canada was relatively insulated from competition⁹. Its unionised workers had a long attachment to the enterprise, 15 years in the case of technicians, and their seniority determined their conditions of work. But in November 1993, confronted by new competition, the company announced a plan without precedent in its history to reduce costs and cut its labour force by the equivalent of 5,000 workers. Elements of Bell's plan along with those of the four other cases are found in Table 1. Aimed at workers in all regions of Ontario and Quebec, the plan combined incentives to leave the company, reduce work time before retirement, increase vacation time without pay and to shorten the work week. From our discussions with Bell management, the plan was intended to respond to structural changes in the industry. At the outset the plan was intended to be voluntary and initially Bell attempted to get federal government assistance for its workers on reduced time¹⁰. But by December 1993 it was evident that Ottawa would not subsidize its workers and the company concluded that a voluntary program was unfeasible. In the context of the renewal of its collective agreement, the company negotiated new clauses in its contract to reduce the length of the work week. Technicians would reduce their work week from a schedule of "5 days/40 hours a week" to a schedule of "4 days/36 hours a week"¹¹. The work day was thus longer, with workers having the opportunity to take their days off on either Monday or Friday. Wages fell by about 10 per cent. The new work week implied that the firm would have to reorganize its scheduling in order to meet its clients needs. The agreement was to last one year.

Alcan:

The Alcan complex in the Saguenay-Lac St. Jean region of Quebec comprises both old and relatively new installations; in total the number of workers in all Quebec plants has fallen from over 9,000 in 1980 to 6,300 in 1994¹². In 1990 the company initiated a period of restructuring with the aim to rationalise

⁹ A more complete account of the Bell experience is found in Huberman and Lacroix (1996).

¹⁰ The Canadian government has run experimental initiatives on a limited basis in which it has subsidised firms and workers instituting worksharing programs. For a history of these programs, see Pal (1983); Reid (1985). Gray (1996) provides a more recent analysis.

¹¹ The evidence in this paper, including Table 1, considers exclusively technicians in the Quebec branch of Bell, unless otherwise mentioned.

¹² The Alcan experience is based on interviews and site visits conducted between June 1996 and May 1997.

production in the more modern, technologically advanced installations. Its unionised workers are among the most highly paid in the region and have an average seniority of about 20 years. In the early 1990s the firm had called on funds available from the federal government to subsidise workers on reduced hours, and workers have had since 1988 the possibility of banking overtime hours and have used them to supplement vacation periods. The point here is that both firms and workers had some prior experience, in the face of a long period of layoffs and restructuring, of adjusting hours of work. A formal agreement in October 1995 with its union provided for a voluntary program of reduced work time. The program, which obtained subsidies from both the federal and provincial governments (\$460 per worker in 1996, \$230 in 1997, \$115 in 1998), was aimed at all personnel, with the exception of management, or about 3,000 workers. The program was itself part of a larger collective agreement that gave workers a \$0.45 increase per hour in 1996 and similar increases in 1997 and 1998, and workers who participated in the initiative received additional bonuses of \$0.25 per hour. Including the contributions of both levels of governments, but excluding the negotiated pay increases, wages of workers participating in the program decreased about 2.9 per cent in the first year and 3.7 per cent in its last year. Workers received a guarantee of job security for the length of the three year agreement. In exchange, the firm would continue with its policy of technical and organisational change, and the union agreed to participate in the firm's reskilling initiatives (le processus d'amélioration continu et du virage qualité.)

The program consisted of reducing paid work time from 40 to 38 hours, or from 35 to 33 hours (for white collar workers). Employees would continue to follow their regular schedules and work week and there was no disruption in the flow of output. The two additional work hours would be banked and be used as vacation time. The intent was to create permanent jobs for workers who had been laid off in the past due to reorganisation. About 66 per cent of workers accepted to participate in the initiative, but their adhesion was renewable, again on a voluntary basis, after they had accumulated 33 or 38 hours of non-paid work time.

Scott Paper:

Scott Paper is a large company producing paper products with plants in a number of Canadian provinces. In 1990 the economic context in the industry began to deteriorate, and Sico, like firms elsewhere, announced a series of layoffs. To reduce costs further in the mid 1990s the firm started to rationalise its activity at its Ontario and Quebec plants, an initiative which it is still

undertaking. Its Quebec plant in Crabtree, a town of about 5,000 inhabitants 70 kilometers from Montreal, employed in the early 1990s about 400 workers. In 1994, the firm announced it intended to lay off 100 hundred workers. During negotiations with its union, the firm was able to save most of these jobs owing to retirement, voluntary departures and worksharing agreements. Over its three years, the collective agreement stipulated wage increases of 2 per cent, 2.5 per cent and 1.5 per cent per annum.

