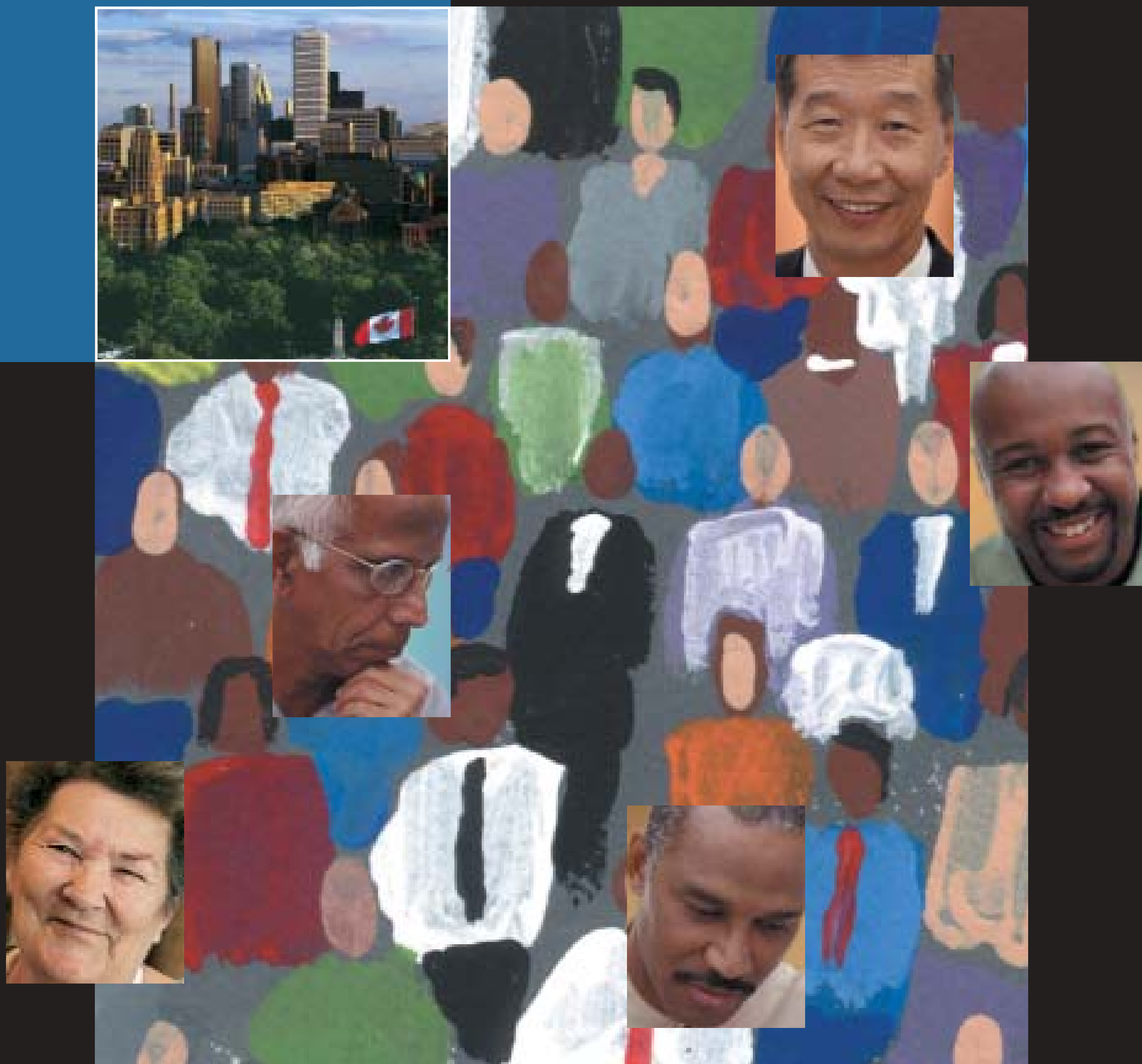
Toronto

Labour Force Readiness Plan



Overview

TORONTO Economic Development

Toronto

Labour Force Readiness Plan

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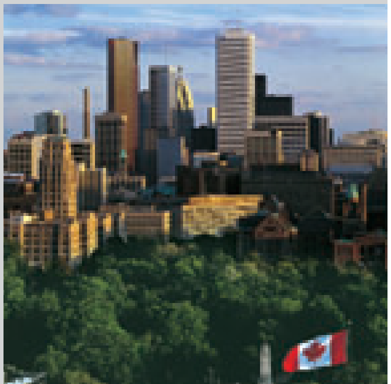

All skill levels, from university-obtained skills to those acquired "on-the-job", are important components of a strong and diversified workforce

This report, part one of a series, was made possible through the generous financial support of Human Resources Development Canada.

ISBN 1-895739-38-1

This publication is available on the World Wide Web at
www.toronto.ca/business

Additional copies are available from:

Toronto Economic Development
Metro Hall, 8th Floor, 55 John Street
Toronto, Ontario M5V 3C6
Web site: www.toronto.ca/business

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ACKNOWLEDGEMENTS

This report was prepared by GHK International (Canada) Ltd. John Gladki was the project director. The main authors were John Gladki and Dr. Damian Dupuy of GHK assisted by Dr. Eleanor Breen of GHK and Prof. Morley Gunderson of the University of Toronto Centre for Industrial Relations.

This report was funded by Human Resources Development Canada (HRDC) under the Labour Market Partnerships (LMP) Program. We also extend our thanks to the countless stakeholders who generously shared their time and expertise in providing input into this report.

1 EXECUTIVE SUMMARY

Introduction

The purpose of this study is to provide the City of Toronto with an assessment of labour force needs in the City and the Toronto region over the next decade, in order to provide a foundation for determining the kinds of interventions necessary to address gaps and take advantage of opportunities.

The impetus for this project is borne out of some of the key findings of the Toronto Competes report and the Toronto Economic Development Strategy, which emphasized the importance of a well-educated and sophisticated labour force in sustaining the City's competitiveness.

While the importance of a well-educated workforce to regional economic success is well documented, the role of a university-educated workforce is often overstated, to the neglect of skills obtained in other ways. Drawing on evidence from secondary and primary sources, this study demonstrates that all skills levels from university obtained skills, to those obtained 'on-the-job', are important components of a strong and diversified workforce, and thus a strong and diversified economy. All are needed within a regional economy as varied as that found in the Toronto region, thus all skill levels need to be supported by appropriate policy initiatives.

Highlights of the Study

- Toronto has a highly educated, highly skilled and culturally diverse labour force, providing a very strong foundation for continued economic development in the future.
- The Toronto region will face labour shortages across all occupations and skill groups by the end of the decade. In certain occupations (university lecturers, health care professionals and some construction trades) shortages may appear sooner.
- Flexibility and adaptability are keys to success in our rapidly changing economy. The most effective measure to ensure labour force readiness is for the City to work with education and training institutions, other orders of government, business and labour to develop a flexible and adaptable training system that is responsive to future changes in the economy.
- An important component of labour force readiness is a skills upgrading and education strategy that focuses on all skills and educational levels ranging from university education to on the job

training. Particularly important for Toronto in the future will be to engage employers more in providing skills upgrading. Better links need to be made between educators/trainers and business as education and training key components to maintaining the competitiveness of Toronto's businesses. Toronto's extensive education and training infrastructure must be supported and nurtured. Such an infrastructure provides the City with an opportunity to promote Toronto as a centre of excellence for knowledge and skills development.

Immigration is a critical source of new entrants into the labour force.

