



“Barriers to Employer-Sponsored Training in Canada”¹

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1. Introduction

It is true that, at least in the prevailing North American context, governments are unlikely to intervene in any major direct way to shape workplace training. However, they clearly have an interest in considering how public policy can create an environment where barriers are minimized (and investment is optimal). For this reason, public policy-makers are interested in understanding the training barriers experienced by firms. This generic interest is heightened in the present context where a learning environment is seen as a key to innovation, productivity, and competitiveness. The relevance of potential barriers has also increased because of current concerns about skill shortages.

This paper considers the question of what barriers employers face in investing in employee training. These barriers, which we will also refer to (interchangeably) as obstacles or disincentives, may or may not be overcome or disregarded by the firm. In our view, the appropriate way to consider the question of barriers is within the context of a decision that the firm faces about whether or not to make a training investment. Sometimes a barrier will be a factor of enough significance to lead to a “no-investment” decision; other times, it may alter the nature or level of the investment; at still other times, it may be a consideration for the firm but ultimately not have an impact on the eventual investment decision. Given this perspective, then, “disincentives” probably most closely describe the concept at the heart of this paper.

For governments, the ultimate concern is whether disincentives may be leading to a sub-optimal (from a social returns point-of-view) level and composition of investment. Unfortunately, the information base is not up to the task of directly addressing this question of underinvestment and,

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as a consequence, policy-makers must focus on understanding what the disincentives are and their importance.

Before addressing the specific types of disincentives that may enter into the employer's training decision, we begin in section 2 by briefly summarizing the available Canadian evidence on patterns of employer-sponsored training. By describing these patterns, we are able to highlight where (i.e., in which types of firms) training investments are relatively large and, more importantly for the purposes of this paper, where they are small. This sets the context, then, by identifying which segments of the employer population seem most likely to have been affected by training disincentives, as revealed in their observed investment behaviour.

There are various disincentives that have been discussed in the economics literature and these provide the focus of section 3. We organize the disincentives into the following categories -- externalities; information barriers; employee-based obstacles; and a miscellaneous group. In each case, the theoretical arguments are discussed and then the relevant Canadian empirical evidence is reviewed. As we will see, that evidence is limited and can only provide partial insight into the importance of these disincentives.

We supplement this literature review with some new analysis of data from Canadian establishments on training obstacles. These data were collected in the 1995-96 Ekos Workplace Training Survey which gathered information on training experiences from over 2500 establishments throughout the Canadian private sector.² We focus on the part of the survey which questioned employers on the extent to which a number of potential obstacles to training were problems in their establishment.

Our conclusions are presented in the final section.

2. Evidence on Training Incidence Among Employers

One way of identifying training barriers is to examine patterns of workplace training. Where training activity is low, it is assumed training disincentives and obstacles are high. Evidence from recent national surveys of workplace training (Betcherman, Leckie, and McMullen 1997, Ekos Research Associates 1993, and Canadian Labour Market and Productivity Centre 1993) indicates that the incidence of workplace training tends to be lowest in small firms and rises with firm size. For example, as revealed by Table 2.1 (based on results from the Workplace Training Survey (WTS)), the incidence of formal training in small establishments is less than half that in large establishments (Betcherman, Leckie, and McMullen 1997). The results also indicate that formal training incidence is fairly low in certain manufacturing industries and in traditional services (which includes, for example, retail trade and accommodation and food services). Low

² The methodology and results of this survey are reported in Betcherman, Leckie, and McMullen (1997). While the survey collected detailed data from employers on the importance they attached to various training barriers, the published study did not report these in any detail.

training incidences were also reported in Newfoundland, Quebec, and Manitoba; however, it should be noted that the confidence levels around the estimates for the small provinces are very large because of small subsample sizes.

The low incidence of formal training in small establishments points to the possibility that training costs are a particular problem for small firms. Indeed, the WTS data indicate that training expenditures per employee are twice as high in small establishments (less than 20 employees) as in large ones (100 or more employees) (Betcherman, Leckie, and McMullen 1997). Larger firms are able to take advantage of economies of scale unavailable to small firms on their own and are better able than small firms to accommodate downtime while employees are being trained. This suggests, then, that small firms face higher barriers to training than larger ones. Similarly, the fact that training activity is relatively low in some regions and some industries raises the possibility that barriers or disincentives are higher in those segments of the economy than elsewhere.

Many surveys, including the WTS and the Adult Education and Training Survey, have found that training incidence was low for particular groups of employees. Youth and workers in non-standard work arrangements (e.g., part-time, self-employed) have low participation rates in workplace training. Because of weak firm attachment, employers are less likely to recoup training expenditures directed at such individuals and are therefore less likely to invest in training for them (Betcherman, McMullen, and Davidman 1998).

3. Disincentives to Training: A Summary of the Literature

The literature review presented in this section organizes the training disincentives faced by employers into four categories: externalities; information problems; employee-based obstacles; and a miscellaneous group. For each, we summarize the key theoretical arguments and then present whatever empirical evidence there is on the importance of each class of disincentive.