Citing administrative constraints, the worksharing arrangement was limited to a small group of 60 workers in one division of the Crabtree plant. The workers were mostly female with 25 years of seniority and whose average age was 45 years. The plan which was voluntary provided workers the opportunity to reduce their work week from 5 to 4, or 5 to 3 days. The Quebec government provided funds to the firm to manage this change, but, unlike Alcan, it was not intended to supplement workers' lost wages directly. Workers' earnings were reduced about proportionately with days lost. About 18 per cent of workers volunteered for the 5 to 4 day program, 1.6 per cent for the 5 to 3day variant; workers could renew their adhesion on an annual basis.

Ministère de l'environnement et de la faune (MEF):

Forced to reduce its expenditure, the Quebec government has sought to cut its labour costs in the public sector¹³. Its worksharing initiatives were aimed to avoid layoffs and also to encourage firms in the private and para public sector to follow its lead. In late 1995, the MEF negotiated an agreement with its union that enabled its 2,900 employees both in the office and in the field to work reduced hours on a voluntary basis. Two types of programs were available: Workers could choose to have their work week reduced from 40 to 36 or 32 hours or from 35 to 32 or 28 hours; alternatively they could work their normal work week (40 or 35 hours) but be paid for 36, 32 or 28 hours, and accumulate, along the lines of Alcan workers, work hours as vacation time. The government offered no financial incentive to workers and this meant that they suffered potential wage losses ranging from 8.6 to 20 per cent. Workers could renew their adhesion to the program after six months. About 15 per cent of the ministry's workers volunteered for the program of which 58 per cent were male workers. The number of workers adhering to the 40 to 36/32 variant was about 5 per cent; from 35 to 32/28, 10 per cent. Most workers decided to reduce their work week instead of accumulating vacation time.

¹³ The MEF experience is based on interviews conducted between January and March 1997.

Sico:

Sico, a manufacturing firm producing paint for residential and commercial use, has three main plants in Quebec. We studied the worksharing agreement at its Longueuil installation, a plant employing 130 workers located in a suburb of Montreal. In 1997, at the renewal of the collective agreement, the union sought a reduction of the work week from 40 to 36 hours without any pay cut. Workers were concerned with improving their quality of life; the question of job creation or consolidation was secondary. At this time, the firm had no plans to make organisational or technological changes, nor was it intending to downsize. After long negotiations, a worksharing agreement, endorsed by the workers, was adopted. As at Bell, Sico employees moved from a "5 days/40 hours a week" to a "4 days/36 hours a week" schedule, with their days off restricted to Mondays or Fridays. In exchange, the firm would not have to give any pay increases during the length of the new collective agreement of three years. The firm also gained some flexibility. Workers accepted some reclassification of their jobs which eased the transition to a new schedule. Daily working hours were to be longer and concentrated in the middle of the week (Tuesday, Wednesday and Thursday), and since these are the firm's peak business days this meant less over-time hours. The pre-layoff announcement period was reduced from 6 to 2 months. The worksharing program has entailed some direct cost to workers, including the sacrifice of a wage increase and some over-time hours. Finally, it was agreed that the change in the work schedule would have to be reassessed after one year in light of the results obtained under three criteria: cost per liter of paint; quality of the service (percentage of orders delivered on time); and absenteeism.

Program results

The popularity of the programs and their outcomes are associated with the demands or sacrifices placed on workers. Consider Figure 1 which traces an "indifference curve" of the tradeoff between loss in (gross) wages and the **participation rate** in the programs. The figure comprises eight observations. Alcan, Scott and the MEF offered two choices to their workers; the Bell observations are from the survey conducted by the firm in the months before the involuntary program; there was no choice offered at Sico. The curve illustrates a declining rate of participation as the sacrifice incurred increases. It flattens when wage loss is high because there will always be some workers

who want to work less; conversely the curve is nearly vertical at low rates of sacrifice. Scott is an outlier, owing perhaps to the small size of its program.

The tradeoff between participation rates and wage sacrifice confirms the importance of distinguishing between the three dimensions of worksharing outlined earlier. Scott and the MEF intended to pursue a long-term policy of worksharing in the context of structural change (dimension 3), but participation rates were low because of the sacrifice workers would have had to incur. As a result, these organisations failed to accommodate those workers who may have wished to work fewer hours, but not as few as set out in the plan. This points to the general difficulty faced by workers and firms in negotiating **individual** contracts. In principle, workers sort between firms to find the right offer of wages and hours (as set out in dimension 1). In practice, workers find it difficult to move and their own employer cannot always offer them their preferred wage-hour package.