- Immigration is a critical source of new entrants into the labour force. Current issues regarding resettlement support, recognition of prior learning and technical upgrading need to be addressed as soon as possible for Toronto to be able to take full advantage on the skills of new immigrants.
- For those youth who do not continue on to college or university, access to other forms of training is necessary to ensure that young people acquire the skills they need to become productive members of the community.

Key Characteristics of the Toronto Region's Workforce

The Toronto region plays a crucial role as an employment centre nationally and provincially. For example:

- In 2001, the Toronto region accounted for 43 percent of the Ontario labour force and 17 percent of the Canadian labour force. Employment in services and the knowledge-producing industries is the core of Toronto's economy. At 71%, the service industries constitute the largest share of employment, however, at 19% manufacturing is still an important source of employment in the region. Construction and Transportation/Utilities account for the remaining 10%.
- The Toronto region has a very highly educated workforce. Approximately 55% of manufacturing employees have some form of post-secondary education (almost 20% of manufacturing employees have a university qualification). In the services sector, the level of education is even more pronounced where almost 76% of employees have post-secondary education.
- Immigration is an important component of the structure of the labour force in Toronto. The Toronto region continues to attract the largest share of national immigration – 42% of the national total in 1998. It is estimated that more than 50% of Toronto's current popu-

lation was born outside of Canada. The multicultural make-up of the region's population gives its workforce a unique set of skills to deal with a globalizing economy, for example, language skills, and cultural sensitivity. These skill sets are often obscured by (no less important) discussions surrounding education and the qualifications of recent immigrants.

Future Change in the Toronto Region's Workforce

The future looks positive for the region's labour force. In particular:

- By 2010, it is forecast that employment will grow to just over 3 million, representing a 13% increase over the 10 year period 2000-2010. However, the highest growth rate is expected to occur between 2001 and 2008, with a slowdown after 2008 due mainly to the baby boom generation leaving the workforce at that time.
- Manufacturing sectors that are concentrated in the region are forecast to grow. These include food and beverages, computer and electronics, clothing, and furniture, with the highest rate of growth occurring in 'other manufacturing' – a highly diverse group of manufacturing activities including scientific and professional equipment, jewellery and sporting goods. By contrast, the only sectors with a regional concentration that are forecast to lose employment are printing and publishing, and plastics.
- The occupation and skills mix within the manufacturing sector may change with 'other manufacturing' occupations becoming a larger share of the manufacturing workforce and more traditional sectors declining in importance.
- The services sector is also expected to grow over the next decade. The shift of large employers in the finance, insurance and real estate (FIRE) sector to offload many of their operations to consultants and specialized service providers who are no longer part of the FIRE group but become part of the "business services" group will continue. Therefore, significant growth is expected in business services, at the expense of FIRE.
- With respect to services sector occupations, significant growth is expected among those associated with 'quality of life' e.g. health, social science, education and government service occupations, and art, culture, recreation and sport. 'Quality of life' is one of the most significant components in the retention of firms and for inward investment and while the Toronto region ranks relatively highly amongst world cities, continued government investment in health,

'Quality of life' is one of the most significant components in the retention of firms and for inward investment.

education and leisure facilities is necessary.

- Demand across all skills groups is expected to grow over the next 10 years. However, it is expected that a higher percentage increase will be seen in occupations that require a university degree. Yet, the largest absolute increase in demand will occur in occupations requiring community college or apprenticeship training, or a high school diploma (for example, the largest absolute increase is expected to occur in business, finance, and administration occupations that require a high school diploma, followed by sales and service occupations requiring high school, and those requiring on-the-job training only). This highlights the importance of both university and non-university acquired skills in the future growth of Toronto's labour market, and confirm that a strategy to address employment change must simultaneously address all skill levels.

Issues That Need to be Addressed

The picture that emerges from this report is that prospects for future employment growth over the next decade are by and large, positive, and that this employment growth will occur among all skills groups. However, there are a number of issues that have emerged in this report that should be addressed as part of a Labour Force Readiness Plan by the City of Toronto.

The Toronto region is expected to lose a major share of its existing workforce by 2010 as a result of the impact of the aging baby boom bulge.

Real Possibility of Skills Gaps in the Future

- The Toronto region is expected to lose a major share of its existing workforce by 2010 as a result of the impact of the aging baby boom bulge. With approximately a third of the current workforce in the 45-64 age bracket, the replacement of the existing workforce will be a critical issue over the next 10 years. The potential for skills gaps to emerge within the region's workforce in the future is real.
- These skills gaps are not limited to particular occupations; instead they cut across all occupations. Among the skill sets that were identified as scarce by many employers surveyed as part of this study are: occupation specific skills; basic high school education; management skills; and second language skills. That said, investment in skills training is not a priority for the majority of Toronto region employers, contrary to the situation in other jurisdictions like the UK.
- To address the potential emergence of skills gaps, the City can use its influence and linkages to help coordinate and improve the education and training infrastructure delivered either by educational institutions, employers or through senior government programs.

This would address the need to train all skills levels. Among the ways this could be achieved are:

- Supporting the post secondary educational and training infrastructure in Toronto to ensure that the large, sophisticated educational infrastructure and centres of excellence can continue to flourish. Particular issues in this regard include: the need to sort out problems and provide a smooth transition for the double cohort; addressing retirements and shortages for faculty in post secondary institutions; and facilitating partnerships to enhance and expand centres of excellence, particularly in the areas of research and development.
- Working with the provincial government to ensure that apprenticeship programs are adapted to the emerging needs of the Toronto economy. This could be achieved through respecting the particular cultural context that has developed in Ontario with regards to apprenticeships, while at the same time developing programs that will provide more employer buy-in to the apprenticeship system. The City also has an interest to ensure that it gets its fair share of new provincial funding dedicated to enhancing and expanding the apprenticeship program.
- Supporting the development of core skills by searching for ways to improve and expand the opportunities for unemployed persons to access Employment Insurance Skills Development Employment Benefit and to search for ways to expand the training dimension of the Ontario Works program. The City should work with the Federal Government and the Province of Ontario to ensure that the opportunities provided by Ontario Works are expanded and that these opportunities reflect the needs of the participants. Additional issues in this regard include general literacy and numeracy training and providing everyone in the workforce with the opportunity to achieve at least a Grade 12 level of education.
- Bringing employers, trainers and government together to enhance and expand on-the-job training and upgrading, and in particular: to ensure that training is flexible for employees; that the need for both generic and job specific skills upgrading is addressed; and that a system exists to deliver information to employers about various coop placement programs.
- Establishing a system for providing up-to-date labour market information by including skills development and labour market issues in the City's annual employers survey, and possibly con-

ducting a more detailed survey focussed on skills and training issues on a regular basis. The City could also explore with the Province how to better coordinate the sharing of provincial information on industrial and occupational trends.

