

February 2011



111 Sparks Street, Suite 500
Ottawa, Ontario K1P 5B5
613-233-8891, Fax 613-233-8250
csls@csls.ca

CENTRE FOR THE
STUDY OF LIVING
STANDARDS

THE STATE OF PRIVATE SECTOR ELECTRONIC LABOUR EXCHANGE SERVICES IN CANADA

Andrew Sharpe and Alexander Murray
CSLS Research Report No. 2011-01
February 2011

Prepared for Human Resources and Skills Development Canada

The State of Private Sector Electronic Labour Exchange Services in Canada

Abstract

This report has two aims. The first is to provide a descriptive overview of the services offered by private sector electronic labour exchanges (ELEs) in Canada. The second is to assess those services in terms of their likely effects on labour market matching, their accessibility, and the degree to which they satisfy the needs of all Canadian jobseekers and employers. The report finds that there is a robust private sector in ELE services in Canada. The private sector provides a broader range of services than the main public sector alternative, Job Bank. However, there are key areas in which the private sector does not deliver adequate services. The public sector, through Job bank, can take the lead in providing specialized job-search services tailored toward groups with unique labour market needs.

Résumé

L'objet de ce rapport est double. Le premier est de fournir une vue d'ensemble descriptive des services offerts par le secteur privé des Services de placement électronique (SPE) au Canada. Le deuxième est d'évaluer l'accessibilité de ces services, leur incidence probable sur l'équilibre entre l'offre et la demande sur le marché du travail ainsi que la mesure dans laquelle ils répondent aux besoins de l'ensemble des chercheurs d'emploi et des employeurs canadiens. Le rapport fait état de la solidité du secteur privé des SPE au Canada. Le secteur privé fournit un plus large éventail de services que la principale option du secteur public, Guichet emplois. Par contre, il existe certains domaines importants pour lesquels le secteur privé ne livre pas des services adéquats. Le secteur public devrait, au moyen de Guichet emplois, miser sur ses forces en tant que fournisseur de SPE qui s'adressent aux travailleurs peu spécialisés ainsi qu'aux petites entreprises.

The State of Private Sector Electronic Labour Exchange Services in Canada

Table of Contents

Abstract.....	i
Résumé.....	i
Executive Summary	iii
List of Tables	viii
I. Introduction	1
II. Definition and Classification of Electronic Labour Exchanges	3
III. Literature Review.....	5
A. The Increasing Importance of ELEs.....	5
B. Evidence on the Internet and Labour Market Matching.....	6
III. Electronic Labour Exchanges in Canada	11
A. Overall Description of Private Sector ELEs.....	11
B. Description of Services Provided by Private Sector ELEs.....	15
i. E-recruiters	15
ii. Job Search Engines.....	17
iii. Job Boards.....	19
IV. Analysis and Assessment.....	22
A. ELEs as Labour Market Intermediaries.....	22
i. Framework.....	22
i. Assessment	24
B. Accessibility	27
C. Tailored Services	28
D. Role of the Public Sector.....	28
i. Public Sector ELEs in Canada.....	28
ii. Public Sector ELEs in Other Countries.....	29
iii. What Role for Job Bank in Canada?	31
V. Conclusion	32
References.....	34

The State of Private Sector Electronic Labour Exchange Services in Canada

Executive Summary

Private sector electronic labour exchanges (ELEs) have burgeoned in Canada over the past decade. This was associated with the emergence of the internet as the most important channel through which Canadians access information, including labour market information (LMI). As more Canadians gained access to the internet, private sector ELEs emerged as a major source of internet-based LMI. A 2009 survey revealed that the private sector ELEs Monster.ca and Workopolis.com were the eighth and tenth most frequently used web sites by seekers of LMI.

The growing importance of private sector ELEs as a form of labour market intermediation between job seekers and employers has potential policy implications because the federal government maintains its own ELE, the Job Bank. The recent report of the Advisory Panel on Labour Market Information, chaired by Don Drummond, recommended that the federal government invest \$7 million to increase the proportion of available jobs (especially high-skill jobs) posted on Job Bank, Canada's primary public sector ELE. But given the range of services available from private sector ELEs, and given that the federal government is expected to look for expenditures to cut in the coming years in order to rebalance its budget, it is worth asking whether Job Bank provides extra value to Canadians above and beyond the private sector ELEs and whether the additional investments recommended by the Drummond Report would add to that value.

To this end, the aim of this report is to improve our understanding of the role of private sector ELEs in the job-search and recruitment activities of Canadian jobseekers and firms. We explore the services provided by a variety of private sector ELEs, with a focus on the accessibility of those services, the degree to which they provide specialized services for various groups of users (older workers, Aboriginal workers, youth, etc.), and the complementarity or substitutability of private and public sector ELEs.

Definition and Classification of ELEs

Electronic labour exchanges (ELEs) are web sites that facilitate matching between jobseekers and employers by collecting, organizing, and making available detailed information about at least one side of the labour market. The domain of private sector ELEs contains a large number of web sites with a variety of user interfaces, target audiences, and suites of services for jobseekers and employers. The ELEs can be categorized according to the types of services they offer to users. We propose the following three categories:

1. **E-recruitment web sites** provide recruitment services to employers. They collect information about workers (e.g. resume databases) and employers pay

for the right to view the information. Employers also pay to post their job vacancies. Job search assistance services are provided to jobseekers for free, in order to build the database for employers.

2. **Job search engines** are aggregators that collect job postings from many job boards and company recruitment web sites and allow users to search through them using keywords. There is no cost to the jobseeker or to employers.
3. **Job Boards** allow jobseekers to search through jobs posted by employers. Employers are charged a fee to post their vacancies. Job boards are like e-recruitment web sites, but without the additional services for employers (resume databases, etc.).

Summary of Findings

Use of ELEs by Canadians

E-recruiting sites tend to be the most popular with users. The three most widely used private sector ELEs – Workopolis, Monster.ca, and Jobboom.com – are all e-recruiters. This makes sense because e-recruiters provide more services to both jobseekers and employers than the other types of ELEs. In contrast, job boards like Working.com and Careerbeacon.com offer fewer services and are less widely used. The public sector's Job Bank is the major exception to this pattern. It falls in the job board category, but is at least as widely used (and by some accounts more widely used) than the most popular private sector e-recruiters.

Job search engines fall between the other two categories in terms of popularity. They provide the fewest services among the three categories, but they likely appeal to jobseekers because of their simplicity. They allow jobseekers to search job postings from a large number of sources through a single interface, and that interface is as easy to use as an everyday search engine such as Google.ca.

Functions of ELEs as Labour Market Intermediaries

By acting as intermediaries between jobseekers and employers, ELEs address two key labour market imperfections:

1. **Costly information.** The acquisition of information involves costs in terms of money, time and effort. Since information is in large part a public good, it is likely to be undersupplied under *laissez faire* conditions.
2. **Adverse Selection.** Asymmetric information in labour markets can lead the highest quality workers and employers to exit the market, leaving only the low-quality participants.

Costly Information

ELEs reduce information costs in several ways. By establishing reputations for effectiveness in matching workers with employers, an ELE can attract a large number of jobseekers and employers to one online location – making matches more likely to occur quickly. Economies of scale allow the fixed costs of information-seeking to be spread over a large number of job matches. A single job ad posted by an employer may be viewed by far more jobseekers through an ELE than would have been possible through any other medium. The ease of updating digital information ensures that online job postings are likely to be more up-to-date than similar information in other media.

There is no doubt that ELEs have reduced the cost of labour market information in Canada. This is especially true for jobseekers. A jobseeker with internet access can obtain a far greater amount of information at a much lower cost per unit (i.e. per job posting viewed) than would have been possible in the past. Costs have also fallen from the employer perspective. While most ELEs charge substantial fees for employers to post job listings or view jobseeker resumes, the costs are lower than the costs of the worker-search methods that were available to employers before the advent of ELEs. For example, a job advertisement in the Sunday *New York Times* (the newspaper with the largest circulation in the United States, at 1.7 million) cost \$4,500 in 2001. In the same year, a job ad at Monster.com cost \$137, stayed online for 30 days, and reached 3.8 million potential viewers.

ELEs may not decrease all costs. A potential added cost to employers from ELEs is that they may be inundated with applications, therefore, increasing the cost to them of sorting through the applications. Some e-recruiting websites have recognized this additional cost and provide services to help organize and select candidates. Nevertheless, the fact that ELEs are so popular relative to other advertising methods is *prima facie* evidence that these added administrative costs do not outweigh the benefits of ELEs.

Adverse Selection

Adverse selection is a more complex issue. ELEs can help solve the problem of adverse selection to the extent that they provide employers with credible information that fully describes the quality of jobseekers. However, ELEs will not completely solve adverse selection problems if firms believe that the pool of jobseekers available through ELEs is of low average quality in terms of *unobservable* characteristics (i.e. in ways that are not apparent from looking at a jobseeker's resume, school transcripts, etc.). There is some empirical evidence that employers do hold this belief, although that evidence may be somewhat outdated.

E-recruitment ELEs may help address the adverse selection problem through the resume database. In particular, the databases often contain resumes and contact information for workers who are currently employed. Current employment sends a strong positive signal to employers about the quality of a worker, and many employers prefer to hire from a pool of employed workers if possible.

However, job search engines and job boards do not contain resume databases and, indeed, possess no characteristics that suggest that they help reduce adverse selection. From this perspective, it is perhaps a good thing that the most popular and widely-used private sector ELEs in Canada – Workopolis and Monster.ca – are both e-recruiters. Of the three types of ELE, e-recruiters are the most likely to address the adverse selection problem.

Accessibility of ELE Services

From the perspective of jobseekers, private sector ELEs in Canada are highly accessible. All ELEs provide their key job search services free of charge. The market contains a range of ELEs offering services suitable for users with varying degrees of computer literacy. Job search engines, in particular, are very easy to use and do not require significant computer skills. If a person knows how to do a web search on Google.ca, then he or she knows how to search for jobs using a job search engine like Eluta.ca or Wowjobs.ca. In addition, most Canadian ELEs may be used in either English or French.

ELE services are also fairly accessible from the employer perspective. In terms of affordability, the advertisement of job vacancies through ELEs is extremely cheap in per-viewer terms. A job ad at an e-recruitment site can cost hundreds of dollars, but it can potentially reach hundreds of thousands of jobseekers. However, the large up-front costs of posting a job ad on the major private sector e-recruiters and job boards may render the services inaccessible to small enterprises or individuals looking to advertise jobs.

Tailored Services for Groups with Unique Employment Challenges

Most ELEs do not offer tailored services for groups with unique employment challenges such as Aboriginal people, immigrants, and persons with disabilities. Workopolis does operate specialized e-recruiter ELEs for Aboriginal people, immigrants, and persons with disabilities through its NicheNetwork system, but these ELEs are hardly used by employers and do not list many jobs. This suggests that most employers are not willing to pay to target their recruitment efforts at these groups.

In any case, it is not clear that ELEs are an appropriate channel by which specialized services for subpopulations with unique employment challenges should be delivered. The appropriate target of government policy is to help members of disadvantaged groups to improve their employability so that they can find jobs through the standard ELEs, rather than try to create special ELEs or ELE services to target those jobseekers.

Role of the Public Sector in the ELE Market

Job Bank, Canada's primary public sector ELE, is one of Canada's most widely used ELEs and is very well liked by its users. But given the range of services available

from the private sector, it is worth asking whether the Job Bank is worth maintaining and, if it is, what role it should play in the overall ELE market.

A key related issue is the degree to which a public sector ELE is a complement or a substitute for the private sector services. It is clear that there is some substitutability between them since they all serve the same basic function: compiling job ads for jobseekers to view. However, the public and private sector ELEs do not necessarily serve the same target populations. Compared to the major private sector ELEs, Job Bank returns more results for keyword searches associated with jobs that require little formal education or training. For search terms associated with jobs that require more specialized training, Job Bank's relative performance is less impressive.

This difference is not necessarily a problem for Job Bank. If Job Bank lacks jobs for highly skilled workers, it seems equally true that the private sector ELEs lack jobs for jobseekers with less education and training. It may be that firms are unwilling to pay the large fees to post ads for low-skill jobs, or that many of these job opportunities are with small and medium-sized employers (SMEs) that are unable to pay the large up-front cost of advertising a job on a major private sector ELE.

This suggests two important functions that Job Bank performs in the ELE marketplace: service for low-skill workers who are underserved by the private sector ELEs, and free service for SMEs that cannot afford to advertise on the major private ELEs.

Rather than try to make Job Bank more similar to private sector competitors (as the Drummond Report essentially recommended), Service Canada should seek to identify important services that private sector ELEs do not provide and aim to provide those services through Job Bank. This is the proper role of the public sector.