The Classic Argument: Externalities and Poaching

Externalities associated with employer-based training have long been recognized by economists (e.g, Pigou 1912). These potential externalities stem from the possibility that employees may leave the firm after training. Thus, employers may be unwilling to sponsor training where they believe they will not be able to fully recoup the costs of training through higher employee productivity in the future. As a consequence, suboptimal investment levels may result.

An important development emerging from human capital theory, however, has been the distinction between general and firm-specific training and the implication that the externality problem might not be as serious as had traditionally been argued (Becker 1964). General training, as the argument goes, is useful to employees in the external labour market and, thus, its

benefits will accrue to the trained workers who could command higher wages elsewhere. Accordingly, employers would be inclined not to sponsor such training if they have to bear the costs. Instead, to the extent that training is general, financing should fall primarily on employees who would pay either through direct contributions or reduced wages. Firm-specific training, on the other hand, is not transferable and, thus, employers can capture (a share of) the benefits in the form of higher employee productivity. In this instance, then, the employer should be willing to finance the training. The implication of human capital theory, then, is that there is not necessarily an externality problem for employers: in the case of general training, because the cost will be borne by the employee; for specific training, because the employer will capture the productivity gains because there is no mobility threat.

More recently, this theoretical argument has been questioned, essentially on two counts (e.g., Stevens 1996). The first is that the distinction between general and specific training is not as clear as human capital theorists suggested and, in any event, this distinction is not apparent to the parties. Most training, in fact, does contain both general and specific aspects. Thus, the rational financing decisions suggested by Becker are less obvious.

The second source of questioning concerns the financing of general training, assuming that this can be identified. While the human capital framework suggests that employees should fund general training, there are in fact obstacles impeding such financing. First, there are liquidity constraints -- workers cannot use their human capital as collateral and, thus, typically cannot borrow to finance such investments. Second, labour market rigidities and other institutional factors affecting wage determination (e.g., minimum wages, pay-equity legislation, collective bargaining arrangements) limit the potential for employees to accept lower wages to finance their training.³

To sum up, the training externality problem hinges critically on notions of mobility and risk. Employers who have borne some of the cost of training with a general component run the risk of losing (some of) their investment if the trained employee leaves the firm. And in the case of firm-specific training where the employer has paid, there is still the risk of employee turnover (even if that training has not changed the worker's labour market situation).

³ Indeed, researchers have generally not found evidence of trainees financing their own general training through lower wages. For example, Barron, Black and Lowenstein (1989) show that employees who receive training felt to be useful to other firms did not receive lower wages than other workers who did not receive such training. Also Feuer, Glick, and Desai (1991) show that engineers who had (general) education financed by their employers were paid no less than those who paid for their own education. It is true that there could be various interpretations for these findings beyond the one emphasized here that downward wage inflexibility is a constraint on employees financing their own general training. For example, these results may indicate that employers in certain circumstances may be prepared to finance general training.

The importance of mobility and risk -- and, thus, the potential importance of disincentives due to these externality problems -- can vary according to the institutional framework. Where the framework encourages job stability (through employment protection legislation, collective agreements, or culture), we can expect to see more workplace training. On the other hand, more flexible labour market institutions run the risk of increasing the possible disincentives employers face in sponsoring training. To some extent, this is supported by cross-country evidence (e.g., OECD 1993). Also, labour market tightness, by affecting search prospects and thus job tenure, can also have an effect.⁴

What empirical support is there for the contention that externalities create a disincentive for employers in investing in workplace training? Here we rely on the results of various employer training surveys which included questions on training obstacles. The most relevant obstacles here are those relating to "poaching" which tends to be articulated in such terms as "fear of losing workers once they are trained" or "trainees don't stay long enough to recoup training investment." However, we consider externality-based disincentives to also be expressed in questions relating to cost as a training barrier; this contention is based on the argument that training costs become a disincentive for firms where they are concerned that they will not capture the benefits because of concerns about losing trained workers. Thus, for purposes of this discussion, we have grouped barriers relating to poaching and costs together.

There is a range of Canadian evidence on externalities as a training obstacle. As the ensuing bullets indicate, the importance attached to this class of disincentives varies across surveys and over time:

- According to a 1984-85 survey sponsored by Employment and Immigration Canada, cost and risk of losing trained workers were the least frequently cited reasons for not sponsoring formal training (*Labour Market Bulletin* 1987).
- On the other hand, according to the 1987 Human Resource Training and Development Survey undertaken by Statistics Canada, limited resources was the predominant reason why firms were not able to meet all of their training needs (Rechnitzer 1990).
- A 1989 Ontario government survey of training in the private sector found that the cost of formal training was the most frequently mentioned factor inhibiting the provision of more training, cited by 50 per cent of respondents. Downtime was also frequently mentioned

⁴ The link between turnover and training is not empirically conclusive. On the one hand, as noted in the text, the OECD (1993) showed that the incidence of workplace training and high average tenure are broadly related across diverse economies. Betcherman, Leckie, and McMullen (1997) found a negative relationship between establishment turnover rates and the probability of formal workplace training. On the other hand, Levine (1993) found no relationship between plants reporting high levels of on-the-job training and turnover levels.