Support for Immigrant and Migrant Workers

- Immigration is, and will continue to be, an important source of labour supply in Toronto. However, the recognition of immigrant qualifications and credentials is important to ensure that immigrants fully contribute to the economy. The absence of credential and educational recognition very often results in social exclusion, heightening the frustration immigrants feel as a result of being denied jobs for which they are qualified, and being relegated to jobs for which they are overqualified – a tremendous waste of talent. In this regard it is important to seek ways to accelerate the entry of skilled immigrants into the job market.
- From another perspective, immigrants can establish important forward linkages with potential customers for exports to their home countries, as well as backward linkages to suppliers. The diversity that is associated with immigration and a multicultural society such as Toronto's offers an important opportunity for increased interaction in the global economy. Cities like Toronto are particularly well-positioned in this regard.
- Internal mobility is also particularly important within the Toronto region as the sheer size of the labour force means that sectors of labour shortage and surplus both likely exist simultaneously. Removing barriers to the internal mobility of labour is crucial to alleviating labour market imbalances, be they shortages or surpluses.
- To address the barriers faced by immigrant and migrant workers, the City can work with the federal and provincial governments to expand and better focus immigrant and migrant resettlement programs in Toronto, particularly in light of the increasing importance of immigration and migration to the future Toronto labour force. These initiatives need to include: a better distribution of resources for immigrant resettlement to Toronto; better information in embassies abroad about labour force needs on a regional basis; improving the assessment and recognition of prior learning for immigrants; providing support to immigrants while they pursue certification and accreditation in their professions; and language training, particularly in technical language skills. For migrants this could involve initiatives such as housing tax credits to address the high cost of housing in Toronto.

The diversity that is associated with immigration and a multicultural society such as Toronto's offers an important opportunity for increased interaction in the global economy.

Establishing an Integrated Labour Force Development System

- In developing a labour force readiness plan, the City of Toronto is limited in the extent to which it can influence the demand for labour. It may be able to do this indirectly through attracting investment to the City, or with their regional partners, to the region. On the supply side however, the City may have more of an influence through enhancing the quality of urban and city-region life, or through improving the education and training infrastructure and program delivery. The influence of the City in affecting supply issues will be particularly effective through developing partnerships with other regional municipalities, and the provincial and federal governments.
- However, this represents only part of a possible labour force plan for Toronto. One approach to supporting a broader spectrum of labour force readiness in the Toronto region could be through the establishment of an "Integrated Labour Force Development System". Recognizing the relationship between the labour force and the social and economic systems of the region, a series of programs and services could be brought together under one system. The components of such as system could include:
    - labour market information;
    - career and employment counselling and on-going support;
    - pre-employment services such as literacy, numeracy, life skills and language training;
    - skills training, upgrading and retraining;
    - recognition of prior learning; and
    - job placement and matching services.

Ultimately the elements of an integrated labour force readiness system will need to be discussed and debated with a broad range of interest groups, each of whom are involved in some way in labour force issues either as employers, trainers, regulators or as funding agencies. The City has an important role in coordinating this discussion.

2 INTRODUCTION AND STUDY CONTEXT

Introduction

The intent of this study is to assist the City of Toronto with an assessment of labour force needs in the City and the Toronto region over the next 10 years and to use this information as a basis for determining what kinds of interventions are possible to address gaps and take advantage of opportunities. In doing so, the study establishes that the demand for labour is expected to grow in the Toronto region over the next 10 years, and this growth will occur at a number of different skill levels from those obtained in university to those obtained 'on-the-job'. Recognizing this, this study recommends that a sound labour market policy must address all skill sets, and thus provides direction for the provision of appropriate policy support.

The impetus for this project is borne out of some of the key findings of the Toronto Competes report and the Toronto Economic Development Strategy. Toronto Competes emphasizes the importance of a well-educated and sophisticated labour force as one of the most critical success factors for competitive city regions in our rapidly evolving global economy. The Toronto Economic Development Strategy builds on the analysis contained in Toronto Competes by proposing a plan for assessing labour force supply and demand issues, analyzing training and skills development issues and undertaking initiatives to ensure labour force readiness.

While the importance of a well-educated workforce to regional economic success is well documented, the role of a university-educated workforce can sometimes be overstated. There is no doubt that improving the transition of university graduates to the workforce is an important part of a regional labour force plan, however to focus on this skill set to the neglect of skills obtained in other ways, is somewhat short-sighted and ignores the reality of the labour market. The reality is that all skills levels from university obtained skills, to those obtained 'on-the-job', are important components of a strong and diversified workforce, and thus a strong and diversified economy. All are needed within the regional economy to satisfy the demand for labour. In a regional economy as varied as that found in the Toronto region, all skill levels need to be supported by appropriate policy initiatives.

Definition of Terms

For the purposes of this study, the use of the term 'skill' for categorizing occupations is drawn from the National Occupational Classification (NOC) as used by Human Resources Development Canada (HRDC). This approach relates occupation to the basic skill required for the occupation. In turn, the basic skill is a function of education where education and training differentiate between different skills categories. Under the NOC system, skills are classified according to four types: Skill A requires university education; Skill B requires college or apprenticeship training; Skill C requires secondary school and/or job-specific training; and Skill D requires on-the-job training alone. Management is included in this system as a separate category because it reflects a specific set of skills that are not captured in the other skill categories. Therefore, when this report refers to 'skills levels', it is referring to the four skills categories A – D as described under the NOC. A copy of a HRDC matrix that relates individual occupations to skill level is provided in Appendix A.

Throughout this report the information is presented for different geographical areas: the City of Toronto (including the amalgamated former cities of North York, Scarborough, York, Toronto, Etobicoke, and the Borough of East York), the Toronto region (composed of The City of Toronto, and the Regions of Halton, Peel, York and Durham) and the Toronto Census Metropolitan Area (the Toronto region minus the Oshawa CMA and Burlington). The Toronto region and the Census Metropolitan Area both refer to different geographical representations, however, not all the data is available for just one of these geographies. For example, the Canadian Occupational Projections System (COPS) data has been organized to correspond to the Toronto region as defined here while the Labour Force Survey is organized for the Census Metropolitan Area.

Study Context

In many ways this study represents a fresh approach in Canada towards addressing labour force issues at the local and regional level.

The analysis presented in this report corresponds to many other studies on city competitiveness from around the world. For example, the World Bank, in its 1999/2000 World Development Report describes how local governments can develop training initiatives adapted to local economic conditions and comparative advantages as a key element to improving city competitiveness. In many ways this study represents a fresh approach in Canada towards addressing labour force issues at the local and regional level; an approach that mirrors successful developments in other parts of the world.

Part of the context of this study is the emergence of gaps in skilled labour for a number of industries as a result of structural changes taking place in the Toronto economy. Demographic trends, such as the aging of the workforce and early retirements, as well as changes in immigration and internal geographic mobility patterns, resulting from, for example, the drying up of the labour pool from other countries and regions as their economies expand, are expected to exacerbate these shortages.

In addition to an overall assessment of future labour force issues in Toronto, this project also explores labour force issues related specifically to the construction, hospitality and information technology sectors. These three sectors are representative of very different types of labour markets and labour market issues: Information Technology is heavily education based and has a unique work culture; in construction, union/employer partnerships are an important part of labour force training and deployment; hospitality has a requirement for a large number of relatively low paid workers and throughout North America is facing problems recruiting and retaining workers impairing improvements in productivity. The in-depth analyses of the three sectors have been prepared as companion studies and are not dealt with in detail in this report.

An important additional context for this study is provided by the changes that were adopted by the Federal government in 1996, which replaced the Unemployment Insurance Act of 1971 with the Employment Insurance Act of 1996. Some of the changes introduced in the new legislation included changing the way funding was allocated for training for individuals receiving Employment Insurance. Previously governments contracted directly with training institutions to purchase space for training of unemployed individuals. Under the new system training funds are provided directly to the individual, with the individual sharing decision-making responsibility for determining the nature of the training he or she intends to pursue. The intention behind these changes was, at least in part, to establish a mechanism for training to be more responsive to market dynamics.