It is reasonable to ask whether, because of low participation rates, the MEF and Scott will continue with its programs. Yet we were led to believe that neither organisation is planning to scrap their initiatives. As for changes in participation rates over time, because the programs have been in place for only a limited period it is difficult to draw any conclusions. Indeed the results are conflicting which may simply reflect the fact that many workers with no previous history with these type of programs are making adjustments as they acquire experience. The participation rate at the MEF was around 13 per cent when the program was launched in April 1996, rising to 15 per cent in April 1997; but the trend at Alcan is in the opposite direction, and as of November 1997, participation rates at Alcan have fallen to about 60 per cent from 66 per cent at the outset¹⁴.

The **employment effects** are proportional to the size of the work force and to the participation rate. In total, the five worksharing programs may have saved or consolidated more than 300 full-time jobs which is not negligible (a total of 8500 employees had access to the programs). Having said that, Bell, the largest employer in the sample and whose program was involuntary, had substantially altered its commitment after one year.

The **productivity effects** of the programs are mixed. Lanoie et al. (1996) have shown that at Bell technicians' productivity declined during the worksharing period. They attributed this outcome to longer work days (the new schedule

did not mesh with clients' needs), to the fact that workers were less than enthusiastic with the involuntary nature of the program, and to evidence that managers were not prepared to meet changes in the work environment. Referring back to the three different dimensions outlined in Section Two, the firm sought to initiate a long-term strategy (dimension 3) without government aid or changes in its organisation. Although the firm was able to maintain employment levels, productivity fell. The outcome was a type of labour hoarding strategy (2) and productivity declining as expected. The Bell experience casts doubt about the potential success of worksharing programs to confront structural problems, like the menace of deregulation. In its new economic context the firm needed to raise productivity, but no measures were put in place to insure this outcome. It is not surprising that with the demise of its worksharing program, the firm has resorted to layoffs.

For voluntary programs the relation between worksharing and productivity at the firm level is ambiguous. Sico has reported improvements in the three evaluation criteria related to productivity. But at the MEF the productivity record is mixed. Managers have observed a reduction in the quality of the work done, an increase in the delays for the services to the clientele and more difficulty in organizing meetings. At Alcan there is no indication of any change in productivity related to the program. The work schedule has not changed since employees in the program are working on their normal schedule and many are accumulating additional vacation time. A negative impact on productivity may have resulted if replacement workers were less productive than regular ones. There is no indication of this however, since replacement during vacation periods is done by workers on a "calling list" who have previous experience at Alcan.

The success of the Alcan and Sico experiences deserves some further comment. The Alcan program is an example of a long-term strategy (3), but its continuing success is intimately related to the fact that changes demanded by the firm were not great (1). Alcan was able to accommodate itself to its workforce, and, as ever, where like meets like positive outcomes result. The firm achieved its goal of hiring new workers and rehiring others on waiting lists. Of the five cases studied the Alcan program was perhaps the most flexible because workers had the choice of continuing or entering the program after 19 weeks, thereby making it more tempting for reluctant workers (those

¹⁴ At Bell, managers and workers attest that if a survey would be conducted one year after the introduction of the program, voluntary participation rates would be higher than the 10 per cent rate (Figure 1) found before the program was in place.

at the margin) to join. Attesting to its success the program is still in place. The Sico experience is also striking since the company was able to accommodate its workers and rearrange working hours in a way that better fits its clients' needs. It would certainly be worthwhile to follow this experience after a year or two.

The role of policy

Many economists would concur that there are positive externalities to job creation and that government intervention to encourage worksharing practices can be warranted. From the cases we have studied, we can draw a number of lessons with respect to policy formation based either on regulation, financial incentives or the diffusion of information,

The Bell confirms the view that worksharing is not desirable when firms are struck by structural shocks, such as technological change, deregulation, and increased international competition. At best, worksharing can be of some use during a transition period. For example, to ease the transition to the market economy the German government is subsidising - on a short-term basis - workers on short-time in uncompetitive industries in the former East Germany (Mosley and Kruppe, 1995). As for cyclical shocks, many firms in Canada are already engaging in labour hoarding, although government policies can be designed, such as current reforms to the unemployment insurance scheme, which encourage firms and workers at the margin to reduce work hours instead of accepting layoffs as the only viable alternative¹⁵.

There is little room for government in **regulating hours** (dimension 3), either in periods of cyclical or structural change, as is currently at issue in France. The Bell worksharing program was a negotiated agreement between two parties but it resulted in lower productivity. Governments would be hard pressed to do better.