List of Tables

Table 1: Electronic Labour Exchange Traffic Metrics, Canada	12
Table 2: Classification of Electronic Labour Exchanges.....	14
Table 3: Number of Results Retrieved from E-recruiters and Job Boards for Selected Search Terms	32

The State of Private Sector Electronic Labour Exchange Services in Canada¹

I. Introduction

Private sector electronic labour exchanges (ELEs) have burgeoned in Canada over the past decade. This was associated with the emergence of the internet as the most important channel through which Canadians access information, including labour market information (LMI). In 2009, 91 per cent of LMI users reported using the internet to access LMI (LMI Secretariat, 2009a). The next most popular medium, printed publications, was utilized by 60 per cent of users.² As more Canadians gained access to the internet, private sector ELEs emerged as a major source of internet-based LMI. Another survey revealed that the private sector ELEs Monster.ca and Workopolis.com were the eighth and tenth most frequently used web sites by seekers of LMI (LMI Secretariat, 2009b).³

The growing importance of private sector ELEs as a form of labour market intermediation between job seekers and employers has potential policy implications because the federal government maintains its own ELE, the Job Bank. According to the LMI Secretariat (2009b), Job Bank is the third most widely used online source of LMI among LMI users. The recent report of the Advisory Panel on Labour Market Information, chaired by Don Drummond, recommended that Job Bank, Canada's primary public sector ELE, must be improved to include a larger proportion of available jobs (especially high-skill jobs):

An important improvement will be to make sure that Job Bank has more complete representation of the "better" jobs. At present, it seems skewed toward lower-paying jobs. . . . Partnerships with provincial and territorial governments and private sector recruiters who maintain their own sites provide one possible way to get more high-end and professional jobs posted. (Drummond *et al.*, 2009)⁴

The Drummond Report recommended a \$7 million investment to improve the Job Bank. But given the range of services available from private sector ELEs, and given that the federal government is expected to look for expenditures to cut in the coming years in order to rebalance its budget, it is worth asking how much value the Job Bank provides to

¹ Andrew Sharpe is Executive Director of the Centre for the Study of Living Standards (CSLS). Alexander Murray is an economist at the CSLS. The authors thank Crystal St. Denis and Eric Thomson of the CSLS for research assistance, and HRSDC officials for useful comments on an earlier draft. They also thank employees at Monster.ca, Indeed.ca, localwork.ca and Allstarjobs.ca for providing answers to inquiries related to this project.
E-mail: andrew.sharpe@csls.ca; alex.murray@csls.ca.

² The sample of LMI users surveyed by the LMI Secretariat (2009a) contains a variety of types of users, including persons from non-governmental organizations, universities and colleges, the federal, provincial and territorial governments, business, and labour organizations.

³ More widely used sites included those of Statistics Canada, HRSDC, and Service Canada, as well as Job Bank and sector council web sites.

⁴ Job Bank is located at <http://www.jobbank.gc.ca/>.

Canadians above and beyond the value produced by private sector ELEs. The United States eliminated its federal government-run ELE, America's Job Bank, in 2007. The explanation given was that "the technology and markets have developed in such a way that government sponsorship is no longer needed" (Nakamura *et al.*, 2009). The same may be true in Canada.

It is apparent that private sector ELEs, such as Monster.ca and Workopolis, have become more well-known over time. Nevertheless, there exists little research on the extent to which they are used by Canadians and the magnitude of their impact on labour market outcomes. The aim of this report is to improve our understanding of the role of private sector ELEs in the job-search and recruitment activities of Canadian jobseekers and firms. We explore the services provided by a variety of private sector ELEs, with a focus on the accessibility of those services, the degree to which they provide specialized services for various groups of users (older workers, Aboriginal workers, youth, etc.), and the complementarity or substitutability of private and public sector ELEs. We do not conduct a rigorous statistical evaluation of the impact of private sector ELEs on labour market outcomes, but we do assess their likely impacts based on a framework for understanding ELEs within the context of their role as labour market intermediaries.

We are unable to conduct a thorough investigation of the magnitude of the effect of private sector ELEs due to a lack of suitable data on the labour market outcomes of ELE users relative to those of non-users. E-recruiters such as Monster.ca and Workopolis did not have any aggregate statistics on who uses their resources. Acquiring such data would require that we conduct our own data gathering project by finding ELE users and following their progress for several months. Such an endeavor would be beyond the scope of this project.

The remainder of the report is structured as follows. Section II discusses the existing literature on ELEs and, more broadly, the role of the internet in labour market matching. In Section III, we provide detailed descriptions of several of the most popular ELEs in Canada. In section IV, we assess private sector ELEs as labour market intermediaries and discuss the role of the public sector in the ELE marketplace. Section V summarizes and concludes.

II. Definition and Classification of Electronic Labour Exchanges

Electronic labour exchanges (ELEs) are web sites that facilitate matching between jobseekers and employers by collecting, organizing, and making available detailed information about at least one side of the labour market. The most basic form of information provided by an ELE is a list of job vacancies that job seekers can browse. Some ELEs collect information about jobseekers and make it available to employers. Additional labour market information (LMI), such as salary information for specific occupations or information about how to create a resume, is also provided by many ELEs.

ELEs are labour market intermediaries, “entities or institutions that interpose themselves between workers and firms to facilitate, inform, or regulate how workers are matched to firms, how work is accomplished, and how conflicts are resolved” (Autor, 2009). Since their function is to facilitate labour market matching, ELEs may be expected to generate improved labour market outcomes including shorter unemployment durations, shorter job vacancy durations, lower frictional unemployment rates, improved job satisfaction and higher labour productivity as a result of improved worker-job matches and less costly labour turnover.

ELEs may also be useful for labour market analysis, independent of their effectiveness in matching jobseekers with employers. Trends in the number of job postings may be useful indicators of general trends in the labour market and the wider economy. Since January 2009, the ELE Indeed.com has provided monthly data on job postings in the United States for 12 major industries on its blog (blog.indeed.com). WANTED Technologies, a publicly-traded firm based in Quebec City and founded in 1999, provides online tools (WANTED Analytics) that aggregate job postings across a number of online job boards, e-recruiters, and corporate websites and allow users to track trends in the number of job postings broken down by region (i.e. for Canada or by province or city), by employer, or by the ELE that supplied the job postings. WANTED also provides an index of labour market performance by occupation and location based on the number of people currently employed in that occupation, the number of job vacancies, and the location. The Conference Board of Canada uses WANTED Analytics to create its own Help Wanted Index, an indicator that predicts employment trends.

While the analytical role of ELEs may be important, analytics are not the primary service provided by ELEs. In this report, we focus on the labour market matching role of ELEs.

This report also focuses on private sector ELEs, as opposed to ELEs operated by governments. The domain of private sector ELEs contains a large number of web sites with a variety of user interfaces, target audiences, and suites of services for jobseekers and employers. There are several dimensions of analysis to consider when thinking about the role and impact of ELEs. These include the types of services offered; the large,

generalist commercial job sites versus smaller niche sites that target specific audiences; and active versus passive job-seeking.⁵

In terms of the types of services offered, our overview of Canadian private sector ELEs suggests three broad categories: *e-recruiters*, which attract a pool of jobseekers by providing free services and then sell recruitment services to firms; *job search engines*, which aggregate job postings from a variety of job boards and corporate career web sites and allow jobseekers to search them through a single interface; and ‘traditional’ online *job boards*, which allow jobseekers to browse job vacancies posted by employers. These categories are explored more fully starting in Section IV below.

⁵ Note that we do not consider firms’ own job opportunities web sites to be ELEs. ELEs are independent entities that bring employers and jobseekers together. That being said, some ELEs collect job listings from firms’ own web sites. See Section III.A below.

III. Literature Review⁶

This section provides an overview of the existing literature on ELEs. The role and impact of private sector ELEs is not well understood, especially in the Canadian context. Existing research from around the world suggests that ELEs have become a dominant medium through which labour market matching takes place. This is probably attributable to the very low cost of finding matches through ELEs relative to other media. Whether or not ELEs improve overall labour market outcomes (e.g. average unemployment durations, the quality of worker-job matches, etc.) is an open question.

A. The Increasing Importance of ELEs

ELEs have become a dominant mechanism for labour market matching in developed economies. In the United States, employer surveys reveal that 12.3 per cent of all new hires in 2008 were attributable to online job boards (Crispin and Mehler, 2009). Online job boards were the third most common source of new hires after referrals (27.3 per cent) and corporate career web sites (20.1 per cent). The proportion of new hires attributable to job boards has been stable at about 12 per cent since 2005. Smith (2005) reports the results of a survey by Kerr and Downs Research Inc. in which 46 per cent of human resources professionals state that online job boards are the best recruitment resource available.

Crispin and Mehler (2009) note that 20.1 per cent of 2008 hires occurred through companies' own career web sites. It is likely that part of that total can be attributed to job search engines that lead jobseekers to the corporate career pages. Thus, ELEs are a key part of the US labour market.

A similar study in Australia shows that job boards led to 29.6 per cent of new hires in 2008/2009 (Specht and Tusing, 2009).⁷ Job boards were the number one source of new hires in Australia, ahead of internal recruiters (16.8 per cent of new hires). Another 10.6 per cent of hires were attributable to employers' own web sites, and as above, some of this was likely associated with jobseekers' use of job search engines.

We know of no similar data for other countries, but there is evidence to suggest that online job sites have become important mechanisms for labour market matching in countries other than the United States and Australia. In Canada, we know that ELEs are popular internet destinations for LMI seekers. As noted in the introduction to this report, 91 per cent of LMI users used the internet to access LMI in 2009 (LMI Secretariat, 2009a). The federal government's ELE, Job bank, was the third most widely used web site among LMI users (used by 29 per cent), while private sector ELEs Monster.ca (9 per cent) and Workopolis (6 per cent) were, respectively, the 8th and 10th most widely used

⁶ This section draws upon Murray (2010a).

⁷ The survey was conducted in June 2009 and asked firms about their hiring practices over the previous twelve months. The figures compiled by Crispin and Mehler (2009) for the United States account only for *external* hires (that is, new workers hired from outside the firm), while the Australian numbers provided by Specht and Tusing (2009) are based on both external hires and hires from the existing pool of in-house workers.

sites (LMI Secretariat, 2009b). In a survey of employers in the United Kingdom, conducted by the Chartered Institute for Personnel Development in 2002, 28.9 per cent of companies reported that they advertised jobs on online job boards (Personnel Today, 2002).

The increase in the use of ELEs in the United States has not been driven entirely by the large commercial ELEs like Monster.com. In recent years, niche employment sites have gained importance in the United States relative to the larger ELEs. Of the 12.3 per cent of new hires attributable to job boards in 2008, 36.2 per cent were from niche sites (Crispin and Mehler, 2009). By comparison, the two largest ELEs – CareerBuilder.com and Monster.com – were responsible for 28.9 per cent and 22.9 per cent of new hires, respectively.

In the 2005 study by Kerr and Downs Research Inc., cited by Smith (2005), 65 per cent of HR professionals reported that so-called association boards (i.e. small, industry-specific ELEs operated by industry associations) were considered more useful than alternative information sources including the large commercial job boards. In a recent Q&A published by the *Wall Street Journal*, ELE experts stated that the big job boards are useful for young workers in search of entry-level positions but that niche sites are better for employers who need to find high-level talent (Needleman, 2009).⁸

Nevertheless, the fact remains that the market for ELE services is not completely dominated by the large well-known ELEs. As the evidence in Smith (2005) and Needleman (2009) suggests, there is a significant place in the market for ELEs that target specific industries. These are typically operated by industry associations.⁹ Canadian examples include job boards operated by the Provincial and Territorial Library Associations of Canada (libraryjobs.ca), the Baking Association of Canada (bakingassocanada.com/jobboard/listjobs.cfm), the Canadian Association for Business Economics (cabe.ca) and the Society of Graphic Designers of Canada (gdc.net/designers/job_board.php). There are also job boards that cater to specific demographic groups.¹⁰ A key point is that even if no individual web site serves the unique needs of every subpopulation in society, the market as a whole may be able to do it through niche sites.

B. Evidence on the Internet and Labour Market Matching

The impact of private sector ELEs on the labour market outcomes of jobseekers and employers is not a well-researched topic, especially in the Canadian context.

⁸ Of course, these numbers depend on what web sites are classified as ‘niche sites.’ In Crispin and Mehler (2009), the set of niche sites seems to comprise all job sites other than the three commercial sites specifically asked about in the survey: CareerBuilder.com, Monster.com, and Yahoo! HotJobs. This classification has nothing to do with whether a site serves a general audience or a niche audience. Craigslist.org is classified as a niche site by Crispin and Mehler, but it is not clear that Craigslist serves only a particular niche market.

⁹ <http://www.associationjobboards.org/> provides a database of hundreds of association boards, mostly pertaining to the United States but with some international content as well. The site links to job boards focused on specific industries including (among others) agriculture, aviation, banking, law, retail, and transportation.

¹⁰ For example, the National Association of Black Accountants maintains an ELE designed for African American financial services professionals at <http://www.nabainc.org/OnlineCareerCenter/tabid/215/Default.aspx>.