The second major change was to transfer most of the responsibility for labour market issues and in particular, skills development and training issues, to the Provinces through "Labour Market Development Agreements". Amongst other things, these Agreements transfer responsibility to the Provinces for setting rules regarding individual eligibility for training – including funding, financing and other aspects of the EI Act (known as Part II of the Act).

The rationale behind these changes was that education, training and skills development are the constitutional responsibility of provincial governments and that labour force issues need to be integrated as part of the Provincial educational infrastructure. All Provinces have signed labour market Development Agreements except for the Province of Ontario. Thus in Ontario, both the Federal government and the Provincial government continue to be involved in labour market skills development and training issues.

It is unclear how this situation will evolve in the future. This study does not address this issue. Regardless of how it is resolved however, there will be implications for developing an implementation plan to address the issues of labour market readiness for Toronto raised in this report. Until an Agreement is signed between the Ontario and the Federal governments, all levels of government will need to be represented at the table to sort through how roles and responsibilities can be shared in a spirit of cooperation. The objective should be to prepare the most effective response towards ensuring that Toronto is well positioned to address labour market needs in the changing global context of increased competition for skills and knowledge.

This report outlines in broad terms where we are likely to be in the future and what some of the issues are, particularly with respect to skills development and training. It does not represent a strategy, rather it provides a basis for the development of a plan which, to be effective, can only be prepared through partnerships with the full participation of all stakeholders.

Study Scope

As stated, the key objective of this study is to prepare a high quality analysis of labour force demand over the next ten years in the City of Toronto and the Toronto region. In addition, the objective is to identify innovative and creative strategies to address changing labour market skills, as well as emerging employment, training and learning issues. Therefore in this study of labour skill in the Toronto region we:

- Provide a comprehensive forecast of the demand for labour skills in the Toronto region over the next 10 years;
- Identify, based on an extensive survey of employers, the key issues affecting the demand for labour in the Toronto region currently, and in the future;
- Through interviews with key informants from the Toronto education and training infrastructure identify gaps in the preparation of the Toronto labour force for employment;
- Create a series of recommendations to assist the City of Toronto in crafting policy to enhance the development of the regional labour market; and
- Create a research standard that can provide a foundation for future studies of labour readiness.

The process for conducting this study has included:

- Data analysis using the Canadian Occupational Projections Survey developed by Human Resources Canada and adapted to the Toronto region;
- An employers survey involving telephone interviews with more than 1000 firms in the Toronto region; and
- In depth interviews with key representatives of industry, labour, training providers and other experts.

Report Organization

This report is organized in the following manner:

- Section 3 describes the factors that influence labour skill demand and supply. While reference is made to the general context of the labour market, the focus of the chapter is the Toronto region. This sets the foundation for the analytical sections that follow.
- Drawing on Statistics Canada's Annual Labour Force Survey, Section 4 presents a snapshot of the current labour market in the Toronto region. The organizational structure of the regional labour market is discussed, with comparisons across industry categories.
- Section 5 presents the results of analysis into how demand for labour may change in the Toronto region, over the next decade. The forecasts presented in this section are drawn from Human Resources Development Canada's Canadian Occupational Projection System (COPS), and modified for the Toronto region.
- Section 6 summarizes the results of a survey of a sample of Toronto region employers. This survey addressed a variety of issues relating to occupation and skills demand currently, and in the future.
- Section 7, by way of concluding the report, pulls together the results of each of the analytical phases, and combined with a series of interviews with employers, skills providers, community groups and education institutions, presents a foundation for the development of a labour market plan for the region.

Accompanying this report are three in-depth sector specific reports and six technical reports that explore some of the study components in greater detail, or present more technical analysis of parts of the study. The additional reports are as follows:

- *Building a Strong Construction Sector in Toronto – A Labour Force Analysis: Toronto Labour Force Readiness Plan Report #2*, by Prism Economics and Analysis
  Assesses labour force issues in Toronto's construction sector.
- *IT Human Resources in the Toronto Region – Meeting the Challenges of Growth: Toronto Labour Force Readiness Plan Report #3*, by Prism Economics and Analysis
  Assesses future prospects for labour force development in Toronto's IT sector.
- *The Tourism and the Hospitality Sector in Toronto: Toronto Labour Force Readiness Plan Report #4*, by KPMG
  Analyses trends in the hospitality sector in Toronto.
- *A Labour Market Development Agreement for Ontario? Toronto*

Labour Force Readiness Plan Report #5, by Ursule Critoph
Outlines the issues for Toronto surrounding the lack of a labour market development agreement between the Federal Government and Ontario.

- *An Integrated Labour Force Development System for Toronto: Toronto Labour Force Readiness Plan Report #6*, by Ursule Critoph
Identifies the elements that might be incorporated as part of an integrated approach to labour force development in Toronto.
- *Labour Force Projections Methodology Technical Report: Toronto Labour Force Readiness Plan Report #7*, by GHK International (Canada)
Illustrates the methodology used to forecast labour market demand in the Toronto region over the next decade.
- *Employers Survey Technical Report: Toronto Labour Force Readiness Plan Report #8*, by GHK International (Canada)
Presents a detailed account of the methodology and results of the survey of a sample of Toronto region employers.
- *Summary of Stakeholder Interviews: Toronto Labour Force Readiness Plan Report #9*, by GHK International (Canada)
Summarizes the points raised by the interviews with industrial and employer representatives, labour organizations, community groups, educational institutions, major employers, and sector associations in the Toronto region.
- *Skills Development in the UK and Europe – An Overview: Toronto Labour Force Readiness Plan Report #10*, by GHK International (Canada)
Outlines some of the key labour force development and skills strategies and programs in the UK and Europe.

3 THE DRIVERS OF LABOUR SKILL DEMAND AND SUPPLY

As previously mentioned, the prospects for the future of employment outlined in this report are based on an analysis of government statistics and other secondary sources, statistical forecasting to 2010, a survey of some 1,000 employers and interviews with key stakeholders. However, as well as the 'data' there is a need to take a closer look at the what is driving labour skill demand and supply in the Toronto region, and to understand the factors that influence regional firms' ability to retain and create jobs and the types of labour they seek.

Labour Skills Demand

Globalization

Globalization and trade liberalization have been compelling forces on the demand side of the labour market, making the world literally a "smaller place." Such globalization is associated with the freer flows of goods, services, financial capital, inward and outward foreign direct investment, and physical capital associated with plant location decisions. Globalization is also associated with the freer flow of ideas – important in the role of cities. Implications for labour and skills development include:

- Increased premiums on higher-end skills associated with high value-added exports and international business and finance; and
- Increased pressure on lower-end skills being displaced by import competition from low-wage countries, furthering wage polarization.

With prices of many goods and services and capital being fixed or set on world markets, the competitiveness of nations, and cities within those nations, will increasingly depend upon their strategic use of human resources as a source of comparative advantage. This is especially true for high-wage countries like Canada that cannot hope to compete on the basis of labour costs with low-wage countries, and hence must move up the value-added chain, with productivity being key to sustaining high wages, and skills development being key to sustaining high productivity.

Cities like Toronto are well-positioned to take advantage of the changes associated with globalization and trade liberalization for a variety of reasons:

- Toronto is within 10 hours driving time of the large market associated with major American cities like New York, Boston, Washington, Baltimore, Philadelphia, Cleveland, Pittsburgh, Detroit and Chicago.
- Toronto has an ethnically diverse population that can facilitate trade and capital flows, including forward linkages with interna-

tional customers and backward linkages with international suppliers.