The case studies do reveal that there is room for **financial aid** to 'kick-start' an interest in worksharing in order to better align the preferences of workers and firms. In terms of Figure 1, a small incentive can have a large impact on an initially low participation rate (the vertical stretch of the curve). A short-term incentive program could have long-lasting effects, because workers and firms learn from past experience and many workers who have adopted worksharing appear to like it. There is a catch, however. A relatively large increase in

¹⁵ Abraham and Houseman (1993) review these issues.

participation will occur only if the gross wage loss involved in a work sharing program is initially fairly low. Note that even with the possibility of government aid, according to surveys conducted, the participation rate at Bell would not have been great because the initial sacrifice was in the 10 per cent range. Finally, financial incentives can also be put in place to smooth the transition from full to reduced work hours and ease organisational changes confronted by firms (dimension 1). Representatives from Alcan and Scott attest to the fact that federal and provincial assistance contributed in this way to their programs' success.

Direct financial aid to selected firms, especially prominent para public enterprises, may prove to be unpopular and difficult to sustain financially. Alternatively, government using its existing manpower facilities can help **diffuse information** to facilitate matches between workers and firms. As well, governments can disseminate information about successful experiences, whether in Canada or abroad, and the organisational changes put in place to smooth firm and worker adjustment. Finally, government can play a leading role with its own employees. As we observed previously, worksharing is not popular in cases where contracts provide high-seniority workers a guaranteed number of work hours. Governments could take the lead in modifying these types of clauses with their own workers.

Conclusion

Worksharing is by no means a solution to the problem of unemployment. But the case studies we have examined show in fact that government involvement can be positive. Policy should be based on financial incentives and information dissemination as opposed to regulating work hours. In fact, policy can act as a substitute for history. The proportion of workers and firms having had past experience with worksharing is actually quite small. How can these agents learn? Government programs can prove crucial here as a means to spread information and to give workers and firms trial experience at little cost. Of course, this does not necessarily translate into higher levels of employment which depends on the elasticity of substitution of hours and numbers employed. It may simply imply that office and factory schedules are more in tune with those working - which in itself is a worthy objective.

References

- Abraham, K and S.N. Houseman (1993), Job Security in America: Lessons from Germany. Washington: Brookings.
- Burdett, K and R. Wright (1989), "Unemployment Insurance and Short-Time Compensation: The Effect on Layoffs, Hours per Worker and Wages," Journal of Political Economy 97: 1479-1496.
- Calmfors, L. (1985), "Work Sharing, Employment and Wages," European Economic Review 27: 293-309.
- Cross, G. (1989), A Quest for Time: The Reduction of Work in Britain and France, 1840-1940. Berkeley: University of California Press.
- Drolet, M. and R. Morissette (1997), "Working More? What do Canadian Workers Prefer?," unpublished paper, Business and Labour Market Analysis Division, Statistics Canada.
- Employment and Immigration Canada (1983), "Work Sharing Evaluation: Technical Report.
- Fortin, B. (1989), "Une réduction de la semaine légale de travail augmente-t-elle la demande des travailleurs?" L'Actualité économique 65: 423-442.
- Gray, D. (1996), "Work Sharing Benefits in Canada: A Time Series Approach," Relations Industrielles 51-4: 802-822.
- Huberman, M. and R. Lacroix (1996), Le partage de l'emploi: solution au chômage ou frein à l'emploi. Sainte-Foy: Les Presses de l'Université Laval.
- Jacoby, S. (1985), Employing Bureaucracy: Managers, Unions, and the Transformation of Work in American Industry, 1900-1945. New York: Columbia University Press.
- Kahn, S. and K. Lang (1995), "Sources of Hours Constraints: Evidence From Canada," Canadian Journal of Economics 28: 914-928.
- Lanoie, P., F. Raymond and B. Shearer (1996), "Work Sharing and Productivity: Evidence from Firm-Level Data", Discussion Paper no. 96s-06, CIRANO: Montreal.
- Mosley, H. and T. Kruppe (1995), "Employment Stabilisation through Short-Time Work," unpublished manuscript Wissenschaftszentrum Berlin.

- Okun, A. (1981), Prices and Quantities: A Macroeconomic Analysis. Washington: Brookings.
- Pal, L.A. (1983), "The Fall and Rise of Development Uses of UI Funds," Canadian Public Policy 9: 81-93.
- Reid, F. (1985), "Reductions in Work Time: An Assessment of Employment Sharing to Reduce Unemployment," in Work and Pay: The Canadian Labour Market, ed., W.C. Riddell. Toronto: University of Toronto Press.
- Report of the Advisory Group on Working Time and the Distribution of Work (1994). Ottawa: Minister of Supply and Services.
- Rosen, S. (1986), "The Theory of Equalizing Differences," in Handbook of Labor Economics, O. Ashenfelter and R. Layard. London: North-Holland.
- Struthers, J. (1983), No Fault of their Own: Unemployment and the Canadian Welfare State. Toronto: University of Toronto Press.
- van Audenrode, M.A. (1994), "Short-Time Compensation, Job Security and Employment Contracts: Evidence from Selected OECD Countries," Journal of Political Economy 102: 76-102.