(25 per cent). However, the risk of losing trained employees was cited by only a small minority (7 per cent) (Ontario Ministry of Skills Development 1989).

- In 1990, the Canadian Labour Market Productivity Centre (CLMPC) sponsored a survey of 193 business and 72 union leaders about training (Canadian Labour Market Productivity Centre 1990a). The results highlight the differences between business and labour on the issue of disincentives. Employers most frequently reported a lack of facilities and interest. Labour most frequently mentioned a lack of employer interest (to a greater degree than by employers), a preference for recruitment, a lack of government funding, and a preference for informal training (44 per cent).
- In 1990, the CLMPC conducted a national survey of 822 high-tech firms and similarly found a preference for informal on-the-job training as the reason why the firms did not offer more formal training (Canadian Labour Market Productivity Centre 1990b). The cost of training, *per se*, was cited by 15 per cent of respondents as a reason for not providing formal training.
- The National Training Survey, a major survey of 17,500 organizations sponsored by the CLMPC in 1991, asked organizations wanting to do more training why their training needs were not met. The predominant reasons related to cost, i.e., lack of funds and lack of time, both reported by over 50 per cent of respondents (Canadian Labour Market Productivity Centre 1993).
- In a 1993 Ekos Research Associates survey of 2,500 employers, about 30 per cent of respondents mentioned training costs and a lack of government assistance as problems for the provision of training (Ekos Research Associates 1993). These were among the most frequently cited problems, along with information constraints (see below). About 22 per cent of respondents cited a fear of losing trained workers as an inhibiting factor.
- In the 1995-96 Ekos Workplace Training Survey, cost-related factors were the most frequently cited obstacles; however, none were reported by more than one-quarter of the weighted sample (Betcherman, Leckie, and McMullen 1997). We will turn to these data in more detail in section 4 of this report.

Information Constraints: Empirical Evidence

There are various kinds of information-related factors that may create disincentives for employers to invest in training. Here we focus on two: firms not being able to properly account for training investments and information shortcomings on the supply of training.

Measurement/Accounting Issues

For a variety of reasons, firms rarely account in any comprehensive manner for human resource development investments. This is part of a broader problem with accounting for investments in intangible assets (Government of Canada/OECD 1997).

In the area of training, Miller (1996) and others have documented the fact that conventional accounting frameworks cannot accurately measure the return on investments in training or in other forms of knowledge acquisition. At best, these frameworks measure the costs of training but not the associated returns.⁵ And even in terms of costs, it is well known that there is great variation among firms in terms of what factors are included.

The significance of these measurement and accounting problems is that it may well lead to an overall underinvestment by firms in training. Assuming that firms as investors are somewhat risk-averse, then in considering investment options where some have explicit expected rates of return (e.g., in physical capital) and where others do not (e.g., in human capital), it can be anticipated that firms will tend to cautiously undervalue the latter thus tilting decision-making at the margin away from these intangible investments. This information problem may also play out at the level of financial markets where investors, lacking accurate rate-of-return information, will undervalue firms investing in intangible assets (Government of Canada/OECD 1997).

Survey evidence does demonstrate that measurement of training activities among Canadian firms is very partial. Results from the WTS indicate that only about one-third of Canadian employers track training expenditures and just over 40 per cent formally measure the impacts of the training they support (Betcherman, Leckie, and McMullen 1997). Moreover, in-depth analysis provided by case studies of establishments participating in the survey revealed that the measurement that does occur is far from systematic and comprehensive.

Lack of Information on Training Opportunities

Over the past 15 years or so, the supply side of the training “market” has proliferated with the emergence of providers from both the commercial and non-commercial sectors. This

⁵ It should be understood that developing proper accounting frameworks is not a simple matter. Indeed, this has been evident from work coordinated by the OECD. There are a great number of “unknowns,” including, for example, the expected tenure of the employee and, thus, the length of the payback period over which employers may recoup their investment. Indeed, using data from the U.S. National Longitudinal Survey of Youth, Lowenstein and Spletzer (1997) find that employers will delay formal training for employees for whom there is uncertainty regarding their future mobility.

development has been due to a number of factors including deregulation and new technological opportunities (e.g., interactive learning technologies, etc.) As Betcherman, McMullen and Davidman (1998) argue in a recently released report on training policy, while the development of this supply side has created new options for firms and employees, there are a variety of information failures which hinder the ability of these potential consumers to fully exploit the opportunities in the market. This situation points to the need for better information flows, including training standards, to improve the functioning of the training market.

The lack of information ranges from difficulties identifying potential suppliers, to evaluating what course content is required to meet occupational requirements, to assessing the quality of the training offered by different suppliers. Problems are likely greatest when it comes to the private training institutions and companies that have grown so rapidly in recent years.⁶

Together, these information gaps can be expected to create reluctance on the part of some employers to tap into training market. These problems may well be compounded for employers in small or remote communities and for small firms in general where the costs of accumulating and evaluating information may be relatively high.