- Toronto has a public infrastructure that "works", as well as urban amenities that make it attractive to businesses especially in the knowledge economy, although there is some debate whether the City will be able to sustain this level of investment into the future.
- The City and surrounding region has an advanced education infrastructure that makes it attractive much like other areas such as Silicon Valley, Route 128 around Boston and the Raleigh-Durham-Chapel Hill triangle.
- Toronto's size makes it a natural location for head offices and a transportation and communication hub.

Industrial Restructuring

Industrial restructuring from manufacturing to services (both high-end business and financial services as well as low-end personal services) is another prominent force from the demand side of the market. Implications for labour and skills that flow from that restructuring include:

- A premium on the knowledge-based skills associated with business and finance services as well as the increasingly important knowledge component associated with the remaining manufacturing with the move towards the use of more and more technology in the production process.
- An emphasis on programs and policies to facilitate the adjustment of labour from declining sectors to expanding ones in order to deal with both the downside adjustment consequences of the declining sectors (layoffs, plant closings, unemployment) as well the upside adjustment consequences of the expanding sectors (shortages, skill bottlenecks, vacancies, long work hours). In that vein, there is increased emphasis on active adjustment programs and policies (training, labour market information, mobility) that can facilitate the relocation of labour from declining to expanding sectors, as opposed to passive income maintenance programs that can encourage labour to "stay-put".

Technological Change

Technological change especially associated with computers and the information economy has been a driving force affecting not only the Information Technology (IT) sector, but also almost every other sector. From a skills standpoint, this has a number of major implications.

- Computer literacy and the ability to interact with information technology are crucial. This is the case not only in IT but also in sectors like hospitality where information systems are becoming more prominent, and in construction with computer-assisted design and other processes.

- There is tremendous uncertainty surrounding technological change in the information economy. Managing change under uncertainty is the new mantra of employers and employees, who must be equipped to deal with the change and uncertainty. Elements that may facilitate dealing with such change include: broad-based generic skills that are generally usable in a variety of changing circumstances and that can be re-arranged in a 'Lego-type' modular fashion; basic skills that provide a foundation for learning and subsequent life-long re-learning (i.e., learning how to learn ... and re-learn); and preparation for working in non-standard employment in such forms as self-employment, fixed-term contracts and telecommuting.
- Skill obsolescence can be extremely rampant as virtual time replaces calendar time, again highlighting the importance of generic, broad-based skills.

From the standpoint of cities, opposing forces are at work. On the one hand, the Internet and advanced communications reduces the need for the face-to-face interaction that cities, in theory, facilitate. On the other hand, cities provide the urban amenities that appeal to knowledge workers, and they provide the necessary environment that fosters the synergies and knowledge spillovers that are so important in the information economy.

Reinventing government means that the increased importance of practices such as performance-based budgeting will lead to increased pressure for performance-based practices for employees.

Deregulation, Privatization and 'Reinventing Government'

Deregulation, privatization and "reinventing government" are another set of forces emanating from the demand side of the market that have important implications for labour and skills development. Essentially, as with the other demand side forces, they create pressures for flexibility and adaptability to adjust to market pressures. Deregulation and privatization means that competitors are more likely to enter the industry, with the competitive pressures they face being passed "backwards" to their employees. Reinventing government means that the increased importance of practices such as performance-based budgeting will lead to increased pressure for performance-based practices for employees.

Organizational Restructuring

Just-in-time delivery systems have also become more prominent in product markets and even in service markets. Related to this process, organizational restructuring has often occurred with firms keeping only a core of internal employees and relying more on joint ventures, alliances, subcontracting and outsourcing. This in turn has led to an increased demand for a just-in-time workforce in such forms of non-standard, contingent employment as part-time work, limited-term contracts, subcontracting, temporary help agencies and telecommuting. While these non-standard flexible forms of work arrangement have benefited employers, they have often resulted in

While the demographics of the aging population and the dominance of the two-earner family are generally thought of as supply side changes that are affecting labour markets, they are also having an effect on the demand side.

low-paying insecure jobs with no benefits for employees. The growth in demand for contingent employment can often be at the expense of the provision of a living wage for workers.

While the demographics of the aging population and the dominance of the two-earner family are generally thought of as supply side changes that are affecting labour markets, they are also having an effect on the demand side. An aging population with increasing life expectancy affects (and will increasingly affect) public expenditure in areas like health. The dominance of two-earner families (and the time crunch associated with balancing work and family) means an increased demand for amenities that were once produced in the household. These amenities are also demanded at a time that is convenient for use by two-earner families, for example evenings and weekends.

Clearly, there are a wide range of inter-related demand side forces emanating from the dramatic changes in product and service markets of organizations (private and public) that are affecting their derived demand for labour and skills. Understanding the sources of these changes is important to predict how these demand pressures may change in the future, and the appropriate policy response for dealing with the derived demands for labour and skills.

Skills Supply

The extent to which labour demand changes create labour market opportunities and/or problems depends in large part on the responses from the various dimensions of labour supply. An appropriate labour supply response is crucial since an inadequate response has implications beyond the labour market. Public policy in this regard needs to be flexible enough to take account of the dynamic nature of the labour market. A flexible public policy response will promote the development of a robust and adaptable labour force.

Manifestations and Implications of Labour Market Imbalances

Labour market imbalances have a variety of manifestations, which, in turn, have implications and repercussions beyond the labour market. Manifestations of labour market imbalances include labour and skill shortages that can have serious repercussions including:

- Delays in the completion of projects, with associated price increases and possible quality compromises;
- Bottlenecks that inhibit the employment of complementary employees;
- Possible health and safety concerns if less qualified employees are used;

- Inflationary wage increases in the areas of shortages that can have ripple effects on other settlements;
- Costly turnover;
- Negative effects on investment and the general job creation associated with that investment;
- Relocation of firms to labour markets with the required skills; and
- Difficulty in acquiring local upstream or downstream components of the production chain.

Labour surpluses in such forms as unemployment, underemployment, involuntary part-time work and the under-utilisation of skills and talent, also have serious ramifications including:

- Possible permanent scarring effects on young persons if their initial employment experience is negative;
- Negative health consequences;
- Increased criminal activity, especially among alienated youths;
- Increased social expenditure associated with the related issues of health, crime and reliance on social assistance and social services;
- Increased wage polarization to the extent that unemployment places downward pressure at the low-end of the occupational distribution at the same time as shortages are placing upward pressure at the higher end of the occupational distribution, with the associated social issues arising from such polarization;
- Downward pressure on wages, forcing individuals into multiple jobs; and
- Loss of skills due to relocation of skilled workers to areas of labour demand.

The labour market imbalances are most severe when shortages and surpluses both co-exist in the same labour market, highlighting the importance of active adjustment policies that can facilitate the reallocation of labour from areas of surplus to those of shortages, thereby alleviating both problems.

Various Dimensions of Labour Supply

The labour supply response to the rapidly changing demand pressures can come from various dimensions of labour supply. Understanding these different dimensions is important for various reasons:

- To predict future pressures on labour markets as these various dimensions of labour supply change in the future;
- To determine the ability of the supply responses to deal with the demand pressures;
- To determine the appropriate policy responses as they relate to these different dimensions of labour supply; and
- To determine the role of the different stakeholders including

employers and their associations, employees and their unions, education and training institutions and governments in their role as regulators and policy makers.

Conventionally, labour supply is thought of in terms of its people – their location and their hours of work as these relate to the external labour market.