However, there is an emerging literature on the role of the internet as a source of LMI and as a job search method.

As more and more people gained access to the internet in the late 1990s, economists began to consider the effects it would have on labour markets. Autor (2001) identifies three areas in which the internet is likely to affect labour markets: how jobseekers and employers find one another; how local markets shape labour demand; and how labour services are delivered. The first area is most relevant with respect to ELEs. Autor notes that the primary effect of online job boards (that is, ELEs) is to lower the cost of information. Relative to alternatives such as newspapers, ELEs offer more information and are easier to search. This should lead to shorter unemployment durations, lower unemployment, and higher productivity by facilitating better matching between workers and employers.

The effects of ELEs are not all positive, however. Autor notes that by lowering the costs associated with advertising workers' credentials, finding potential employers and applying for jobs, ELEs may exacerbate the adverse selection of job applicants. Employers are likely to receive more job applications from low-quality applicants if the cost of finding and applying for a job is low. A low-quality jobseeker who possesses private information about his or her unsuitability for certain kinds of jobs might think twice about applying for (or even searching for) those jobs if it is costly to do so, but may decide to apply if the cost is low.¹¹ Screening applicants on the basis of credentials cannot eliminate this problem, since many aspects of worker quality (e.g. on-the-job diligence or innate ability) are fully observable only through personal interaction. ELEs shift the cost of acquiring and acting on this information from jobseekers to employers.

The problem of adverse selection based on unobservable characteristics is highlighted by Kuhn and Skuterud (2004). The authors examine data on 4,139 unemployed persons from the December 1998 and August 2000 Computer and Internet Use Supplements to the Current Population Survey (CPS) in the United States. They find that relative to the non-internet using unemployed, internet jobseekers are more likely to be well-educated, entering unemployment from work, entering the labour force from school, and experienced in occupations with low unemployment rates. These are all characteristics associated with shorter unemployment duration. Black and Hispanic people are less likely to use the internet for job search than people of other races, but this is because of inequalities in access to the internet rather than different preferences for job-seeking strategies.

However, after controlling for observable factors (including the use of other job-search methods such as direct contact with employers and visiting an employment agency), the use of the internet as a job search tool has no statistically significant impact on the probability that an unemployed person will become reemployed within one year of

¹¹ There are some costs associated with the job application process that we would not expect ELEs to reduce. An example is the cost, in terms of time and effort, of composing a cover letter tailored to a specific employer. Nevertheless, the total cost of a job application should decline if ELEs reduce the cost of finding out about the job opportunity.

his or her initial survey response. When the authors examine the duration of unemployment spells, they find that using the internet as a job search tool has a statistically significant *negative* impact on the reemployment hazard rate. This means that people who use the internet to search for jobs take longer to become reemployed than those who do not, after controlling for observable worker characteristics.

A plausible explanation for this result is that internet job-seekers are negatively selected on unobserved characteristics, as conjectured by Autor (2001). People who use the internet may do so because they lack the personal contacts and network relationships that would otherwise aid their job search. People who use a large number of search methods, including the internet, may do so as a response to private information about their poor reemployment prospects. In particular, internet searchers may be more likely to have health or disability limitations. They may also be more likely to apply and qualify for unemployment insurance. Since internet searching is a method with a very low marginal cost in terms of effort, it may attract unmotivated job-seekers who are less interested in finding a job quickly than those who use alternative search methods. These factors could dominate any beneficial impact of the internet as an information source, and they are *unobserved* in the sense that they cannot easily be measured and statistically controlled for.

Fountain (2005) further hypothesizes that as internet use becomes more common the internet becomes a less effective tool for job searching. Initially, internet use was restricted to those with high levels of education and above average levels of computer expertise. However, as the internet became more accessible overtime, the average quality of workers who used the internet in their job search fell.

Stevenson (2009) analyzes the impact of the internet on the job-search strategies used by the unemployed. She notes that the internet should increase job-search activity by lowering the costs of job-search in terms of time and effort. Using CPS data in conjunction with data on internet use from Forrester Research, Stevenson uses regression analysis to examine how state-level internet penetration affected the usage rates of various job-search methods by unemployed job-seekers over the 1992-2002 period. The results show that internet access has a significant positive impact on the use of all the methods listed in the CPS, such as looking at job ads, sending out resumes, contacting an employment agency, and contacting an employer. The use of instrumental variables techniques provides evidence that internet penetration is not merely correlated with greater usage rates for the job-search strategies, it *causes* them.¹²

These results suggest that the internet makes information cheaper in terms of time and effort costs. If the internet makes it easier to find job ads, one would expect job-seekers to look at more job ads and contact more employers. Again, this is consistent with the discussion of adverse selection in Autor (2001).

¹² Stevenson (2009) instruments for internet penetration using the interaction of time dummy variables and the state-level adoption rates of telephones and washing machines in 1960.

Evidence on the benefits of ELEs for jobseekers comes from Bagues and Labini (2009). The authors use a difference-in-difference approach to study the impact of *AlmaLaurea*, an Italian database that provides employers with resumes and official educational information on university graduates. Only a subset of Italy's universities were part of *AlmaLaurea* when it was created in the mid-1990s, so the authors are able to identify the impact of the database by comparing the outcomes of graduates from participating universities with those of non-participating ones.

Based on survey data from 1998 (for 1995 graduates) and 2001 (for 1998 graduates), Bagues and Labini (2009) estimate that the *AlmaLaurea* system decreased university graduates' probability of unemployment by between 1.6 and 2.1 percentage points. The overall unemployment rates in 2001 were 9.4 per cent for graduates of *AlmaLaurea* universities and 10.7 per cent for graduates of non-participating universities, so a decline of about two percentage points is substantial.

The *AlmaLaurea* database increases interregional labour mobility (as measured by the probability that a graduate lives in a region different from the one in which they attended university) by between 2.3 and 2.8 percentage points, and increases monthly earnings by about three per cent (or €35). Finally, the database increases graduates' satisfaction with the knowledge gained at university and their self-perceived job stability.

Nakamura *et al.* (2009) provide a comprehensive description of the market for ELE services in the United States. They distinguish between two categories of ELEs: traditional job boards, which provide job postings much like a newspaper; and e-recruiting sites, which (in addition to job postings) provide searchable resume databases, customized recruitment services (web site design, job application database management, etc.), and other services targeted at employers.

The most widely used private sector ELEs are e-recruiters. Their distinguishing characteristic is that they sell recruiting services to employers, while providing free job search services to jobseekers. Privately operated e-recruiters such as Monster.com and CareerBuilder.com allow individuals to post resumes and contact information, and then firms can pay to post job openings or access the jobseeker database. The services for jobseekers are inputs in the production of the services the ELEs sell to employers. In order to generate sales, the ELEs must have a large pool of potential workers that they can match to their client firms. To this end, the barriers for jobseekers to sign up with the ELEs are kept low.

A key feature of e-recruiting web sites from the perspective of employers is that they facilitate the search for *employed* workers. The jobseeker databases often include the contact information of currently employed persons who have used the system in the past or who have engaged in passive job search. Nakamura *et al.* (2009) report:

Auren Hoffman, founder of the referrals company KarmaOne, [states] "A vast percentage of the people who are looking aren't the people you want. . . . It's extremely hard to get to the people who aren't actively looking,

and generally, that pool is much better.” This is a candid statement of what we feel is a ubiquitous subtext in the trade literature on recruiting. (pp. 9)

This evidence indicates that active online job search sends a negative signal to potential employers about a jobseeker’s quality. This is consistent with the adverse selection problem discussed by Autor (2001).

Nevertheless, employers continue to use the labour market matching services of ELEs. Citing a March 2007 survey by the Society for Human Resource Management (SHRM, 2007), Nakamura *et al.* note that private and public sector organizations in the United States attributed 44 per cent of new hires over the previous year to e-recruiting firms. Whatever problems ELEs may be perceived to have, the fact that they are so widely used is *prima facie* evidence that they are beneficial to employers.

Even if e-recruitment lowers the average quality of the workers who apply for a given job, firms may use ELEs provided that the cost of e-recruitment is sufficiently low relative to that of other methods. In addition, inter-firm competition over high-quality hires may lead all firms to adopt the recruitment strategy with the lowest cost to applicants in order to ensure that the best workers do not opt to apply elsewhere. Hadass (2003) formalizes these intuitions in a mathematical model, and then examines data on the recruitment activities of a multinational manufacturing firm headquartered in the United States. Using the duration of employment at the firm as a proxy for the quality of the worker, Hadass shows that the increasing use of e-recruiting over the 1996-2002 period was associated with a reduction in the average quality of the firm’s hires. Internet recruits were less likely to retain their jobs at the firm than workers recruited through referrals, but did not differ from those recruited through print advertising.

According to Hadass, the firm that provided the data gave the cost-saving argument as its reason for using online hiring. Although e-recruiting led to higher worker turnover and more low-quality hires, it was used because it was so cheap relative to alternative recruitment methods.

Finally, it is worth noting that the existing empirical literature on the effects of internet job search is typically based on data from the 1990s and early 2000s. The internet has become more prevalent since that time, and the old results showing that online job search has some drawbacks may be somewhat out of date. New research using more recent data that capture the ubiquity of the internet in today’s labour market would be useful.

III. Electronic Labour Exchanges in Canada

In this section, we describe the state of private sector ELEs in Canada. We provide detailed discussions of several of the most popular ELEs in Canada, as well as a more cursory discussion of some less heavily utilized ELEs.¹³ We also discuss the federal government's Job Bank for the sake of comparison with the private sector ELEs.

A. Overall Description of Private Sector ELEs

The domain of private sector ELEs contains a large number of web sites with a variety of user interfaces, target audiences, and suites of services for jobseekers and employers. To enumerate all these ELEs would be extremely difficult.¹⁴ However, not all ELEs are equally important. Some are more popular and offer more services than others. As a practical matter, we can obtain a good idea of the services offered by ELEs by focusing on a few of the most popular examples. Table 1 lists ten of the most widely used private sector ELEs in Canada, along with internet traffic metrics to indicate the intensity of their usage.¹⁵ The table also includes two other sites – Kijiji.ca and Craigslist.org – which contain job listings but also provide general purpose advertising unrelated to ELE services.

Note that the table does not include any job boards operated by newspapers through their web sites. This is because newspapers with an online presence generally do not have significant classified boards of their own. The competition from large e-recruitment web sites is too great for it to be economically viable to maintain their own database of jobs. Rather than compete, many newspapers offer links to e-recruitment web sites. All of the top twenty-five newspapers by weekly circulation in Canada link their employment sections to one of the major ELEs.¹⁶ The three largest newspapers by circulation – the *Toronto Star*, the *Globe and Mail*, and *La Presse* – all direct jobseekers to Workopolis. Jobboom is the primary employment listing for the *Journal de Montréal* and the *Sun* chain of daily tabloid newspapers because it is owned and operated by Canoe.ca, a subsidiary of Sun Media owner Quebecor Media. Other newspapers link to major e-recruiting websites. It is likely that they generate revenue from the referrals that they provide.

The most prominent private sector ELEs in Canada are Workopolis and Monster.ca. As noted in the introduction, these two sites were among the ten most

¹³ This information is also summarized in a table in the Appendix to this report.

¹⁴ WANTED Technologies, a publicly-traded Quebec-based firm that produces software for the collection and analysis of data on online job postings, claims that there are at least 1,500 online job boards and employment web sites from which their software collects data.

¹⁵ The traffic metrics are taken from www.alexa.com, which provides information about web sites' traffic on the basis of data collected from users who download a special toolbar program. It is not clear that this sample of users is representative of the entire population of internet users, so the measures should be interpreted carefully. The metrics are probably reliable for popular, high-traffic sites. The list of the most popular sites identified by [alexa.com](http://www.alexa.com), provided at the bottom of Table 1, is consistent with what we would expect. The data are less reliable for sites with less traffic.

¹⁶ For a list of the top twenty-five Canadian newspapers by weekly circulation in 2009, as well as a link to the web site of each newspaper, see http://en.wikipedia.org/wiki/List_of_Canadian_newspapers_by_circulation.

Table 1: Electronic Labour Exchange Traffic Metrics, Canada

Site	Traffic Rank in Canada ^a	Global Reach (per million global internet users) ^b	Percentage of traffic from Canada	Canadian Reach (per million Canadian internet users) ^c
	A	B	C	D
Workopolis.com	116	206	87.0	11,333
Jobbank.gc.ca ^d	n.a.	225	66.5	9,460
Monster.ca	223	126	80.9	6,446
Wowjobs.ca	469	63	74.7	2,957
Indeed.ca	607	45	77.5	2,210
Jobboom.com	686	39	90.8	2,222
Eluta.ca	785	37	80.2	1,866
Simplyhired.ca	904	34	73.7	1,561
Working.com	1,295	24	80.5	1,211
Careerbeacon.com	1,695	18	87.0	985
Allstarjobs.ca	6,041	8	59.3	289
For comparison: the five most widely used web sites in Canada:				
Google.ca	1	14,360	87.7	796,343
Facebook.com	2	333,760	2.6	548,724
Google.com	3	421,900	1.7	453,529
YouTube.com	4	241,420	2.4	366,379
Yahoo.com	5	269,730	2.1	358,175

Source: Alexa.com web information.