For the most part, surveys have not delved into the question of how significant information failures are as a constraint on employers in investing in training. There are, however, a few surveys that do offer some evidence and, together, they suggest that information problems are an issue for a minority of firms. The most detailed picture probably comes from the 1993 Ekos Research survey which asked about a number of potential training barriers including several relating to information (Ekos Research Associates 1993). A lack of information was particularly notable with respect to knowledge of the availability of government training programs as well as of training courses in general (cited by 35 and 27 per cent of respondents, respectively). Other information-related barriers included lack of suitable training centres (21 per cent) and lack of suitable training courses and trainers (18 per cent). In the WTS, information concerns in the form of a lack of suitable training courses or trainers were cited by about 17 per cent of respondents (Betcherman, Leckie, and McMullen 1997).

Employee-Related Obstacles

Our focus in this subsection is on how employee-related factors may create disincentives for employers to invest in training. While employers are the primary decision-makers in the area of workplace training, employee-initiated demand is not insignificant. For example, using data from the 1994 Adult Education and Training Survey (AETS) on full-time employees with at least one year tenure, Kapsalis (1996) found that employee demand for training has a significant impact on the incidence of employer-provided training. Among the pieces of evidence he provided to support this finding was the fact that in one-quarter of training events, it was the

⁶ More detail is provided in Betcherman, McMullen, and Davidman (1998).

employee who suggested the training. In addition, the incidence of employer-sponsored training is much higher among employees who expressed a need or desire to take training than among those who did not (47 and 41 per cent versus 30 and 28 per cent, respectively). Finally, regression analysis indicated that employee demand for training increased the likelihood of employer-sponsored training by one-third.

The AETS data indicate that over half (55 per cent) of these employees reported that they were “too busy” to take training needed for work; 29 per cent found that the time or location of the training was inconvenient; and 12 per cent reported family responsibilities as a reason for not training (Kapsalis 1996).

While employee interest is a factor, evidence from establishment surveys suggests, however, that employers generally do not see employees as being a major stumbling block in the provision of training. First, the Canadian Labour Market Productivity Centre (1990a), in a survey of business leaders, found that “no worker interest” was least frequently (8 per cent) cited as an obstacle to the improvement of training and retraining; this result was supported by a companion survey of union leaders. Also, results from the 1991 National Training Survey showed that “no employee interest” was least likely to be mentioned (2 per cent) as a reason for not being able to meet training needs (Canadian Labour Market Productivity Centre 1993). Finally, Ekos Research Associates (1993), using results from its National Survey of Employers and Employment and Training Issues, found that factors associated with employees, such as “not enough candidates” (14.2 per cent) and “non-completion of courses” (7.8 per cent) were among the least likely to be mentioned as problems by employers in the provision of training.

Employee factors as potential disincentives to training are unevenly distributed across the workforce. Evidence from the AETS shows very clearly that participation both in employer-sponsored training and in training undertaken by workers on their own rises significantly with education and income and is much higher for workers in managerial, professional, and technical occupations than for those in clerical, sales, and goods-producing occupations. This conclusion is supported by evidence from the 1994 International Adult Literacy Survey (IALS) (OECD and Statistics Canada 1995) which found that the higher an individual’s literacy level, the greater the likelihood that (s)he had received some training in the previous year. These unequal training patterns obviously reflect employer preferences in who they choose to invest in. However, it also reflects differences in how workers recognize the importance of training, and their interest in getting further training.

Other Disincentives

The literature addresses various other disincentives that firms might face in investing in training. At some level, it can be argued that, in one way or another, these can be fitted into the preceding categories. However, for various reasons, they are interesting to briefly consider on their own.

We include four below.⁷ In most cases, there is little, if any, empirical evidence with which to test their importance.

Surplus Skilled Labour

It has been argued that, in many sectors of the economy, a surplus of skilled labour exists and, as a result, firms have little incentive to invest in further training (beyond very firm-specific orientation training) (e.g., Lightstone 1997). This has long been articulated as the “buy instead of make” decision. In countries like Canada where educational attainment levels are high and where high unemployment rates have persisted, the possibility of a surplus of skilled labour seems more plausible. However, there is essentially no up-to-date evidence to evaluate this disincentive.⁸

In fact, the present debate is increasingly centred on concerns about shortages of skilled labour in certain occupations, most notably in the high technology area even within an overall context of high unemployment. There is a certain amount of disagreement about the extent and nature of these shortages but most serious analysis has concluded that the labour market is very tight for certain skill sets (Davidman 1998). Whether this situation is leading to more employer-based training is difficult to ascertain. A recent study by Industry Canada (1998) did find that one-half of information technology firms have increased the training they provide for high-skilled workers. It has been suggested, on the other hand, that various factors may be acting as continuing obstacles to training in these sectors despite the apparent tightness of the labour market. For example, the concentration of contractors which stems from the project-based nature of much high technology work may be a disincentive for employers given the uncertain future tenure. Also some observers have argued that the skills in particular demand may, in fact, be of a general nature and, thus, unlikely to be developed through employer-sponsored training.