The wide range of labour supply responses highlights the potential flexibility of labour markets to deal with the changing demand pressures. But it also highlights the importance of understanding the barriers that inhibit these supply responses, the policy levers that can influence these barriers and the supply responses themselves. Conventionally, labour supply is thought of in terms of its people – their location and their hours of work as these relate to the external labour market. This is important, but it is limiting, especially in a more information intensive economy.

Other dimensions of labour supply that are of growing importance include: the intensity of work; the quality of labour supply and human capital formation (including training issues); and the utilisation of workers through the human resource and workplace practices within the internal labour market of organizations (including work sharing, flexible work arrangements, multi tasking etc.). The latter especially is an ignored dimension of labour supply, but it is a crucial dimension because the internal practices of firms are an important source not only of demand changes, but also of supply responses that can be crucial in dealing with issues of labour shortage and surplus. In essence, the conventional focus on labour supply issues as they are dealt with in external labour markets, should be broadened to encompass labour supply issues as they are dealt with within the internal labour markets of firms.

With these caveats in mind, the various dimensions of labour supply that have the most important implications for understanding labour market imbalances (both shortages and surpluses) include:

- Population growth and demographics;
- Labour force participation, especially with respect to three main groups at different phases of the lifecycle (younger persons while in school and in making the school-to-work transition; women and especially women with children – a group that has dramatically increased their labour force participation; and retirement including flexible transitions into retirement);
- Hours of work of the existing labour force participants, including commute issues;
- Immigration (including temporary immigration permits) and issues relating to the brain drain;
- Internal migration and labour mobility including inter-provincial, intra-provincial, and across occupations;
- Intensity of work of existing personnel;
- Human capital dimensions pertaining to the quality of the work-

force (education, training, job search and labour market information); and

- Unemployment.

Each of these dimensions of labour supply will be examined in turn, with particular attention to how they contribute to the "problem" of labour market imbalances as well as the "solution" and especially with respect to solutions that are under direct or indirect policy influence.

Population Growth and Demographics

There are two dimensions of population that have important implications for labour market issues in the Toronto region. The first is population growth into the city and the region; the second is the aging workforce.

Population in cities and city-regions, especially major centres like Toronto, is expected to continue to grow.[1] This is so for a variety of reasons: urban amenities are attractive especially for the growing group of knowledge workers; cities provide a pool of talent for employers and a pool of jobs for job seekers; cities provide the networks that are important to new immigrant groups (although it is critical to make sure that these networks are well known); head offices are increasingly important in a global economy; and cities can provide the clusters of inter-related jobs and knowledge spillovers that are so important in the knowledge economy.

Working in the other direction, urban disamenities such as congestion and pollution can be a check on urban growth, as can high housing prices, highlighting the importance of public infrastructure. The bifurcation of "haves" and "have nots" associated with low-end personal services serving the high-end business services can create social exclusion problems. The prediction that we no longer need cities to inter-act as we can all interact in cyberspace through the Internet and save the commute time does not seem to have come to fruition. In essence, while there are checks on the population growth of cities, the things that have made cities attractive seem to continue to make them attractive – even more so in the global information economy.

Demographics and especially the aging population also shape the labour markets of cities.

Demographics and especially the aging population also shape the labour markets of cities. On the demand side, over the next several decades there will be a shift towards the demands associated with an older population with longer life expectancy – health care, condominiums and senior residences. On the supply side, labour shortages are expected to emerge from the greater proportion of the population in the retirement years as well as the tendency to retire earlier. These shortages will most likely be particularly acute since they are a result of shortages of experienced workers who can also be an important source of on-the-job training and mentoring for younger workers. They will be particularly severe for sectors like construction where the average age of many persons in some skilled trades is around 50 years. Similar issues are arising in higher education where the large

In terms of comparator cities, population growth in the Toronto region has exceeded many US metropolitan areas.

numbers of instructors who entered the field in response to the expansion of community colleges and universities in the 1970s are entering the conventional retirement years. Issues pertaining to age discrimination, mandatory retirement and phased retirement will become increasingly important, and the retired workforce increasingly will become a potentially important source of labour supply, just like the pool of female labour in the household was in much of the post-war period.

The City of Toronto and surrounding areas experienced substantial population growth between 1996 and 2001. The greatest rate of growth was outside the City in the surrounding regional municipalities. The City of Toronto saw a population growth of nearly 4% during this period compared to 16% for Peel, 23.1% for York, 10.5% for Durham and 10.4% for Halton.[2] In terms of comparator cities, population growth in the Toronto region has exceeded many US metropolitan areas. Although population growth in the City has been slower than in the Toronto region, its rate of growth has still been very high compared to most central city areas in the U.S.

As the demographic profile in the table below illustrates, the relative share of population in each age band differs only slightly across the region and by comparison with Canada as a whole. However, without in-migration and immigration by 2011 there would be a significant reduction in the size of the available labour force in the 24-65 age bracket. Currently this age group represents around 54% of the population, but by 2011 if based solely on natural increase it would constitute a significantly smaller percentage of the available labour force – at a time when forecasts suggest there could be a potential extra 400,000 to 600,000 jobs required in the Toronto region.

TABLE 1

Percentage Distribution of Population by Age in Canada and Selected Regional Municipalities 1998[3]

	Canada %	City of Toronto %	Peel Regional Municipality %	York Regional Municipality %	Halton Regional Municipality %
Under 15	19.7	19.2	22.2	21.4	20.5
15-24	13.5	12.2	14.0	14.1	12.5
25-44	32.3	35.5	35.4	32.8	32.1
45-64	22.2	21.3	21.1	23.1	23.5
65-74	7.0	7.6	4.6	5.3	6.9
75+ years	5.3	4.7	2.7	3.3	4.5

Source: The Federation of Canadian Municipalities Quality of Life Reporting System, Second Report: Quality of Life In Canadian Communities (March, 2001)

This phenomenon is not unique to the Toronto region, nor to Canada – it is a feature of many western industrialized countries. In the UK for example, the 'demographic time bomb' as it is called, is a high profile policy issue.

Labour Force Participation

Persons in schools, in households, and in retirement can be an important source of potential labour supply to fill shortages.

Once the population size and composition of a particular region is determined, the portion of that population that participates in the labour market is another important dimension of labour supply. There are three main groups at different phases of their life cycle for which that participation decision is an important dimension of labour supply: youths in their school-to-work transition; women in their household to labour market transition; and older workers in their work-to-retirement transitions. These transitions are important in both directions for dealing with shortages and surpluses. That is, persons in schools, in households, and in retirement can be an important source of potential labour supply to fill shortages. Working in the other direction, schools, household work and retirement can be important alternative activities in times of labour market surplus, although this is obviously subject to different degrees of 'voluntaryness' depending upon labour and economic market conditions.

Importantly, the ability of schools, household activities and retirement to serve as a "reservoir" to provide labour in times of shortage and to absorb labour in times of surplus, differs for different occupational groups. Appropriate programs must be available to ensure these groups have the necessary skills to enter the workforce at critical points in time. In construction, for example, it is generally not common to fill shortages through the use of part-time students, or women to be drawn in from household activities, or older persons drawn back from retirement (given the physically arduous nature of much of the work). While not common, such strategies (of bringing in those who have historically been excluded like women, persons with disabilities, youth, experienced workers, or visible minorities) could be used to great social and economic benefit. In IT where technological change is so rapid, part-time students could be the most important possible source to fill shortages.

The current labour market participation rate for the Toronto region is just over 68%[4]– this does leave some scope for expansion in the labour force over time, but it will be limited. Further, given the fact that Canada and many other countries will be experiencing a similar demographic issue at the same time, means that the Toronto region will have to compete that much more effectively in order to attract skilled immigrant workers over time to supplement the labour force or see the potential for jobs growth constrained.