Data were up-to-date as of July 13, 2010.

Notes:

a. Traffic rank is based on a combination of average unique daily visitors and page views per visitor from Canada over the past three months (computed by Alexa.com).

b. Global reach is the number of unique internet users per million who visited the web site during the past three months.

c. Canadian reach is an estimate of the number of unique Canadian users per million who visited the web site during the past three months. It is computed as follows:

$$\text{Canadian Reach} = B * (1,586,272,555 / 1,000,000) * (C / 100) * (1,000,000 / 25,086,000)$$

where B and C refer to columns B and C in Table 1. The number of global internet users is 1,586,272,555, and 25,086,000 is the number of Canadian users (source: World Bank, World Development Indicators).

Note that the data on internet users are for 2008.

d. Alexa.com provides data for www.gc.ca, but not for www.jobbank.gc.ca in particular. However, it does report that jobbank.gc.ca accounts for 12.2 per cent of the traffic of gc.ca. We therefore compute the global reach of Job Bank by taking 12.2 per cent of the global reach of gc.ca. We have no way to estimate the proportion of traffic on Job Bank that consists of Canadian users, so we assume that it is the same as the share of Canadian traffic for gc.ca as a whole (66.5 per cent). This probably underestimates the share of Canadian traffic on jobbank.gc.ca itself. The Canadian reach of jobbank.gc.ca would exceed that of Workopolis for any Canadian traffic share above 79.7 per cent.

e. Alexa.com does not indicate how much of the traffic on Kijiji and Craigslist is accounted for by their job postings sections.

popular sources of labour market information among Canadian users in 2010 (LMI Secretariat, 2009b). In the three month period leading up to July 13, 2010, Workopolis and Monster.ca were the two most highly ranked private sector ELEs in Canada in terms of their daily traffic. Workopolis was the 116th most visited site among Canadian internet users, while Monster.ca ranked 223rd. In Canada, 11,333 of every million internet users visited Workopolis at least once over the three month period, while 6,446 of every million visited Monster.ca. Canadian users made up the vast majority of the traffic for both sites; 87.0 per cent of Workopolis's traffic and 80.9 per cent of Monster.ca's traffic consisted of Canadian users.

The remaining job sites are substantially less popular than the 'Big Two.' Even Wowjobs.ca, the remaining site with the highest reach (2957 per million Canadian internet users), receives less than half the traffic of Monster.ca.

Kijiji.ca (ranked 12th in Canada) and Craigslist.org (ranked 55th in Canada) are both ranked above Workopolis and Monster.ca in terms of Canadian traffic. However, it is likely that most of this traffic is unrelated to users' labour market activities. Both Kijiji.ca and Craigslist.org are multi-purpose advertising sites that contain housing ads, personal ads, and ads for second-hand goods. It is impossible to determine what proportion of the users of these sites are engaging in labour exchange services.

The ELEs can be categorized according to the types of services they offer to users. We propose the following three categories:

2. **E-recruitment web sites** provide recruitment services to employers. They collect information about workers (e.g. resume databases) and employers pay for the right to view the information. Employers also pay to post their job vacancies. Job search assistance services are provided to jobseekers for free, in order to build the database for employers.
2. **Job search engines** are aggregators that collect job postings from many job boards and company recruitment web sites and allow users to search through them using keywords. There is no cost to the jobseeker or to employers.
3. **Job Boards** allow jobseekers to search through jobs posted by employers. Employers are charged a fee to post their vacancies. Job boards are like e-recruitment web sites, but without the additional services for employers (resume databases, etc.).

Table 2 summarizes how the job sites in Table 1 fit into these categories. The typology is based on the main types of LMI the sites provide to users and on the manner in which the information is collected. E-recruiters provide a resume database and job listings; job boards provide job listings but not resumes; and job search engines aggregate job listings from many job boards and e-recruiters. Sites of all three types may provide other kinds of information, such as job interview tips and guidance on creating a resume.

Table 2: Classification of Electronic Labour Exchanges

E-Recruiters			
Sites	Services for Jobseekers	Services for Employers	Costs
Workopolis.com Monster.ca Jobboom.com Allstarjobs.ca	- Searchable job listings - Submit resumes to resume database - Career resources (help with resumes, job interviews, etc.)	- Advertisement of job vacancies - Searchable resume databases - Help with corporate career web sites	- Free for jobseekers - Substantial costs for employers (e.g. \$700 per job posting, \$500 - \$800 for -week access to resume database)
<u>Job Search Engines</u>			
Wowjobs.ca Eluta.ca Indeed.ca Simplyhired.ca	- Job listings searchable using keywords and location information	- Advertisement job vacancies (acquired automatically from other job boards or corporate web sites; requires no direct action by employers)	- Free for jobseekers and employers; generates revenue by selling ads and sponsored links
<u>Job Boards</u>			
Careerbeacon.com Working.com Jobbank.gc.ca ¹⁷ Kijiji.ca Craigslist.ca Localwork.ca	- Job listings searchable using keywords and location information - information about employers	- Advertisement of job vacancies - Business advertising	- Free for jobseekers - Costs may be substantial for employers (e.g. \$0 to \$400 per job posting)

¹⁷ Although the Job Bank is a job board, the cost to both jobseekers and to employers is nil.

A comparison of the two tables reveals that e-recruiting sites tend to be the most popular with users. The three most widely used private sector ELEs – Workopolis, Monster.ca, and Jobboom.com – are all e-recruiters. This makes sense because e-recruiters provide more services to both jobseekers and employers than the other types of ELEs. In contrast, job boards like Working.com and Careerbeacon.com offer fewer services and are less widely used.

Job search engines fall between the other two categories in terms of popularity. They provide the fewest services among the three categories, but they likely appeal to jobseekers because of their simplicity. They allow jobseekers to search job postings from a large number of sources through a single interface, and that interface is as easy to use as an everyday search engine such as Google.ca.

B. Description of Services Provided by Private Sector ELEs

In this subsection, we provide detailed descriptions of the services provided by each of the private sector ELEs listed in Table 1. For comparison, we also discuss the federal government’s Job Bank. We show that private sector ELEs provide a variety of services above and beyond those provided by Job Bank. This is no surprise, since no one would pay for the services of private sector ELEs unless they offered value added relative to the free public sector option.

i. E-recruiters

a. Workopolis.com

Workopolis is a website for both job seekers and employers available in both official languages, where employers may post and manage job competitions and job seekers may post their resume for the perusal of potential employers. It was founded in 1999 and it is headquartered in Toronto. It also has offices in eight other Canadian cities. According to the employer page, there are over three million candidates from Canada who have their resume posted.

Workopolis’s services are free for job seekers, but there is a fee for employers who wish to post jobs or to look at posted resumes. The fees to employers depend on whether they view the entire database of resumes, the location of the posting or search, and the visibility to job seekers of the posting. Employers may also purchase other value-added services such as background checks and application management services. For the purposes of pricing job postings, Workopolis divides Canada into four regions: Atlantic Canada (\$325 per job posting), Quebec (\$495), Western Canada (\$695), and Ontario (\$725). A Canada-wide posting costs \$750. The price per job can drop by up to 50 per cent if purchased in bulk. Employers may also purchase bolded or featured advertisements as well as job posting extensions. To reduce the sorting costs of having many applications, Workopolis offers screening, tracking, and pre-screening questionnaires of applicants at no additional cost.

Workopolis has a section devoted to entry-level and student career jobs as well as a significant resource centre with weekly new postings about the job market, a resume builder, interview tips, and other general career advice for job seekers. Workopolis also provides additional links to other resources for employers such as candidate prescreening, background checks, and job market salary information.

Through its NicheNetwork system, Workopolis provides tailored ELE services for three important subpopulations of jobseekers: Aboriginal people, immigrants, and persons with disabilities. Specialized web sites, operated through Workopolis, are devoted to each of these subpopulations: inclusionnetwork.ca for Aboriginal people, canadianimmigrants.ca for immigrants, and jobs.abilities.ca for persons with disabilities. Like Workopolis itself, these ELEs are e-recruiters. Jobseekers who are members of the relevant group can submit resumes and search job postings for free, while employers must pay to post jobs or access the resume databases. For employers, the costs of using the NicheNetwork sites are dramatically lower than the costs of using Workopolis. A single job posting costs \$300 on each of the three sites (versus \$750 on Workopolis), and 30-day access to the resume database costs \$500 (versus \$875 for two-week access on Workopolis).

In spite of the relatively low costs, employers do not use the NicheNetwork sites intensively. As of July 14, 2010, there were 47 jobs listed on inclusionnetwork.ca, two jobs listed on canadianimmigrants.ca, and three jobs listed on jobs.abilities.ca. This suggests that there is little desire among employers to target these particular subpopulations through specialized ELEs. The sites do not provide the number of jobseekers who have submitted their information to the resume databases.

b. Monster.ca

Monster Worldwide Inc. owns and operates Monster.ca. It is based out of New York, New York and employs over 4,600 people in 35 countries. It is also one of the few ELEs that is owned by a publicly-traded company and therefore makes its financial information available. In 2008, it had revenues of \$1.34 billion (in US dollars) and \$124 million in net income. In February 2010, Monster.ca had over 670,000 unique visitors.

Monster.ca is available in both English and French versions. Jobseekers may post resumes and employers may post jobs in either English or French. Job postings and resumes are posted only in the languages in which they are submitted by users; the site does not translate all job ads and resumes into the other official language. Looking at job posting and uploading a resume is free for job seekers, but employers must pay based on the number of job posts they make and the length of subscription they get to the national resume database. Job posts cost \$725 per post with bulk discounts that can lower the price to \$185 per post. Monster's resume search pricing is based on the number of resumes viewed by the employer. Packages may be bought from 500 views over 2 weeks for \$595 to 20,000 views at a cost of \$4,950. Job seekers may also purchase a custom resume and interview services. Employers may also purchase targeted advertising for their job posts for \$200 per post with bulk discounts available for larger orders. There are

also more tailored services that do not have publicly-posted pricing, including training on the use of Monster, the ability to post jobs directly from the employer's website, video profile, and quick third-party candidate searches.

Recent graduates and students may search for postings directed at them by potential employers. A job seeker may also browse general career advice, use career tools to look at the specific skills required by career and compare their current job to industry benchmarks in salary, education, and other measures at no charge.

c. [Jobboom.com](#)

Quebecor Media Inc. owns Canoe Inc., which operates Jobboom.com. This ELE was founded in 2003 and operates from Quebec. The website allows job seekers to search for jobs and apply online to job openings. The search is tailored to the candidates profile to help job searchers efficiently find a job. The web site is available in both English and French. Job ads may be posted and searched in either official language. Jobboom.com is free for job seekers but employers must pay based on the number of postings and level of exposure they desire. Employer services include emails sent to candidates who match the employer's job posting, application management, and advertising tools.

Although there are no services directed to specific employment groups, Jobboom.com has a 'Career Zone' that contains a number of resources and articles for job seekers including job-search strategies, resume writing, workplace issues, and work/life balance. Over 2.6 million jobseekers have registered at jobboom.com, and 2,458 jobs were posted as of March 17, 2010.

d. [Allstarjobs.ca](#)

Allstarjobs.ca is a website that provides links to over 50,000 Canadian career-related websites. Job seekers may also post their resumes and employers may post jobs which are valid for 60 days completely free of charge. To access the resume database, employers are only required to provide a verifiable telephone number and a Canadian or American address.

Allstarjobs.ca is only available in English and provides no services directed at specific employment groups other than groups of links for students and recent graduates. It also advertises a resume writing service for a fee. According to the website, there have been 3,126 jobs posted in the last 60 days in Canada as of July 13, 2010. Currently, Alexa ranks it as 6,041st in Canadian web site traffic.

ii. **Job Search Engines**

a. [Wowjobs.ca](#)

Wowjobs.ca is an English only aggregator-web site that allows job seekers to search the internet for jobs by keywords and location. It was started in 2008 and operates

out of Alberta. Wowjobs.ca does not have its own database and there are no services for employers. Resumes cannot be posted and the website provides no service other than a web search for jobs. There is no fee for jobseekers. Wowjobs generates revenues through advertising and sponsored links (Finlayson, 2006).

According to its homepage, WowJobs has over 100,000 jobs listed. It is difficult to enumerate the many firms in the search engine because Wowjobs aggregates job listings across multiple sources.

b. Indeed.ca

Indeed.ca is a subsidiary of the privately held corporation Indeed.com, which was founded in 2004 and operates out of Austin, Texas. Indeed.ca is currently the 607th most visited site in Canada. It searches millions of jobs on thousands of employer and staffing agency websites, as well as other ELEs such as working.com, jobbank.gc.ca, and monster.ca. The site exists in both English and French versions and searches job postings in both languages. The service is free for job seekers and employers, unless the employer wants their job posting to be sponsored. The cost to an employer is dependent on the cost per click from the advertisement selected. If the employer selects a higher cost per click, the ad he or she places will be visible more often. Although jobseekers cannot upload a resume, they can save job searches and job postings for future viewing.