Low Skills/Bad Job Trap

The quality of the labour force can affect the employer’s likelihood of training because of the types of job designs that are implemented and the training that is then required. If a firm has a highly educated and literate labour force to draw on, then it is more likely to build a competitive strategy on challenging, high-skill job designs which, in turn, creates an incentive to make investments in job-specific training that builds on the basics. In contrast to this “high-skill

⁷ For a more exhaustive list, see Booth and Snower (1996), especially chapter 15.

⁸ In the 1990 CLMPC survey of business and union leaders (Canadian Labour Market and Productivity Centre 1990a), there was evidence that about one-quarter of business leaders preferred recruitment over training. The union leaders considered a preference for recruitment to be a more prevalent factor.

equilibrium” is a “low-skill equilibrium” where employers drawing on a less educated workforce will design jobs in such a way as to not require advanced skills (Finegold 1992). In such a case, there will be little incentive to invest in training. Furthermore, as the IALS results have demonstrated, literacy skills are subject to the “use it or lose it” principle – workers who spend long periods in low-skill jobs that do not require the application of their literacy skills find that those skills deteriorate over time. As a consequence, employers who follow a low-skill strategy will find it increasingly difficult to change their skills strategy by training their existing workforce.⁹

Expectations for Government Responsibility

In a society where education has traditionally been seen as a public good, there is potential for firms (and workers) to resist the notion of private financing of training and to expect public financing.¹⁰ This can occur even where private returns exceed social returns, as long as the information failures discussed earlier exist. Various surveys have found that some portion of the employer population identifies a lack of government assistance as a barrier to training. For example, in the Ekos 1993 National Survey of Employers on Training and Employment Issues (NSETI) and the 1995 Ekos Workplace Training Survey, 30 per cent and 25 per cent of the respondents, respectively, cited this factor (Ekos Research Associates 1993; Betcherman, Leckie, and McMullen 1997).

Tax-Related Factors

There has actually been very little analysis of how the tax system affects the training decisions of firms (and, indeed, of workers).¹¹ However, as economists, we can expect that there will be behavioural responses here as in so many other areas. Booth and Snower (1996, chapter 15) offer some illustrations. For example, where income or profit gains from training are reduced in net terms because of personal or corporate taxes, we would expect that this would result in a disincentive to train. Similarly, the tax treatment of other types of investment (e.g., on physical capital) will affect the relative attractiveness of training investments to the firm.

⁹ The relationships among the skills of the labour force, the job designs selected by employers, and subsequent need for further training are discussed in Betcherman, McMullen, and Davidman (1998).

¹⁰ In Canada, government traditionally has also used immigration as a policy instrument to help firms meet skill needs, especially in times of labour shortages. This augments the expectation that human resource development is a public responsibility.

¹¹ One exception is Kitchen and Auld (1995).

4. New Evidence from the Workplace Training Survey

To complement the literature review, we now present some new results on disincentives to employer-sponsored training based on data from the Workplace Training Survey (WTS)¹². As indicated above, the WTS was a national survey of employers (n=2,584) conducted in 1995 to gather information on incidence, impacts and other aspects of workplace training in Canada. Results from the survey were weighted to reflect the size, industrial, and provincial composition of establishments in the country. For comparative purposes, we also present some results on training obstacles from the 1993 Ekos NSETI which asked similar questions on obstacles. It should be noted that 1,089 establishments participated in both surveys which allows us to conduct some longitudinal analysis.

In both surveys, employers were asked to rate the importance of various potential training obstacles on a seven-point scale (from 1, representing "not a problem," to 7, representing "a major problem"). For the present analysis, these responses were aggregated into two groups to create dichotomous variables: "yes, a major problem" (6-7) and "no, not a major problem" (1-5).¹³

In Table 4.1, we present the aggregated results from questions on training obstacles that were (almost) identically worded in the 1993 NSETI and 1995-96 WTS.¹⁴ When considering the results, however, it should be kept in mind that these data relate to the complete samples and not just the common group of 1,089 establishments. Thus, differences in the two years may be due to differences in sample composition. Keeping this in mind, the incidence of reported training obstacles declined between 1993 and 1995. Note that in 1995, similar proportions (about one-fifth) of employers cited each training obstacle. In other words, no single factor stands out as a disincentive for a large proportion of employers. However, each is important for a significant minority of firms. In both years, the most frequently cited obstacles relate to cost and lack of

¹² We have already cited the survey report (Betcherman, Leckie, and McMullen 1997). This section expands upon the discussion of training obstacles contained there.

¹³ In addition, there were some responses to an open-ended question on training obstacles which were re-coded into dichotomous variables and which we report on separately in this document. In the following tables, we do concentrate on the close-ended responses because of higher incidences reported for these obstacles compared to the responses to the open-ended question.