The other big potential margin to address shortages will be retirements, given the aging workforce (i.e. postponed retirements, partial as opposed to full retirement, and return to work from retirement).

Hours of Work

For those who are participating in the labour market, their hours of work is an important dimension of labour supply. In times of shortage, hours can be extended through various ways including overtime and reallocations from part-time to full-time. In times of surplus the reverse can occur. As well, worksharing (reducing the workweek for all employees) can be an alternative to layoffs, as can jobsharing (where two persons share the same job).

Flexible worktime arrangements can also be an attractive job feature that can be used to recruit and retain employees in times of shortage. This can be the case for flextime (flexible start and end times around a common core time), compressed workweeks (e.g., 4 ten hour days), and homework (where employees are allowed to work at home for part of the week). Such arrangements can be particularly appealing in cities to minimise commute time and for lone-parent and two-earner families who are trying to balance work and family pressures.

Immigration

Immigration can be an important supplement to natural population increase as a component of labour supply.

Immigration can be an important supplement to natural population increase as a component of labour supply. Altering the amount of immigration in the short-run can be a viable policy to turn the "tap on" when there are shortages and the "tap off" when there are surpluses. While there are lags in the system that can complicate this procedure, the lags are generally not as great as those in the training system.[5] Furthermore, the skills based "point system" used in Canada can influence the specific skills content of immigration and this can be used to reduce shortages. Recent trends are towards a more general "human capital model" that emphasises more generic, broad-based education and skills so that immigrants are better prepared to do a wide range of ever changing tasks (as is more common in the new world of work) as opposed to having specific occupational skills that may be obsolete or difficult to judge in terms of qualifications and credentials.

Immigration can also be a potentially important source of labour supply since immigrants can establish important forward linkages with potential customers for exports to their home countries, as well as backward linkages to suppliers. Furthermore, the diversity that is associated with immigration – and which was once regarded as a challenge – is increasingly regarded as an opportunity for increased interaction in the global economy. Cities like Toronto are particularly well-positioned in that regard.

The Toronto CMA continues to attract the largest share of national immigration. In 1998, Toronto absorbed over 73,000 immigrants or 42% of the national total. These were immigrants who landed in Toronto initially, as over time more than 50% of new immigrants locate in the Toronto region. In fact, according to the 1996 census, 48% of Toronto's population were not born in Canada. While the data on place of birth from the 2001 census is not yet available, based on previous trends it is highly likely that the figure will show that more than 50% of Toronto's current population was born outside of Canada.

It is the CMA that absorbs the majority of all Ontario immigrants, domestic or international. Relative to its share of national immigration, Ontario's share of federal settlement resources is far lower than for other provinces.[6] Given that the Toronto CMA is the main recipient of immigrants, then by extension the Toronto CMA receives less assistance to help immigrants adjust to living in Canada.

While the potential labour force of Toronto is being enriched through immigration – its ability to deploy those resources effectively is constrained. The consequences are costly – economically and socially. Certainly, immigration statistics suggest that Toronto tends to receive a larger share of immigrants with higher levels of educational attainment than other Canadian CMAs and in absolute terms, those immigrants with less than 13 years of school accounted for about 45% of new immigrants in 1998. However, employment statistics suggest that the additional skills and resources immigrants bring to the labour market are not being well utilised. There is considerable evidence of labour market segmentation in Canada's largest metropolitan areas (see "Ethno-Racial Inequality in the City of Toronto: An Analysis of the 1996 Census", by Michael Ornstein, City of Toronto 2000, and "Local Geographies of Labour Market Segmentation: Montreal, Toronto and Vancouver, 1991" by Daniel Hiebert, Economic Geography, 1999). In particular:

- Immigrant and visible minority women receive fewer benefits from the labour market than their education reflects;
- Men and women of colour occupy a disproportionate share of lower skilled occupations; and
- Immigrant women of colour are frequently locked into the least paid and least secure occupations.

Statistics on labour market segmentation within the hospitality industry indicate[7]:

- Eighty percent of room attendants are women – 30% are black and 30% are from the Philippines;
- Eighty-two percent of room cleaners are visible minorities; and
- The majority of workers in the hospitality industry are migrants who are from outside Canada – for example 95% of room attendants are from outside Canada, 10% of whom have university degrees.

Internal Migration and Labour Mobility

While Canada is labelled a "nation of immigrants" and cities like Toronto epitomise that characterization, the fact remains that internal migration in other parts of Canada is a more important source of regional population growth than immigration.[8]

Internal migration (both inter- and intra-provincial) can be particularly important since it can deal with both issues of surplus and shortage as it generally involves a reallocation of labour from areas of labour surplus to ones of shortage – potentially alleviating both problems. That is, it can reduce bottlenecks at the same time as alleviating unemployment and underemployment.

Intensity of Work of Existing Personnel

While we tend to think of labour supply in its quantity dimensions – population, participation, immigration, migration and hours worked – there is also an intensity dimension that can be accessed especially to deal with shortages. The pace of work, for example, can be sped up if additional people cannot be hired, sometimes in lieu of hiring additional persons. In fact, when downsizing occurs through layoffs, the remaining employees often find that the work itself has not been downsized, and they are simply expected to pick up the slack with more intense work effort.

Labour supply is clearly not a uni-dimensional, static concept.

While this can be a viable mechanism for augmenting effective labour supply in the short-run (especially if there was some labour hoarding of redundant workers in slack times) this strategy can have longer run consequences that have to be considered. It can create work related stress especially for workers who have little control over their jobs. It can create family stress for the growing number of lone-parent and two-earner families who are trying to balance work and family pressures. It can lead to health and safety problems if the speed-up bypasses safe procedures. These issues can be particularly important in urban environments when they are added to other stresses associated with commuting and the pace of cities. In essence, the intensity of work effort is an important margin of labour supply adjustment for surpluses and especially shortages, but it is a margin that has other less desirable consequences.

Labour supply is clearly not a uni-dimensional, static concept. This highlights the vast potential for markets (both external and internal to the firm) to adjust to shortages and surpluses. It also highlights the various roles of all stakeholders – employers, employees and their unions, governments (especially in setting laws and policies), and education and training institutions.

Human Capital Dimensions

The Council of Ministers of Education Canada (CMEC) in a 1999 report on Education Indicators in Canada, noted that 48% of the working age population (25-64) had a post-secondary education by 1995, more than double the average for all industrialised countries. In addition, when examining the educational attainment of the labour force at each spatial scale (that is, at the CMA, Toronto region and City levels), the distribution of employees who have achieved a 'post-high school' qualification is similar. However, looking at the composition of that 'post high school' educational attainment, a more striking picture emerges.

Examining educational attainment of the labour force at each geographic level, the distribution of employees who have achieved a 'post-high school' qualification is similar with slightly higher levels of achievement in the Toronto CMA and City than provincially. According to the Labour Force Survey in 2001, 58% of the Toronto labour force have obtained a 'post-high school' qualification, compared with 55% of the CMA labour force and 54% of the Ontario labour force as a whole. In the City of Toronto, 33% of Toronto's labour force have obtained a University degree compared with only 28% in the Toronto region as a whole, and 23% when measured provincially. Alternatively, the proportion of the labour force who hold a post secondary diploma is lower in Toronto (25%), than in both the CMA as a whole (27%), and the province (31%).