Figure 1: Tradeoff between Participation Rate and Wage Loss

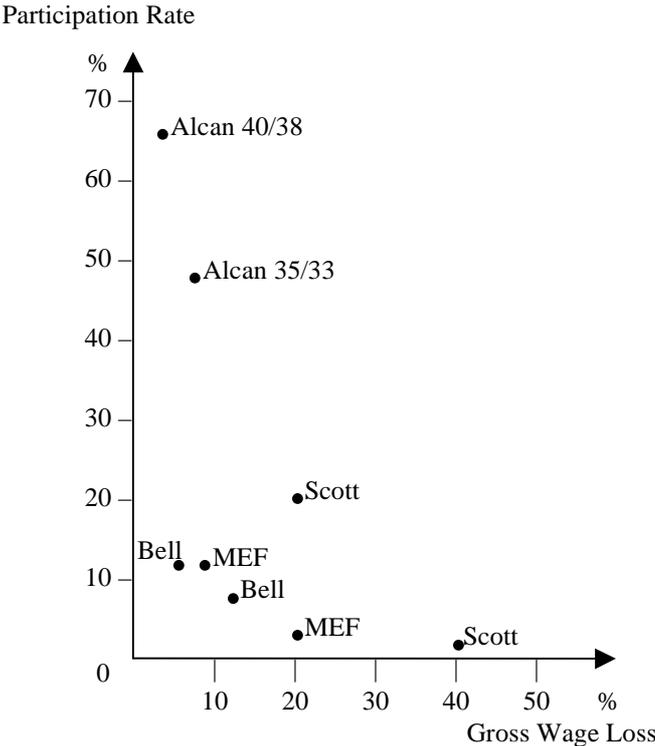


Table 1 : Five case studies of work sharing : Context, Program and Results

	ALCAN	BELL ¹	MEF	SCOTT PAPER	SICO
CONTEXT	negotiated	threat of layoffs	threat of layoffs and wage cuts	negotiated / threat of layoffs	regular renewal of the collective agreement
<i>Organizational change</i>	yes	no	no	yes	no
<i>Salary gains</i>	yes	no	no	yes	no
<i>Financial aid of enterprise</i>	yes	no	no	no	yes
<i>Financial aid of government</i>	restricted to those enrolled in program	no	no	aid to all workers	no
PROGRAM	voluntary	involuntary	voluntary (with the agreement of management)	voluntary	program accepted by a vote of 95%
<i>Potential workers</i>	all workers	technicians	all workers	Restricted (60 / 400 workers)	everyone except managers and clerical workers
<i>Choices available</i>	40 h → 38 h or 35 h → 33 h	5 d → 4 d and 40 h → 36 h	35 h → 32 h or 35 h → 28 h	5 d → 4 d or 5 d → 3 d	5 d → 4 d and 40 h → 36 h
<i>Impact on fringe benefits</i>	no change	no change	no change	proportional reduction	no change
<i>Additional time off</i>	additional vacation time	reduced work week	reduced work week or additional vacation time	reduced work week	reduced work week
<i>Length of agreement</i>	renewable after the accumulation of 33/38 hours	one year	renewable every 6 months	renewable yearly	Renewable (collectively) after an evaluation following the 1 st year of implementation
RESULTS					
<i>Participation rate</i>	66.5%	100% (voluntary : 7%)	35 h → 32 h: 10.8% 35 h → 28 h: 2.7%	5 d → 4 d: 18.3% 5 d → 3 d: 1.6%	100%
<i>Gross salary</i>	-2.9% 1 st year -3.4% 2 nd year -3.7% 3 rd year	-10%	35 h → 32 h: - 8.6% 35 h → 28 h: -20.0%	5 d → 4 d: -20.0% 5 d → 3 d: -40.0%	no reduction, but no pay increase during the three years of the collective agreement
<i>Productivity</i>	no change	negative effect	mixed results	no change	improvement (six months after the implementation)
<i>Employment effect</i>	102 new jobs	200 jobs saved	38 jobs saved	2 jobs saved	? ?

h: hours
d: days

¹ This information pertains to the program as it was applied for the technicians

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