¹⁴ Except where indicated, all results presented in the following tables are weighted.

government assistance. Poaching ("losing trained workers to other employers") was the least frequently cited barrier in 1995 but not in 1993.¹⁵

How persistent are reported training obstacles? To accurately answer this question, we need to examine incidence of the obstacles among the same group of establishments in the two survey years. In Table 4.2, we present the results of the longitudinal analysis based on the restricted sample of employers who answered questions on similarly worded obstacles in both the 1993 and 1995 surveys. Note that results in this table (and only this table) are not weighted.

The main finding from Table 4.2 (column 1) is that there is a lot of "churning" among employers with respect to reported training obstacles -- i.e., a lack of persistence in training obstacles. Between only one-quarter and one-third of establishments experiencing a specific training obstacle in 1993 continued to experience the same obstacle in 1995. This suggests that most establishments are able to overcome perceived obstacles to training. The second column of Table 4.2 indicates that only about 10 per cent of establishments reported a specific training obstacle in 1995 after not having experienced it two years earlier.

Do employers who do not train overestimate the extent to which factors may be an obstacle to training? To answer this question, we compared the incidences of cited training obstacles for establishments that provided formal training to the incidences among those that did not (Table 4.3). The results indicate larger proportions of non-training employers than trainers citing specific obstacles. (The one exception is lost production, which presumably may be something that is learned only after the training is provided.) Further econometric analysis would be required to test whether this result reflects the fact that non-trainers overestimate training obstacles or whether it simply reflects differences in the composition of the two subsamples.

In the next series of tables, we present the results on training obstacles for various characteristics of establishments. First, looking at size, based on actual training patterns, we would expect training obstacles to be greater for smaller establishments, presumably because of a lack of economies of scale relative to larger employers. However, variations by size seem to depend on

¹⁵ As we noted, on the WTS there were some open-ended responses to the question on training obstacles. These were offered by about 25 per cent of the respondents. Three of the open-ended responses — lack of suitable candidates, employees don't see a training need, and employees don't complete the training — were amalgamated into a single employee-driven obstacle, which we discussed above. Only 4 per cent of employers cited this type of obstacle. Similarly, a lack of information about what training was available was mentioned as an obstacle by only 3.2 per cent. Other open-ended responses, which were of a cost-related nature, cited by more than 3 per cent of employers were too busy/loss of workers and production (6.4 per cent), cost (3.3 per cent), and travel distance/geographic location (3.1 per cent). As can be seen, these obstacles were not of wide concern to WTS respondents, but this may have to do more with the form of the question (open-ended) than actual experience.

the specific obstacle and, for the most part, differences are not statistically significant across size categories.

Still, as expected, smaller firms generally were more likely to identify the cost of training as an obstacle than larger employers. On the other hand, lost production during training was somewhat more likely to be cited by larger firms. On the one hand, this is surprising since one would expect that large firms would be most able to absorb downtime; however, on the other hand, this result may reflect a greater flexibility in many small firms. Small employers were more likely to cite poaching as a disincentive, presumably because of their inability to match compensation offers that larger firms can make. Finally, insufficient government assistance and a lack of suitable training courses and trainers were cited most frequently by large establishments and small establishments, with medium-sized employers least likely to report these barriers.¹⁶

Table 4.5 shows reported training obstacles by region. Differences here could reflect institutional differences (due, for example, to culture or public policies), differences in the composition of the employer population, or labour market conditions. All of these can affect the training decision.

The results do indicate statistically significant differences across regions. For the most part, employers in Quebec were most likely to report different training barriers, which is consistent with the survey's finding that this region had the lowest incidence of formal training. Employers in Ontario and the Prairies were the least likely to report training obstacles.

We might expect the incidence of certain training obstacles to be higher in rural communities than in urban centres because of a thinner supply side and higher information costs. As Table 4.6 shows, however, any differences are very small and not statistically significant.

As the literature review indicated, labour turnover plays a big role in the perception of externalities as a disincentive to training. We would expect that employers in high-turnover environments to cite potential loss of trained workers as an obstacle to the provision of workplace training. Also, these employers might be expected to cite costs as an impediment to training. As Table 4.7 indicates, the incidence of each training obstacle does rise with the level of turnover. For example, the percentage of employers with more than 25 per cent staff turnover who cited the threat of poaching as a training barrier was more than double the percentage of firms with less than 25 per cent turnover. There were also appreciable differences by level of turnover for lost production time and lack of suitable training courses/trainers being identified as training barriers.

¹⁶ As for lack of government assistance and training courses and trainers, small firms may find it difficult or costly to gather information about what is available. On the other hand, large firms would have better access to information but may simply have sophisticated requirements.

The final potential correlate of training obstacles we discuss here is the extent to which an employer relies on part-time workers. Where the employment relationship is part-time and/or of expected short tenure, there is less incentive for the employer (and, indeed, the employee) to invest in training because of the greater risk that that investment will not be recouped because the worker is likely to never work enough hours before the employment relationship ends.¹⁷ As such, we might expect employers with a large proportion of part-time workers to emphasize the importance of certain obstacles such as losing trained workers or the high costs of training. However, as Table 4.8 indicates, there was very little difference in the mean percentage of employment that is part-time between employers who cited the different training obstacles and employers who did not cite the obstacles.