There are no services tailored to specific employment groups, but there are forums in which job seekers may discuss job postings and other topics. Statistics about the total number of jobs posted are not available, although 35,706 Canadian job openings have been posted in the last seven days as of July 13, 2010.

c. Eluta.ca

Medicorp Canada, which produces several 'Top 100' guides of businesses for potential employees, founded Eluta in 2006 in Toronto, Ontario. In February 2010, it had more than 730,000 unique visitors to its website.

Eluta.ca is a vertical job aggregator that monitors new job announcements at tens of thousands of employers across Canada. It allows job seekers to search a variety of companies' websites for suitable positions. Eluta.ca also allows job seekers to search for jobs openings with top employers in several categories according to annual rankings compiled by Media Corp Inc.¹⁸ Categories include the top employers for recent graduates, the top environmentally friendly employers, and the top employers for new Canadians.

The service is free for job seekers and employers. However, should an employer want their job posted at the top of a search or have a more visible ad placed, they may pay \$179 to \$4,950 depending on the visibility to job seekers and the length of time of the advertisement. Employers may purchase options from a simple 'Sponsored job' which

¹⁸ See the Canada's Top 100 web site at <http://www.canadastop100.com/index.html>.

bolds their job posting in searches to having a graphic displayed on every page for a month. To aid searching, eluta.ca provides search tips and an email notification when jobs are posted for job seekers.

d. [Simplyhired.ca](#)

The parent company of SimplyHired.ca, SimplyHired Inc., is based in the United States and was founded in 2005. As of July 13, 2010, SimplyHired.ca is ranked 904th in Canadian web site traffic.

Simplyhired.ca is an English language job search engine that searches thousands of job websites for job postings in many countries. The search is free for job seekers, and employers or other job sites may add their job postings for free. Employers may create a sponsored job posting or sponsor all of their job postings based on a pay-per-click payment schedule.

Resumes are not posted on the website and there are no services directed at specific employment groups. However, job seekers can also take advantage of notification services such as an RSS Feed and email alerts that will let them know of recent job postings.

iii. Job Boards

a. [Jobbank.gc.ca](#)

The Job Bank, maintained by Services Canada, is one of Canada's most widely used job web sites. It provides free job posting for employers and job search for jobseekers, and every job opening is posted in both official languages. The website also includes other job search information such as how to find unadvertised job opportunities, how to build a resume, and how to identify and protect oneself from inappropriate screening methods (interview questions, etc.). The Job Bank provides links to other government employment services such as employment insurance (EI), as well as links for employers on hiring practices, potential grants and work programs, labour standards and regulations, and how to make a successful advertisement.

The Job Bank provides a youth job search for students, career navigator (job matching service), and links for job resources for aboriginals and new immigrants. Although resumes are not directly posted on the website, one can use the resume builder tool to create their own resume to send to potential employers. The Job Bank has 57,669 jobs posted as of July 13, 2010.

b. [Kijiji.ca](#)

Kijiji is a Canadian classifieds website that may be searched by city. It was launched in 2005 and is a subsidiary of eBay Inc., which also operates Kijiji web sites in several other countries. Although job classifieds are not its focus, it does have a very

large job posting board for Canadian cities. Job seekers may search job listings based on, occupation type, location and the distance from the location (up to 1,000km); no national or provincial search exists. Job postings can be made in both English and in French. The web site itself exists in both English and French for cities in Quebec and New Brunswick; for cities in the rest of Canada, there is only the English version. There is no cost to posting a job or to browsing jobs because the website is supported by internet advertising and sponsored links.

As of April 9, 2010 there are 42,097 jobs posted within 1,000km of Toronto. Kijiji provide no services to specific employment groups. It is difficult to quantify the number of users who visit Kijiji specifically for job postings due to the multiple categories of classified offered.

[c. Craigslist.ca](#)

Craigslist is an international classifieds website that has devoted classifieds sections to particular large cities. Posting a job and searching jobs are free for employers and job seekers in Canada. Craigslist does not aggregate jobs by province or for Canada, so jobseekers must search within a city only. The website is available in both English and French for all Canadian cities, and jobs may be posted in both languages.

Craigslist does not offer any job-related services beyond job postings and a search function. As in the case of Kijiji, it is difficult to quantify the number of users who visit Kijiji specifically for job postings due to the multiple categories of classified offered.

[d. Working.com](#)

Working.com is owned by Canwest Publishing Inc. and has twelve regional offices. Jobseekers may upload and submit their resumes to employers. Like other websites, jobseekers may upload a resume and use the job search free of charge, but there is a fee for employers based on the number of job postings and the value-added services that may be purchased such as advertisements on a newspaper webpage, jobs appearing in the top search results, and making a job posting more visible. Job postings are \$425 for a 28 day online only job post with discounts for multiple jobs. Pricing for additional services varies from \$12 to have a job posting's title bolded to \$500 to have a logo on the homepage. Employers may also purchase job subscription packages that include unlimited job posting and up-sells. These subscriptions are 12 months and cost \$18,060 to \$90,000.

There are both English and French versions of the working.com web page, but the French site is a scaled-down version that does not contain many of the elements of the English version (e.g. links to job-search advice, a salary calculator, etc.). In the job listings, jobs are posted in the languages desired by the employer. Thus, not all jobs are listed in both official languages.

There are no services directed at specific employment groups, but the website does provide a work-related news feed and job alert function that notifies job seekers of recent job posts that may be relevant to them.

e. Careerbeacon.com

Brunswick News, privately held by James K. Irving, owns Careerbacon.com, an Atlantic Canada based career website. It has three offices all located in Atlantic Canada. According to their website, they had over 1.5 million unique visitors in 2007.

Careerbeacon.com provides job listings and career services for job seekers and employers. Most of the job postings are for positions in Atlantic Canada, but the site contains some postings for jobs in the rest of Canada and in other countries. Job seekers may browse the postings and save up to 10 resumes and cover letters for free, but posting job advertisements costs \$375 per job ad (less with a bulk discount). There are also discounts for non-profit organizations. The site exists in both English and French versions, but job postings are not all available in both languages. If a job is to be posted multiple times in different languages, the cost is \$100 for each ad beyond the initial \$375 one. Employers may also purchase other services such as an interactive banner or an applicant tracking system. An addition applicant tracking system may also be purchased for a monthly fee of \$50. This service provides tools that allow employers to search, sort, rank and screen applications.

There are no additional resources provided beyond a search for job seekers and there are no tailored services for specific employment groups. In the 21 day period ending on July 13, 2010, 1,317 positions were posted.

f. localwork.ca

Localwork.ca is an e-recruitment website that specializes in providing job services directed at employers and job seekers looking for local talent and opportunities. The website is only in English and nearly all of the 1,618 job postings, as of July 13, 2010, are in Ontario. Localwork.ca is owned by Metroland Media Group Ltd., a subsidiary of Torstar (principal owner of the *Toronto Star* and Workopolis.com). Employers may post jobs both online and in a newspaper near the job location. Job seekers may search for jobs for free and can upload their resume to facilitate easy online job applications. Employers may post an online ad for \$249 for a regular package, or \$359 for a premium package that includes job title bolding and a featured job enhancement. They cannot browse jobseekers' resumes. Employers also receive job application management software and candidate screening questionnaires. The cost to post online and a newspaper varies by location. Localwork.ca also provides tips for resume writing and interviewing for job seekers, like many other job websites.

The main market for Localwork.ca is to serve very local labour markets, although a job seeker can look at jobs posted anywhere. Other than this, there are no additional services provided by Localwork.ca.

IV. Analysis and Assessment

In Section III, we provided a description of the state of private sector ELE services in Canada. In the present section, we assess the state of private sector ELEs on the basis of that description.

A. ELEs as Labour Market Intermediaries

i. Framework

ELEs are labour market intermediaries, “entities or institutions that interpose themselves between workers and firms to facilitate, inform, or regulate how workers are matched to firms, how work is accomplished, and how conflicts are resolved” (Autor, 2009). Intermediaries compile labour market information, interpret it, and provide it to employers and individuals who need it. Autor (2009) observes that the labour market is not a spot market in which labour can be bought and sold instantaneously under perfect information.¹⁹ In real labour markets, the information-provision activities of intermediaries are associated with three main market failures:

1. **Costly information.** The acquisition of information involves costs in terms of money, time and effort. Since information is in large part a public good, it is likely to be undersupplied under *laissez faire* conditions.
2. **Adverse Selection.** Asymmetric information in labour markets can lead the highest quality workers and employers to exit the market, leaving only the low-quality participants.²⁰
3. **Collective Action Problems.** Actions that are optimal for each individual acting alone may not lead to positive outcomes if every individual takes those actions simultaneously.

Collective action problems are not relevant for the analysis of ELEs, since they are not treatable by information alone.²¹ The other two market failures are relevant, however.

Jobseekers need information on job vacancies suited to their skills, location, etc. Employers need information on potential employees with the skills necessary to fill

¹⁹ See Diamond (1982), Mortensen (1982) and Pissarides (1986) for examples of formal economic theory in which job search under imperfect information leads to labour market equilibria with both unemployed workers and unfilled jobs.

²⁰ See Akerlof (1970) for the classic exposition of this concept. The idea is as follows: if the quality of a product in the market is uncertain, buyers will offer to pay a price below the price that would be acceptable to sellers of high-quality merchandise. The high-quality sellers exit the market, which leads the buyers to lower their offers even further. As a result of this process, the market eventually contains only low-quality products. This principle can easily be applied to markets for labour, or even markets for information.

²¹ Solving collective action problems usually requires special institutional arrangements, often involving coercion. The labour union is an example of a labour market intermediary that addresses collective action problems on behalf of workers.

vacancies. For both parties, the acquisition of this information involves costs in terms of time, effort and money. ELEs reduce these costs in several ways:

- Some ELEs can establish reputations for effectiveness in matching workers with employers. When an ELE becomes well-known and widely trusted (as, for instance, Workopolis and Monster.ca have done), it can attract more jobseekers and employers. When most jobseekers and employers are going to the same place in search of one another, matches are more likely to occur quickly.
- Economies of scale allow the fixed costs of information-seeking to be spread over a large number of job matches. A single job ad posted by an employer may be viewed by far more jobseekers through an ELE than would have been possible through any other medium (e.g. newspaper advertising).
- The ease of updating digital information ensures that online job postings are likely to be more up-to-date than similar information in other media.

Lower information costs should allow jobseekers and employers to obtain more information about potential matches. Ultimately, this should lead to faster, better job matches (or at least less costly ones).

Adverse selection is a more complex issue. We are particularly concerned with worker-side adverse selection, whereby asymmetric information reduces the average quality of the jobseekers that employers can choose from.²² ELEs can help solve the problem of adverse selection to the extent that they provide employers with credible information that fully describes the quality of jobseekers. However, ELEs do not prevent adverse selection if firms believe that the pool of jobseekers available through ELEs is of low average quality in terms of *unobservable* characteristics (i.e. in ways that are not apparent from looking at a jobseeker's resume, school transcripts, etc.).

Indeed, Autor (2001) points out that ELEs can actually exacerbate the problem of adverse selection by lowering the cost of information. If there are high costs associated with finding and applying for a given job, a jobseeker who has private information about his or her unsuitability for that job is unlikely to incur the cost of applying. In this sense, upfront information costs serve to screen jobseekers on the basis of unobservables. In the face of information costs, only the most motivated jobseekers or the jobseekers who believe they have a good chance to receive the job would bother to apply. When the information costs fall as a result of ELE services, the effects of adverse selection can be made more severe from the perspective of employers.

²² In principle, firm-side adverse selection could also be an issue. This would occur if workers' uncertainty about the quality of employers led the high quality employers to exit the internet labour market, leaving only the low-quality employers. We find this less plausible than worker-side adverse selection. Many firms prefer to hire workers through personal referrals rather than through the online labour market, but this preference is likely attributable to the firms' uncertainty about the quality of online jobseekers rather than to the selection of good firms out of the market.

i. Assessment

a. Costly Information

There is no doubt that ELEs have reduced the cost of labour market information in Canada. This is especially true for jobseekers. In the past, a jobseeker in search of labour market information would have had to visit an employment centre or purchase newspapers or trade publications. Today, a jobseeker with internet access can obtain a far greater amount of information at a much lower cost per unit (i.e. per job posting viewed). Searching for jobs through ELEs requires less time and effort than physically travelling to employment centres. It provides access to up-to-date information about a larger number of job openings than traditional printed sources, and unlike most newspapers, the internet is not limited to a small geographical region. Jobseekers in Canada can use job search engines to search a host of job boards through a single easy-to-use interface. Most ELEs allow jobseekers to sign up for free customized e-mail alerts or RSS feeds that deliver new job postings directly to their e-mail inboxes. At e-recruiter web sites, jobseekers can submit resumes and contact information and wait for employers to make job offers.