5. Conclusion

Employer-sponsored training is of particular interest to policy-makers in the current context. This is largely due to two developments. First, economic theory has placed new emphasis on the importance of intangible assets that drive knowledge generation and innovation. Ultimately, the source of these drivers of growth is people. This has placed renewed importance on human resource development – not only initial schooling but also lifelong learning in the workplace. Second, Canada, along with many other countries, is concerned about the appearance of skill shortages, especially in critical knowledge- and technology-intensive areas. Thus, public policy-makers are interested in encouraging employer investment in training even if direct interventions are not prominent in the potential tool-kit. In this environment, then, understanding disincentives to training, including how they might be overcome, is a priority for policy-makers .

In theory, there are many disincentives that can influence employers in their decision about making employee training investments. The classic one is an externality-based concern that, once trained, employees may leave the firm thus precluding any possibility that the firm will get a (full) return on its investment. There are also various disincentives stemming from imperfect information. In some cases, employees may themselves create disincentives for employers because of a lack of interest or a lack of basic skills that provide a necessary foundation for ultimately ensuring productivity gains from training. Finally, there is a host of other potential barriers stemming from labour force conditions and public policy.

Unfortunately, the empirical base on which to evaluate these obstacles is partial. One strategy is to observe actual training patterns across the employer population thereby identifying where investments are low and (presumably) where barriers are high. This sort of exercise does lead to the identification of certain correlates of training, most prominently firm size. A second empirical strategy is to analyze how employers rate the importance of various potential disincentives. From this exercise, in which we have both reviewed existing evidence and

¹⁷ Household surveys such as the AETS have documented the relatively low training participation rates of part-time employees.

undertaken new analysis, it seems fair to conclude that, for large numbers of firms, specific obstacles do not lead to real underinvestment. It seems plausible that decisions not to train are often “rational” in the sense that the likely return does not warrant the investment either because workers with the necessary skills are available or because they can learn the required skills informally.

This does not mean that disincentives do not exist. While none of the potential barriers are consistently and widely cited as important, a number of them do appear to be significant for a minority of firms. In these cases, investment may not occur at socially optimal levels, which is an issue for policy-makers. The appropriate response for governments may be to consider how they can support the functioning of the training market through providing better information and supporting intermediaries and partnerships that pool risk and strengthen the links between industry and the learning sector.¹⁸

¹⁸ These ideas are developed in some detail in Betcherman, McMullen, and Davidman (1998).

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Table 2.1
Percentage of Establishments with Formal Training,
by Establishment Size, Industry and Province, 1995¹

TOTAL	41.8
EMPLOYMENT SIZE	
Less than 20 employees	37.8
20-99 employees	64.5
100+ employees	85.7
INDUSTRY	
Non-farm primary	48.7
Natural-resource manufacturing	36.7
Labour-intensive manufacturing	43.6
Scale-based manufacturing	33.7
Research-based manufacturing	50.0
Distribution services	46.0
Information services	48.2
Traditional services	37.9
Non-market services	73.0
Construction	33.6
REGION	
Atlantic	35.7
Quebec	30.5
Ontario	50.9
Prairies	39.0
British Columbia	45.7

1 All differences by size, industry and province are significant at the 1% level

Source: Betcherman, Leckie and McMullen (1997).

TABLE 4.1
Percentage Incidence of Training Obstacles*,
Weighted, 1993 and 1995

Obstacle	1993	1995
Training cost the organization too much	29.5	20.2
Lost production while workers on training	18.4	16.4
Insufficient government assistance	29.9	22.7
Lose trained workers to other organizations	24.5	15.5
Lack of suitable training courses and trainers	17.5	16.7

* Establishments responding 6 or 7 on a 7-point scale capturing the degree to which obstacle was a problem, varying from 1 (not a problem) to 7 (serious problem) for questions on obstacles that were worded the same in both surveys. Note, however, that the incidences are based on different samples of establishments in the survey years.

Source: Published incidences rates based on Ekos National Survey of Employees on Training and Employment Issues (HRDC) and the Workplace Training Survey (Betcherman, Leckie and McMullen 1997).

Table 4.2
Incidence of Obstacles to Workplace Training: Longitudinal Analysis*,
Unweighted, 1995*

Obstacle	(1) <i>Persistence:</i> Percent of org. which had reported obstacle in 1993, which also reported obstacle in 1995	(2) <i>"Newcomer":</i> Percent of org. which had <u>not</u> reported obstacle in 1993, but which reported obstacle in 1995
Training cost the firm too much	33.5	9.8
Lost production time while training	26.0	12.4
Insufficient government assistance	32.7	12.5
Lose trained workers to other organizations	29.6	8.1
Lack of suitable training courses and trainers	25.2	11.5

* Based on establishments (n=1080) responding 6 or 7 on a 7-point scale capturing the degree to which obstacle was a problem, varying from 1 (not a problem) to 7 (serious problem), among establishments responding to the relevant questions in both years, for questions on obstacles that were worded the same in both surveys.

Source: Ekos National Survey of Employees on Training and Employment Issues (HRDC) and estimates by the authors based on the Workplace Training Survey.

Table 4.3
Percentage Incidence of Training Obstacles¹ by Whether or Not Establishment Provided Formal Training to Its Employees, Weighted, 1995

Obstacles	Provided Formal Training	No Formal Training	Total
Training cost the organization too much	16.9	22.5	20.1***
Lost production time while training	18.4	14.9	16.4**
Insufficient government assistance	20.7	24.1	22.7**
Lose trained workers to other organizations	12.9	17.3	15.5***
Lack of suitable training courses/trainers	13.9	18.7	16.7**

Differences significant at:

* 10% level, ** 5% level, *** 1% level.

1 Establishments responding 6,7 ("yes" a major problem) on a 7-point scale varying from 1 (not a problem) to 7 (a major problem).

Source: Estimates by the authors based on the Workplace Training Survey.

Table 4.4
Percentage Incidence of Training Obstacles¹
by Workforce Size of Establishment, Weighted, 1995

Obstacles	<20 Employees	20-99 Employees	100 Employees or more	Total
Training cost the organization too much	20.7	15.6	15.1	20.1
Lost production time while training	16.5	14.6	19.3	16.4
Insufficient government assistance	23.3	16.6	24.1	22.7*
Lose trained workers to other organizations	15.7	15.9	8.3	15.5
Lack of suitable training courses/trainers	17.0	13.1	17.0	16.7

* Difference significant at 10% level.

1 Establishments responding 6,7 ("yes" a major problem) on a 7-point scale varying from 1 (not a problem) to 7 (a major problem).

Source: Estimates by the authors based on the Workplace Training Survey.

Table 4.5
Percentage Incidence of Training Obstacles¹
by Region*, Weighted, 1995**

Obstacles	Atlantic	Quebec	Ontario	Prairies	B.C.	Canada
Training cost the organization too much	24.9	31.2	11.8	12.9	29.1	20.2
Lost production time while training	20.6	18.0	10.9	15.4	26.6	16.4
Insufficient government assistance	26.8	33.1	17.4	19.9	19.5	22.7
Lose trained workers to other organizations	18.3	20.1	16.3	10.0	11.4	15.5
Lack of suitable training courses/trainers	18.6	22.0	14.3	13.6	16.5	16.7

*** All differences significant at 1% level.

1 Establishments responding 6,7 ("yes" a major problem) on a 7-point scale varying from 1 (not a problem) to 7 (a major problem).

Source: Estimates by the authors based on the Workplace Training Survey.

Table 4.6
Percentage Incidence of Training Obstacles¹
by Whether or Not in a Rural Community, Weighted, 1995

Obstacles	Rural	Urban	Total
Training cost the organization too much	21.1	20.1	20.3
Lost production time while training	20.3	15.3	16.6**
Insufficient government assistance	24.4	23.3	23.5
Lose trained workers to other organizations	17.3	15.6	15.9
Lack of suitable training courses/trainers	13.1	15.7	15.3

** Difference significant at 5% level.

1 Establishments responding 6,7 ("yes" a major problem) on a 7-point scale varying from 1 (not a problem) to 7 (a major problem).

Source: Estimates by the authors based on the Workplace Training Survey.

Table 4.7
Percentage Incidence of Training Obstacles¹
by Level of Turnover, Weighted, 1995

Obstacles	0-4%	5-25%	26%+	Total
Training cost the organization too much	19.0	20.3	22.2	20.0
Lost production time while training	14.6	11.7	25.7	16.0***
Insufficient government assistance	15.5	13.9	18.2	15.6
Lose trained workers to other organizations	10.1	10.7	23.6	12.1***
Lack of suitable training courses/trainers	23.0	18.1	28.3	22.6***

*** Difference significant at 1% level.

1 Establishments responding 6,7 ("yes" a major problem) on a 7-point scale varying from 1 (not a problem) to 7 (a major problem).

Source: Estimates by the authors based on the Workplace Training Survey.

Table 4.8
Mean Percentage of Work Force that is Part-Time
by Whether or Not Training Obstacles¹ Reported, Weighted, 1995

Obstacles	Mean Percentage Part-Time	
	Obstacle	Not
Training cost the organization too much	21.5	20.4
Lost production time while training	20.0	20.7
Insufficient government assistance	18.7	20.8*
Lose trained workers to other organizations	20.4	20.6
Lack of suitable training courses/trainers	21.1	20.3

Differences significant at * 10% level, ** 5% level, *** 1% level.

1 Establishments responding 6,7 ("yes" a major problem) on a 7-point scale varying from 1 (not a problem) to 7 (a major problem).

Source: Estimates by the authors based on the Workplace Training Survey.