Many ELEs do not offer services to employers free of charge. At Workopolis, for example, an employer must pay \$875 to view the resume database for two weeks, or \$750 to post a single job vacancy. While these costs are substantial, they are lower than the costs of the worker-search methods that were available to employers before the advent of the internet. As a concrete example, Autor (2001) notes that a job advertisement in the Sunday *New York Times* (the newspaper with the largest circulation in the United States, at 1.7 million) cost \$4,500 in 2001. In the same year, a job ad at Monster.com cost \$137, stayed online for 30 days, and reached 3.8 million potential viewers.

More generally, it is well known that online advertising has displaced newspaper advertising in Canada and elsewhere in the developed world.²³ This has led to well-publicized financial challenges for traditional printed media outlets. The reasons for this development are the same as the reasons for the growth of ELEs at the expense of traditional sources of labour market information: the internet allows ads to reach a wider audience at a lower cost than the older forms of media. The fact that ELEs are so popular relative to other advertising methods is *prima facie* evidence that they have these cost-reducing effects.

Despite the lower cost of posting a job online, there may be indirect costs incurred by employers. A potential added cost to employers from ELEs is that they may be inundated with applications, therefore, increasing the cost to them of sorting through the applications. Some e-recruiting websites have recognized this additional cost and provide services to help organize and select candidate. For example, Workopolis provides a

²³ Statistics Canada used to publish the Help Wanted Index, an indicator of labour demand based on the number of job ads printed in 22 major newspapers across Canada. This index was discontinued in 2003 because it failed to capture the growing importance of the internet in job advertisement relative to newspaper advertisement (Sharpe, 2009).

HirePower service that shortlists candidates for \$650; Monster provides a simple tool for attaching ratings to candidates and other organization tools to reduce the administrative costs of having many more candidates than an off-line search; and many e-recruiters offer some sort of keyword resume search, customizable questionnaire, or other application management tool. The prevalence of online resume searching by businesses shows that despite the additional administrative costs, online job postings still involve a net benefit over other methods. Furthermore, many websites offer basic application management services for free. For example, Workopolis, Jobboom and Monster offer screening, tracking, and pre-screening questionnaires of applicants at no additional cost to employers.

In addition to e-recruiters, which charge employers for job postings, the private sector ELE marketplace also includes the job search engines. These offer an even cheaper way for firms to advertise their jobs. Job search engines use web crawler technology to search job boards and employer web sites for new job postings. An employer can therefore post its job vacancies on its own site at next to no cost, and the job search engines will direct jobseekers toward the job posting.²⁴ The disadvantage is that search engines provide no job application management tools, but this is balanced by the fact that they increase the potential viewership of the job ad at no extra cost to the employer.

Finally, e-recruitment ELEs allow firms to access comprehensive resume databases containing information about jobseekers. This represents perhaps the largest decrease in the cost of information that ELEs have brought about for employers. Before large e-recruiters like Workopolis and Monster.ca created their resume databases, employers had no way to access information about such a large pool of potential workers. For the most part, an employer could only see a jobseeker's resume if the job seeker sent it to the employer. Information about the majority of potential workers was completely inaccessible to employers. In a sense, this is the same as saying that the information was 'infinitely costly.' The creation of resume databases has made this information relatively affordable to employers.

b. Adverse Selection

As we noted in Section II, evidence from the literature of the early 2000s on the internet as a job search tool suggests that online jobseekers are negatively selected on unobservable characteristics (Kuhn and Skuterud, 2004). Employers are aware of this; they believe that online jobseekers are of low average quality relative to jobseekers encountered through other channels such as personal referrals (Autor, 2009).²⁵ While it is

²⁴ At most, this may require the employer to contact the operators of the job search engine to ensure that the engine captures the employer's web site in its search. The most popular Canadian job search engines provide instructions for employers who want to do this. For instance, the Frequently Asked Questions section of Eluta.ca tells employers the following: "Start by doing a search to see if we already include your positions. If your jobs aren't listed, let us know where we can find them. We'll set up your site to be spidered on a regular basis and your jobs will begin appearing on Eluta shortly afterwards." See http://www.eluta.ca/help#faq_51.

²⁵ Autor (2009) quotes a recruiting executive who claims that online job boards are populated by four groups: "The unhappy (and thus probably not a desirable employee); the curious (and therefore likely to be a 'job-hopper'); the unpromotable (probably for a reason); and the unemployed (probably for a worse reason)." The quote is drawn from Boyle *et al.* (1999). It is conceivable that employers' perceptions of online jobseekers have changed since the late

obvious that ELEs have reduced information costs in the Canadian labour market, it is less clear that they have ameliorated the problem of worker-side adverse selection.

E-recruitment ELEs may help address the adverse selection problem through the resume database. As e-recruiters become larger, more well-known, and more comprehensive in their coverage, employers may become increasingly confident in the average quality of the workers contained in the database. In addition, the databases often contain resumes and contact information for workers who are currently employed. Current employment sends a strong positive signal to employers about the quality of a worker, and many employers prefer to hire from a pool of employed workers if possible (Stevenson, 2009; Nakamura *et al.*, 2009). Resume databases often contain information about currently-employed workers, either because they used the ELE while they were unemployed in the past or because the low cost of using ELEs in job search encourages employed workers to engage in casual job-seeking activities in case a better job opportunity presents itself. Stevenson (2009) finds that employed persons constitute a majority of persons who engage in online job-seeking activity in the United States.

However, most ELEs do not offer resume databases. Job search engines and job boards possess no characteristics that suggest that they help reduce adverse selection. Indeed, as noted above, they may exacerbate the problem by lowering the cost of finding and applying for jobs. From this perspective, it is perhaps a good thing that the most popular and widely-used private sector ELEs in Canada – Workopolis and Monster.ca – are both e-recruiters. Of the three types of ELE, e-recruiters are the most likely to address the adverse selection problem.

Adverse selection may or may not be a serious problem in the online labour market. As shown by Hadass (2003), employers may be willing to sacrifice the quality of worker matches in return for the massive cost savings that arise from online job search. The popularity of ELEs suggests that this may be the case. However, this would partly offset the social benefit of ELEs. By lowering search costs and facilitating matches between employers and jobseekers, ELEs are supposed to improve job-worker matches and increase productivity and job satisfaction. If ELEs lead employers to hire low-quality workers at a low search cost (rather than incur higher search costs to find high-quality workers), the likely result is higher job turnover, lower productivity, and lower job satisfaction.

Unfortunately, the data necessary to conduct a rigorous statistical investigation of these issues in Canada are not available. However, the issues have important implications for Canadian labour market performance and well-being, and are important areas for future research.

B. Accessibility

From the perspective of jobseekers, private sector ELEs in Canada are highly accessible. Every one of the ELEs we discussed in Section III provides its key job search services free of charge. E-recruiters, in particular, earn revenues by charging employers for access to information about jobseekers, so they have an incentive to keep barriers low for jobseekers.

The market provides a range of ELEs offering services of varying complexity. Job search engines, in particular, are very easy to use and do not require significant computer skills. If a person knows how to do a web search on Google.ca, then he or she knows how to search for jobs using a job search engine like Eluta.ca or Wowjobs.ca. E-recruiters offer more services and therefore have more complex interfaces than job search engines. For instance, users must be able to upload resumes and other information in order to take full advantage of the services offered by Workopolis or Monster.ca. Even at those sites, however, it is straightforward to search job postings without using any of the additional services.

Private sector ELEs are obviously inaccessible to people who do not have access to the internet due to low income or low literacy. This is also true of public sector ELEs. As useful and effective as ELEs may be, it is important that they do not crowd out other forms of job-search assistance targeted at groups that cannot benefit from online information.

Most of the ELEs we discussed in Section III offer services in both English and French. The exceptions are Wowjobs.ca, Eluta.ca, Allstarjobs.ca, and Simplyhired.ca, which exist only in English versions.

ELE services are also fairly accessible from the employer perspective, although the degree of accessibility varies across services and across the three categories of ELEs. In terms of affordability, the advertisement of job vacancies through ELEs is extremely cheap in per-viewer terms. A job ad at an e-recruitment site can cost hundreds of dollars, but it can potentially reach hundreds of thousands of jobseekers.

In its recommendation for the modernization of Job Bank, Drummond *et al.* (2009) note that “Modernizing Job Bank can also support [small and medium-sized employers] by providing an effective and low cost avenue for recruitment.” This suggests that the high up-front cost of posting a job advertisement at Workopolis or Monster.ca may be too high for small and medium-sized employers (SMEs) and that there is a role for the public sector in providing free job postings for such employers. However, not all private sector ELEs charge employers fees for posting job ads. In particular, employers can post ads on their own web sites free of charge and have job search engines pick up those ads.

C. Tailored Services

Some subpopulations of the total pool of jobseekers in Canada may have special needs. We searched each ELE for special services targeted at youth, Aboriginal people, older workers, recent immigrants, persons with disabilities, and women.

About half of the ELEs we examined offered some specialized services for young workers, especially those recently finished post-secondary education. An entire section of the Workopolis web site, called WokopolisCampus.com, is devoted to jobs for students and recent graduates. At Monster.ca, students and recent graduates can search for postings directed at them by potential employers. Job Bank also has this feature. Allstarjobs.ca provides links to career information for students.

Most ELEs do not offer tailored services for the other subpopulations. The exceptions are Workopolis and Eluta.ca. Workopolis operates specialized e-recruiter ELEs for Aboriginal people, immigrants, and persons with disabilities through its NicheNetwork system, but these ELEs are hardly used by employers and do not list many jobs (see Section III.B.i.a above). Eluta.ca, a job search engine, allows users to search job postings within the following categories: best employers for new Canadians; Canada's best diversity employers; Canada's greenest employers; and Canada's best employers for recent graduates. The 'new Canadians' category targets recent immigrants. The 'diversity employers' category focuses on employers that offer inclusive workplaces for five major employee groups: women, visible minorities, persons with disabilities, Aboriginal persons, and lesbian, gay, bisexual and transgendered or transsexual (LGBT) people.²⁶

Overall, the private sector does not provide extensive specialized services for subpopulations with special labour market needs. The fact that the Workopolis NicheNetwork ELEs have attracted very little interest from employers suggests that creating separate ELEs that depend on employer buy-in is unlikely to be an effective method of providing such services. The Eluta.ca approach, which simply assigns employers to certain categories (such as 'best employers for immigrants') may be more effective from the jobseeker perspective, although it invites questions about how employers are to be categorized.

D. Role of the Public Sector

i. Public Sector ELEs in Canada

The main public sector ELE in Canada is Job Bank, which is administered by Service Canada. Under our three-category classification scheme for ELEs, Job Bank is a 'job board' because it allows jobseekers to search job postings but does not supply employers with information about specific jobseekers. However, it does provide services to employers above and beyond simply advertising job vacancies. In particular, Job Bank

²⁶ These 'best employer' lists are compiled by Mediacorp Canada Inc. See <http://www.canadastop100.com/index.html> and <http://www.mediacorp.ca/tcd/>.

provides extensive information about human resources management and opportunities for grants, tax credits, etc.

Job Bank is the most widely used ELE in Canada (LMI Secretariat, 2009b).²⁷ It receives excellent reviews from users. According to a survey of about 500 Job Bank users, 90 per cent of users were either “very highly satisfied” or “highly satisfied” with Job Bank, while only 7 per cent reported “low” or “very low” satisfaction with the site (View Stats Research, 2004). Strong majorities of respondents (61 to 71 per cent) preferred Job Bank to other ELEs in one-on-one comparisons.

These results are almost certainly driven by sample selection bias. The sample of respondents is drawn from the population of Job Bank users, and we would expect that Job Bank users self-select onto Job Bank (as opposed to other sites) on the basis of their preference for it relative to other sites. It is unlikely that a survey of users of Workopolis or Monster.ca would reveal similarly strong preferences for Job Bank.

Nevertheless, the results provide information about the reasons that many people prefer Job Bank to other job sites. Users cite the ease of using Job Bank and the trustworthiness of the information as key reasons for their preference. In the survey by View Stats Research (2004), 70 per cent of users reported a high degree of trust in Job Bank, while only 13 per cent said that they trusted Workopolis.²⁸ When asked about the features of Job Bank that they like least, thirty per cent of respondents assert that Job Bank has no problems. Job Bank generally delivers good job matches, in the sense that the jobs users find coincide with the kinds of jobs they were seeking.

Job Bank is the key public sector ELE for all of Canada except for the Northwest Territories, Newfoundland and Labrador, Quebec and Saskatchewan. In these jurisdictions, the territorial and provincial governments have developed their own public sector ELEs: jobsnorth.ca for the Northwest Territories, jobsinnl.ca for Newfoundland and Labrador, emploiquebec.net for Quebec, and sasknetwork.gov.sk.ca for Saskatchewan. Jobseekers from these places can still search for local jobs on Job Bank; the search results will redirect them to job postings on their provincial or territorial ELEs.

ii. Public Sector ELEs in Other Countries

Not all countries have government-run ELEs. Among the predominantly English-speaking OECD countries other than Canada, Australia is the only one with a national public sector ELE comparable to Job Bank. Australia’s jobsearch.gov.au is free of charge for both jobseekers and employers. Employers can post job advertisements, and jobseekers can search them by region and occupation type or by using keywords. According to the web site, jobsearch.gov.au is the fourth most widely used job site in

²⁷ It ranks second behind Workopolis according to the data reported in Table 1 above, but this is probably because the data from Alexa.com does not provide a good estimate of the share of Job Bank’s total traffic that is accounted for by Canadian internet users. See note c under Table 1.

²⁸ Again, these results are likely biased by the fact that the survey respondents were Job Bank users to begin with. We know of no compelling evidence that large private sector ELEs like Workopolis and Monster.ca are not trusted or trustworthy. Nevertheless, Job Bank may have the advantage of being viewed as an “official” information source.

Australia, with over 900,000 registered jobseekers and about 17,000 daily visitors. It contained 20,769 job postings on July 15, 2010. The site also contains sections tailored to the needs of indigenous people, young workers, parents, older workers, migrant workers and people with disabilities. These sites provide links and information related to government services for these groups; they do not provide targeted job postings or other specially tailored ELE services.

The United Kingdom and New Zealand have no public sector ELEs that list private sector job openings. The government of the United Kingdom does operate an ELE for public sector jobs (www.civilservice.gov.uk/jobs/index.aspx). New Zealand provides two such sites: one for careers in the national public sector (jobs.govt.nz) and one for careers in local government (localgovernmentcareers.govt.nz). Ireland has no public sector ELEs.

In the United States, the federal government has exited the market for ELE services. The publicly-run America's Job Bank (AJB), an e-recruiter-type ELE, was founded in 1995 and was an innovator in online recruiting. By 2007, it held some 2.2 million job postings and 600,000 jobseeker resumes – far more than private sector ELEs such as CareerBuilder (Frauenheim, 2007a). Nevertheless, AJB was shut down in 2007. The explanation given was that “the technology and markets have developed in such a way that government sponsorship is no longer needed” (Nakamura *et al.*, 2009).

The decision to shut down AJB appears not to have been based on rigorous program evaluation. The Department of Labor has not made public any comprehensive study showing that AJB was ineffective or inefficient. Indeed, the ELE received positive reviews in feedback sessions (Frauenheim, 2007a). A study by the Technical Assistance and Training Corporation (2002) suggests that AJB was about as effective as some major private sector ELEs. In a three month study of about 250 employers, four per cent of posted jobs were filled through AJB, similar to the 6 per cent rate for Yahoo! Hotjobs but lower than the 15 per cent rate for Monster.com. AJB was also highly efficient. The cost per hire through AJB was \$44.52 (paid by the government; AJB was free for employers), versus \$1,907 for Monster.com and \$644 on Yahoo! Hotjobs (paid by employers).²⁹ Ten per cent of jobseekers found jobs through AJB over the three month period, versus 28 per cent for all other job search methods combined.

While these results suggest that AJB was neither ineffective nor inefficient, they do not necessarily imply that it was a good use of public funds. Whether a particular program is worthy of public funding depends on many factors, including the opportunity cost of the government expenditure and whether or not the same services are provided in the private sector. On these terms, experts disagree as to whether the government should operate a service like AJB. Peter Weddle, head of the well-known recruitment consulting firm Weddle's, supported the decision to eliminate AJB on the grounds that the government need not duplicate services that the private sector already provides

²⁹ Note that the results for Monster.com and Hotjobs were based on samples of only 25 employers each and may not be robust estimates of the true average cost per hire on those sites.

(Frauenheim, 2007b). Stiglitz *et al.* (2000), on the other hand, suggest that the provision of LMI through AJB was an appropriate function for government in the digital age.

iii. What Role for Job Bank in Canada?

Given that the private sector provides an extensive array of ELE services, and given the fiscal pressures likely to face the federal government in the coming years, it is worth asking whether the Job Bank is worth maintaining and, if it is, what role it should play in the overall ELE market.

A key related issue is the degree to which a public sector ELE is a complement or a substitute for the private sector services. It is clear that there is some substitutability between them since they all serve the same basic function: compiling job ads for jobseekers to view. To the extent that the public and private sector services differ, the fact that many employers are willing to pay sizable fees to post job ads with private sector ELEs when they could post them for free on Job Bank suggests that the private sector provides some extra services above and beyond those offered by Job Bank. One possibility is that employers expect to target a superior pool of jobseekers through the private sector ELEs than through Job Bank. Job Bank has a reputation for being used predominantly by jobseekers with lower skill levels and, correspondingly, being used mainly by employers looking for low-skill workers.

The data in Table 3 support this to some extent. Compared to the major private sector ELEs (excluding the job search engines, the results from which usually include Job Bank postings), Job Bank returns more results for keyword searches associated with jobs that require little formal education or training. For search terms associated with jobs that require more specialized training, Job Bank's relative performance is less impressive.

This difference is not necessarily a problem for Job Bank. If Job Bank lacks jobs for highly skilled workers, it seems equally true that the private sector ELEs lack jobs for jobseekers with less education and training.³⁰ It may be that firms are unwilling to pay the large fees to post ads for low-skill jobs, or that many of these job opportunities are with small and medium-sized employers (SMEs) that are unable to pay the large up-front cost of advertising a job on a major private sector ELE.

This discussion suggests two important functions that Job Bank performs in the ELE marketplace: service for low-skill workers who are underserved by the private sector ELEs, and free service for SMEs that cannot afford to advertise on the major private ELEs. The latter point is partly offset by the fact that some smaller private sector ELEs provide free job posting for firms, but none of those is as popular with jobseekers as Job Bank. Thus, greater accessibility for small employers is a key feature of Job Bank.

Another area in which Job Bank may be well positioned to contribute is tailored services for groups with unique labour market challenges. At the moment, Job Bank does

³⁰ Stiglitz *et al.* (2000) note that this was also true of the ELE market in the United States circa 2000. Private sector ELEs were targeted toward high-skill workers, while America's Job Bank served the low-skill jobseekers.

Table 3: Number of Results Retrieved from E-recruiters and Job Boards for Selected Search Terms

Site	Janitor	Nanny	Truck Driver	Economist	Pharmacist
Jobbank.gc.ca	36	382	1000+	2	95
Workopolis.com	5	9	58.0	8	117
Monster.ca	3	1	15.0	2	24
Jobboom.com	0	0	11.0	0	0
Working.com	26	6	70.0	9	575
Careerbeacon.com	0	0	56.0	2	32
Allstarjobs.ca	2	0	15.0	0	10

not provide such services except for young workers. Within the private ELE sector, no firm has successfully created specialized services for Aboriginal people and recent immigrants, two of the most important groups for Canada's future labour force growth.³¹ The apparent lack of employer interest in Workopolis' NicheNetwork system suggests that most employers are not willing to pay to target their recruitment efforts at these groups. Job Bank could be more successful in attracting employer participation since it does not charge fees to employers.

Having said that, it is not clear that ELEs are an appropriate channel by which specialized services for subpopulations with unique employment challenges should be delivered. Jobseekers from these groups would no doubt be interested in using specialized ELEs catering exclusively to themselves if there were widespread employer interest, but it is likely that most employers would rather advertise job openings to the widest possible pool of jobseekers and choose the best candidates. The appropriate target of government policy is to help members of disadvantaged groups to improve their employability so that they can find jobs through the standard ELEs, rather than try to create special ELEs or ELE services to target those jobseekers.

V. Conclusion

This report has two aims. The first is to provide a descriptive overview of the services offered by private sector ELEs in Canada. The second is to assess those services in terms of their likely effects on labour market matching, their accessibility, and the degree to which they satisfy the needs of all Canadian jobseekers and employers.

We have shown that there is a robust private sector in ELE services in Canada. The domain of private sector ELEs contains a large number of web sites with a variety of user interfaces, target audiences, and suites of services for jobseekers and employers. The private sector ELEs – especially e-recruiters like Workopolis and Monster.ca – provide a broader range of services than the main public sector alternative, Job Bank. However, there are key areas in which the private sector does not deliver adequate services.

³¹ Aboriginal people, in particular, will be an increasingly important component of the Canadian labour force in the coming years. See Sharpe *et al.* (2007).

Although private ELEs are very accessible for jobseekers, they may underserve the population of low-skill jobseekers. They may also be financially inaccessible to small employers who cannot afford to pay the sizable fees for posting job advertisements. These are key roles that the public sector can and does serve.

Drummond *et al.* (2009) has recommended that Job Bank be ‘modernized’ to increase its usefulness. A key part of this effort is to ensure that a larger proportion of Canada’s job vacancies (especially high-end and professional jobs, which are underrepresented on Job Bank) are posted on Job Bank. The report suggests that partnerships with private sector recruiters could help to achieve this goal. One way of interpreting this recommendation is that Job Bank should be made more similar to private sector ELEs. If that is the intention, then it is not a good way to justify increased expenditures on the public sector ELE. Why should Job Bank exist if it simply duplicates the services offered by the private sector?³²

Rather than try to make Job Bank more similar to private sector competitors, Service Canada should seek to identify important services that private sector ELEs do not provide and aim to provide those services through Job Bank. This is the proper role of the public sector.

³² Indeed, this was the explanation given when the United States Department of Labor closed its job board, America’s JobBank, in 2007. The precise explanation was that “the technology and markets have developed in such a way that government sponsorship is no longer needed” (Nakamura *et al.*, 2009).

References

- Akerlof, G. A. (1970) "The Market for 'Lemons': Quality, Uncertainty and the Market Mechanism," *Quarterly Journal of Economics* Vol. 84, No. 3, pp. 488-500.
- Autor (2001) "Wiring the Labor Market," *Journal of Economic Perspectives* Vol. 15, No. 1, pp. 25-40.
- Autor, David H. (2009) "Studies of Labour Market Intermediation: Introduction," in David H. Autor (ed.) *Studies of Labor Market Intermediation*, National Bureau of Economic Research (Chicago: University of Chicago Press).
- Bagues, Manuel F. and Mauro Sylos Labini (2009) "Do On-line Labor Market Intermediaries Matter? The Impact of *AlmaLaurea* on the University-to-Work Transition," in David H. Autor (ed.) *Studies of Labor Market Intermediation*, National Bureau of Economic Research (Chicago: University of Chicago Press).
<http://www.almalaurea.it/info/bagues-labini.pdf>.
- Boyle, H. Perry Jr., Lynn A. Summer, and Benjamin Koby (1999) "E*Recruiting: From Job Boards to MetaMarkets," Thomas Wiesel Partners, May.
- Crispin, Gerry, and Mark Mehler (2009) "CareerXroads 8th Annual Source of Hire Study: What Happened in 2008 and What it Means for 2009," CareerXroads report, February.
<http://www.careerxroads.com/news/SourcesOfHire09.pdf>.
- Diamond, P. A. (1982) "Wage Determination and Efficiency in Search Equilibrium," *Review of Economic Studies* Vol. 49, No. 2, pp. 217-227.
- Drummond, Don, Elizabeth Beale, Ken Kolby, Marjolaine Loiselle and Rick Miner (2009) *Working Together to Build a Better Labour Market Information System for Canada*, Final Report of the Advisory Panel on Labour Market Information (Drummond Report). http://www.imt-lmi.ca/eng/flmm/final_report-eng.shtml.
- Finlayson, Dave (2006) "Web Site Set to Wow Job Hunters," *The Edmonton Journal*, June 29.
<http://www.canada.com/edmontonjournal/news/business/story.html?id=bdd4a55-e464-4dce-aece-7bf7fb83da2e&k=59572>.
- Frauenheim, Ed (2007a) "Bank Withdrawal: The Closure of America's Job Bank," *Workforce Management*, July 6.
<http://www.workforce.com/section/06/feature/24/99/21/index.html>.
- Frauenheim, Ed (2007b) "Applauding the End of America's Job Bank," *Workforce Management*, July 6.
<http://www.workforce.com/section/06/feature/24/99/21/249931.html>.

Hadass, Yael (2003) "The Effect of Internet Recruiting on the Matching of Workers and Employers," unpublished manuscript, Harvard University, September.
<http://time.dufe.edu.cn/wencong/laboreconomics/hadass.pdf>.

Kuhn, Peter, and Mikal Skuterud (2004) "Internet Job Search and Unemployment Durations," *American Economic Review* Vol. 94, No. 1, pp. 218-232.

LMI Secretariat (2009a) "Survey Findings from the Labour Market Information Questionnaire," prepared for the Advisory Panel on Labour Market Information, April.
http://www.imt-lmi.ca/eng/pdf/lmi_survey_report_final_eng.pdf.

LMI Secretariat (2009b) "Survey Findings on the Use of Web-sites for LMI," prepared for the Advisory Panel on Labour Market Information, April. http://www.imt-lmi.ca/eng/pdf/website_survey_eng.pdf.

Mortensen, D. T. (1982) "The Matching Process as a Non-cooperative Bargaining Game," in J. J. McCall (ed.) *The Economics of Information and Uncertainty* (Chicago: University of Chicago Press).

Murray, Alexander (2010a) "The State of Knowledge on the Role and Impact of Labour Market Information: A Survey of the International Evidence," Centre for the Study of Living Standards Research Report, forthcoming.

Murray, Alexander (2010b) "The State of Knowledge on the Role and Impact of Labour Market Information: A Survey of the Canadian Evidence," Centre for the Study of Living Standards Research Report, forthcoming.

Nakamura, Alice O., Kathryn L. Shaw, Richard B. Freeman, Emi Nakamura, and Amanda Pyman (2009) "Jobs Online," in David H. Autor (ed.) *Studies of Labor Market Intermediation*, National Bureau of Economic Research (Chicago: University of Chicago Press). <http://www.columbia.edu/~en2198/papers/jobsonline.pdf>.

Needleman, Sarah E. (2009) "Career Journal: Experts Weigh In on Job Boards," *Wall Street Journal*, Eastern Edition, February 17, pp. B.15.

Personnel Today (2002) "E-recruiting Methods Grow in Popularity," *Personnel Today*, August 20, 2002, pp. 55.

Pissarides, C. A. (1986) "Unemployment and Vacancies in Britain," *Economic Policy* Vol. 1, No. 3, pp. 500-559.

Sharpe, Andrew (2009) "Best Practices in Labour Market Information: Recommendations for Canada's LMI System," CSLS Research Report 2009-05, July.
<http://www.csls.ca/reports/csls2009-5.pdf>.

Sharpe, Andrew, Jean-Francois Arsenault, and Simon Lapointe (2007) "The Potential Contribution of Aboriginal Canadians to Labour Force, Output and Productivity Growth in Canada, 2001-2020," CSLS Research Report 2007-04, November.

<http://www.csls.ca/reports/csls2007-04.PDF>.

SHRM (2007) "2007 Advances in E-Recruiting: Leveraging the Jobs Domain," Society for Human Resource Management.

Smith, Christine (2005) "Finding the 'Right People' Just Got Easier," *Franchising World* Vol. 37, Iss. 11, pp. 46-48.

Specht, Michael, and Phillip Tusing (2009) "Source of Talent, 09: Understanding Sources of Talent in Australia," report jointly prepared by Inspecht and Destination Talent.

http://talentsource.com.au/download_report.

Stevenson, Betsey (2009) "The Internet and Job Search," in David H. Autor (ed.) *Studies of Labor Market Intermediation*, National Bureau of Economic Research (Chicago: University of Chicago Press).

<http://bpp.wharton.upenn.edu/betseys/papers/InternetSearch.pdf>.

Stiglitz, Joseph E., Peter R. Orszag and Jonathan M. Orszag (2000) "the Role of Government in a Digital Age," prepared for the Computer and Communications Industry Association, October.

<http://unpan1.un.org/intradoc/groups/public/documents/apcity/unpan002055.pdf>.

Technical Assistance and Training Corporation (2002) "America's Job Bank: Outcome Study," prepared for the United States Department of Labor, March.

<http://www.workforce.com/tools/misc/ajb.pdf>.

View Stats Research (2004) "Job Bank Study: Final Report," prepared for Human Resources and Skills Development Canada, October.

Appendix: Summary of Characteristics of ELEs

	Year founded (1)	Traffic Rank in Canada (2)	Organizational Structure (3)	Ownership (4)	Number of CV posted (5)	Job Posting Traffic (6)	Duration of Job Postings (7)	Pricing for employers for a single posting. (8) See note 1.
E. L. E.								
Job Boards								
Jobbank.gc.ca	Est. late 1960's	n.a.	Public Sector	Govn't of Canada	n.a.	57,669 jobs posted as of July 13, 2010. See Note 2.	Job advertisements will be advertised on Job Bank for 14 calendar days unless otherwise requested by the employer.	Free
Working.com	2004	1,295	Private Sector- for-profit (private company)	Canadian-controlled	n.a.	9,197 job postings for Canada on July 12th, 2010.	28 days	\$425
Careerbeacon.com	2002	1,695	Private Sector- for-profit (private company)	Canadian-controlled	n.a.	1,306 jobs posted within last 21 days for all regions (Includes jobs outside of Canada). 6 foreign jobs posted within last 3 weeks.	2 months	\$375
Localwork.ca	n.a.	2,831	Private Sector- for-profit (private company)	Canadian-controlled	n.a.	1 job posting for Skatchewan and Alberta and 1,682 job postings for Ontario. No job postings for other provinces or territories.	30 days	\$249
Job Search Engines								
wowjobs.ca	2008	469	Private Sector- for-profit (private company)	Canadian-controlled	n.a.	100,000+ jobs in Canada. Note: Only jobs that are less than a month old are kept unless the job posting deadline exceeds this time frame.	One month, unless job posting deadline exceeds a month	Free
Indeed.ca	2004	607	Private Sector- for-profit (private company)	U.S.-based organization	n.a.	33,735 new jobs in the last 7 days (July 12th)	30 days	Employers pay when job seekers click their ad and control how much they spend. They set the budget for each job.
Eluta.ca	2006	785	Private Sector- for-profit (private company)	Canadian-controlled	n.a.	There are more than 10,000 job listings searchable on Eluta at any time. Does not include part-time, temporary or seasonal positions.	min {job posting expires, 30 days}	Free
Simplyhired.ca	2005	904	Private Sector- for-profit (private company)	U.S.-based organization	n.a.	98,887 Jobs in Canada. 9,602 news jobs within 24 hours on July 15th, 2010.	A listing will only appear in [the] search engine if it is still active on the site where [simplyhired.ca] pulled the information from.	Free

	Year founded (1)	Traffic Rank in Canada (2)	Organization (3)	Ownership (4)	Number of CV (5)	Job Posting Traffic (6)	Duration of Job Postings (7)	Pricing for employers for a single posting. (8) Note: Job seekers do not pay any fees.
E-recruiters								
E. L. E.								
Workopolis.ca	1999	116 (Workopolis.com)	Private Sector- for-profit (private company)	Canadian-controlled	n.a.	25,000+ Canadian job postings. 509 jobs in Canada posted on July 15th, 2010.	30 days for SinglePost basic, as long as posting is on employers website for AutoPost and until removed by employer for DirectPost	From \$325 (Atlantic Canada) to \$750 (Canada-wide posting)
Monster.ca	1994	223	Private Sector- for-profit (public company)	U.S.-based organization	n.a.	601 job postings on July 12th, 2010. Note: Duplication of job postings may occur if employer is still looking for candidates.	30 or 60 days	\$695 (30 days) and \$725 (60 days)
Jobboom.com	2003	686	Private Sector- for-profit (private company)	Canadian-controlled	n.a.	Nearly 5,000 jobs	n.a.	employers must pay based on the number of postings and level of exposure they desire.
Careerowl	1999	114,333	Private Sector- for-profit (private company)	Canadian-controlled	446 (Resumes date back to the 8th of March, 2009)	50,276 job postings for Canada within the past month on July 12th, 2010 .	n.a.	Free
Allstarjobs.ca	1999	119,747	Private Sector- for-profit (private company)	Canadian-controlled	14,000	3,079 jobs posted for all regions and 3,017 jobs posted for Canada within last 60 days	60 days	Free
Other								
Kijiji.ca	2005	12	Private Sector- for-profit (private company)	Owned by a U.S. based company	n.a.	By local area only. 3,898 job postings for Ottawa/Gatineau area on July 15th, 2010. 42,097 jobs posted within 1000km of Toronto	n.a.	Free
Craigslist.ca	1999 See note 5.	14	Private Sector- for-profit (private company)	U.S.-based organization	n.a.	More than 1 million new job listings each month	30 days for Boston, Chicago, Los Angeles, New York, Portland, Sacramento, San Diego, Seattle, SF Bay Area, Wash, DC and 45 days for all other cities.	Ranges from \$0 to 75\$ per ad.

Note 1: Note: Job seekers do not pay any fees.

Note 2: Quebec, Newfoundland and Labrador, Saskatchewan and the Northwest Territories not included in the choice of locations for a Job Match profile. It is, however, possible to use Job Bank to view job opportunities in these areas. The Job Match option allows you to receive a list of matching jobs.

Note 3: Service Canada offers services such as:

Service Canada Centre for Youth. The primary mandate of an SCCY is to assist students in their search for summer employment by connecting them with local employers and helping them prepare their resumes.

Service Canada Centre. Service Canada Centres are full service centres offering a mix of information and transactional services.

Note 4: Informs you of nearby or online training and educational opportunities.

<http://www.workopolis.com/work.aspx?action=Transfer&View=Content/Common/ResourceCentre/RCLearningView&lang=EN&theme=work>

Note 5: Craigslist was initially an email list of San Francisco events, started as a hobby by Craig Newmark in early 1995, and was incorporated as a for-profit in 1999.

	Location of HQ (9)	Regional Offices (10)	Geographical Focus (11)	Browsing options (12)	Revenues (13)	Services (14)
E. L. E.						
Job boards						
Jobbank.gc.ca	Ottawa (mailing address)	Across Canada	Canadian Jobs	10 occupational categories (eg. Health)	n.a.	Job Match, Job Alert, the Résumé Builder and the Career Navigator. Links to other government employment services such as employment insurance (EI), as well as links for employers on hiring practices, potential grants and work programs, labour standards and regulations, and how to make a successful advertisement. See note 3.
Working.com	Toronto, Ontario	Victoria, Calgary, Regina, Toronto, Montreal and Vancouver Island and Ottawa, Edmonton, Saskatoon, Windsor	Canadian and International Jobs	23 sectors	n.a.	Ressources that include: Articles, Job Search Tips, Career Advice
Careerbeacon.com	n.a.	Offices in Nova Scotia, New Brunswick (which also serves Prince Edward Island) and Newfoundland and Labrador	Canadian and International Jobs	34 occupational categories	n.a.	Employer profiles
Localwork.ca	Hamilton, ON	n.a.	Canadian Jobs	13 occupational categories	n.a.	Career Center: Useful articles
Job Search Engines						
wowjobs.ca	Alberta	n.a.	Canadian Jobs	29 occupational categories	n.a.	n.a.
Indeed.ca	Stamford, CT	Indeed operates in 29 different countries around the world	Canadian jobs, but U.S. site available.	45 occupational categories	n.a.	Job alert: E-mail notification whenever a job that matches a job seeker's criteria becomes available. Forum.
Eluta.ca	Toronto, Ontario	n.a.	Canadian Jobs. full-time, career-level opportunities.	Over 80 occupational categories. Also, top employers for recent graduates and new Canadians and the top environmentally friendly employers.	n.a.	Eluta allows you to set up an e-mail notification that alerts you as soon as new jobs matching your search are posted.
Simplyhired.ca	Mountain View, CA	n.a.	Canadian (simplyhired sites exist for other countries)	24 categories	n.a.	Job rating available (for personal use). RSS Feed and email alerts that will let job seekers know of recent job postings

	Location of HQ (9)	Regional Offices (10)	Geographical Focus (11)	Browsing options (12)	Revenues (13)	Services (14)
E-recruiters						
E. L. E.						
Workopolis.ca	Toronto	Offices in eight other Canadian cities	Canadian/U.S. Jobs	54 industrial categories and 130 + occupational categories	n.a.	Section devoted to entry-level and student career jobs. Career resources: Latest news and advice, Salary calculator, resume rescue and Education and training. See note 4. Provides additional links to other resources for employers such as candidate prescreening, background checks, and job market salary information.
Monster.ca	n.a.	n.a.	Canadian and International Jobs	20 + industrial categories and 20 + occupational categories	\$1.34 billion (US dollars) in 2008 and \$124 million in net income	Advice on job-hunt strategies, resume and letters, interviewing, salary and benefits and career development.
Jobboom.com	Quebec	n.a.	Canadian and International Jobs	16 occupational categories	n.a.	Career Zone: Several useful articles.
Careerowl	Vancouver, BC	None.	Canadian/U.S. Jobs	26 occupational categories	n.a.	Links to useful sites.
Allstarjobs.ca	Shaunavon, SK	None.	Canadian and International Jobs	35 industrial categories	n.a.	Canadian Resume Writing Services and career and student resources.
Other						
Kijiji.ca	n.a.	n.a.	Local Area Search for Canada and links to sites for other countries also available	16 occupational categories	n.a.	n.a.
Craigslist.ca	San Francisco	n.a.	Local Area Search for Canada and International	31 occupational categories	n.a.	Forum