The City's labour force also includes a slightly higher proportion of employees with only 0 to 8 years of education than the Toronto CMA and the Province. This indicates that the labour force in the Toronto CMA has both highly educated workers and workers with low educational levels, and that the skilled trades represent less of the labour force in the Toronto CMA than in the other two jurisdictions. Increasingly, grade 12 is the minimum entry-level requirement for jobs particularly for apprenticeship programs. This creates significant pressures on segments of the labour force who have not achieved this basic level of education and represents a challenge for policy makers and educators. The situation is particularly daunting for youth who have difficulty with finishing school and are entering the labour force for the first time.

Youth unemployment is nearly twice that of adults.

Youth unemployment is nearly twice that of adults. In August 2001 the unemployment rate for the CMA was 6.7%, but youth unemployment was higher at 11.4%, up from 10.5% a year ago (HRDC Highlights for August 2001: Toronto – Source: Labour Force Survey). There is concern that young people who leave school early and/or do not progress beyond Year 12 have difficulty in progressing within the labour market and are over-represented in lower skill jobs.

As Minister of Training, Colleges and Universities Dianne Cunningham noted in a 2001 speech to the Toronto Board of Trade, as the rate of retirement from the labour force increases over the next 10 years, young people will be asked to move up the career ladder faster than previous generations to fill the gaps that are being vacated. This means an even greater need for investment in career path development, innovative in-house development programmes, and employer investment in career development.

Unemployment

Unemployment rates are generally highest for workers with less formal education and tend to decline with greater qualifications and skill levels. During the last recession and post-NAFTA restructuring period of the early 1990's, the City experienced not only higher levels of unemployment relative to other regions, but more prolonged periods of unemployment than the surrounding region. In addition, the City tends historically to have higher unemployment rates than the rest of the Toronto region. There are further, spatial disparities within the City with the inner city faring better than the outer city.[9]

The income gap between Toronto and the rest of the Toronto region has been steadily widening.

The income gap between Toronto and the rest of the Toronto region has been steadily widening. Compared to the CMA average, Toronto incomes have been falling while incomes in the rest of the CMA have been increasing.[10] Average income differentials between the Toronto's central city and inner area on the one hand, and mature suburbs on the other, have increased significantly since 1980. This is because the central city and inner areas have improved their position relative to the CMA average, while the position of the mature suburbs has declined dramatically.

A recent Toronto Community Foundation report, Vital Signs: The Vitality of the Greater Toronto Area and a number of the interviews conducted for this study, identified housing supply and the cost of housing as being a significant constraint on the supply of labour to employers in the City. The issues raised included: a shortage in the supply of affordable housing in particular for key workers such as nurses; rents rising at a greater rate than tenants incomes; substantial and increasing waiting lists for subsidised housing; and increases in the number of evictions and the number of homeless families within the city.

Conclusions

Through an examination of the factors influencing both labour demand and supply, this section demonstrates the complexity of the labour market. A number of different factors serve to influence the demand for and the supply of labour in the regional context.

In terms of relating this to policy and serving as a means from which to guide policy development by City staff, a number of points can be made. With reference to the demand side, the City has little influence over the demand for labour, at least in a direct way. Changes in the macro economy, which become played out at the level of the region are more directly influenced by national and to some degree provincial policy. At best, the City can create opportunities for new investment that will indirectly affect the demand for labour, either in the City or in the region (in cooperation with the other regional municipalities).

The City's most direct influence will be on training and education infrastructure development policy.

Where the City has a more direct influence is in the supply of a qualified workforce, which then serve as an extremely important attraction factor for new investment and re-investment. Indirectly, the City can influence the supply of labour through enhancing the quality of urban and city region life. This is especially the case among knowledge intensive workers where quality of life issues figure highly on their decision to move to particular labour markets.[11] The City's most direct influence will be on training and education infrastructure development policy. In the case of both, it may not be possible to 'go-it-alone'. Instead, a more effective approach would be to develop partnerships across different levels of government, particularly with counterparts in other Toronto regional municipalities, to ensure appropriate labour force supply mechanisms are in place.

4 LABOUR DEMAND IN TORONTO

This section of the report presents a picture of the current labour market in Toronto, drawn from Statistics Canada's Annual Labour Force Survey. It presents the current organizational structure of the regional labour market, comparing numbers employed across a number of industry categories, with particular emphasis on services and manufacturing. As it stands, although more are employed in the services sector, manufacturing is still an important source of employment in the region as a whole, but particularly in the City of Toronto. This is an important situation in the context of addressing current skills needs and the potential skills needs in the future (discussed in the next section), and identifying appropriate policy mechanisms to address those needs.

Toronto: An Important Regional and National

Employment Centre

In 2001, the Toronto Census Metropolitan Area (CMA) provided employment for some 2.6 million people, with 1.3 million employed people living in the City alone (Table 2). In total, the Toronto CMA accounted for 43 percent of the Ontario labour force and 17 percent of the Canadian labour force. The distribution of employment among goods producing and services producing sectors is similar among all geographical levels, although the City of Toronto has a slightly higher share of services producing employment.

TABLE 2

Toronto CMA Employment, 2001

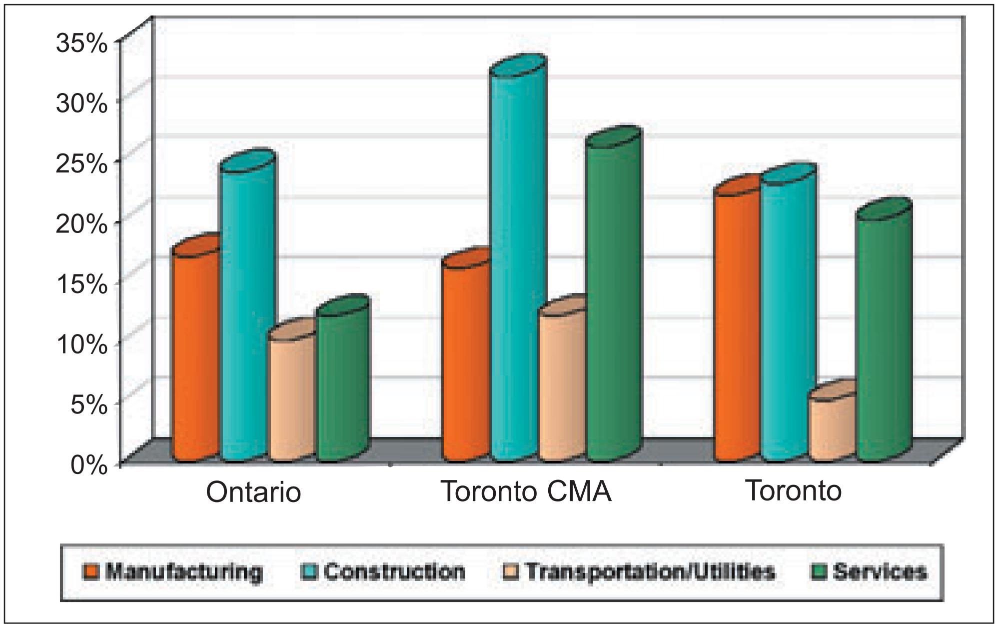
	Canada	Ontario	Toronto CMA	City of Toronto
% Goods Producing	25%	24%	23%	22%
% Service Producing	75%	76%	77%	78%
All Industries[12]	15,084,600	5,963,100	2,570,000	1,294,900

Source: Statistics Canada, Labour Force Survey, 2001

Significant job growth in the CMA

FIGURE 1

Change in Toronto CMA Employed Labour Force by Sector, 1996-2001

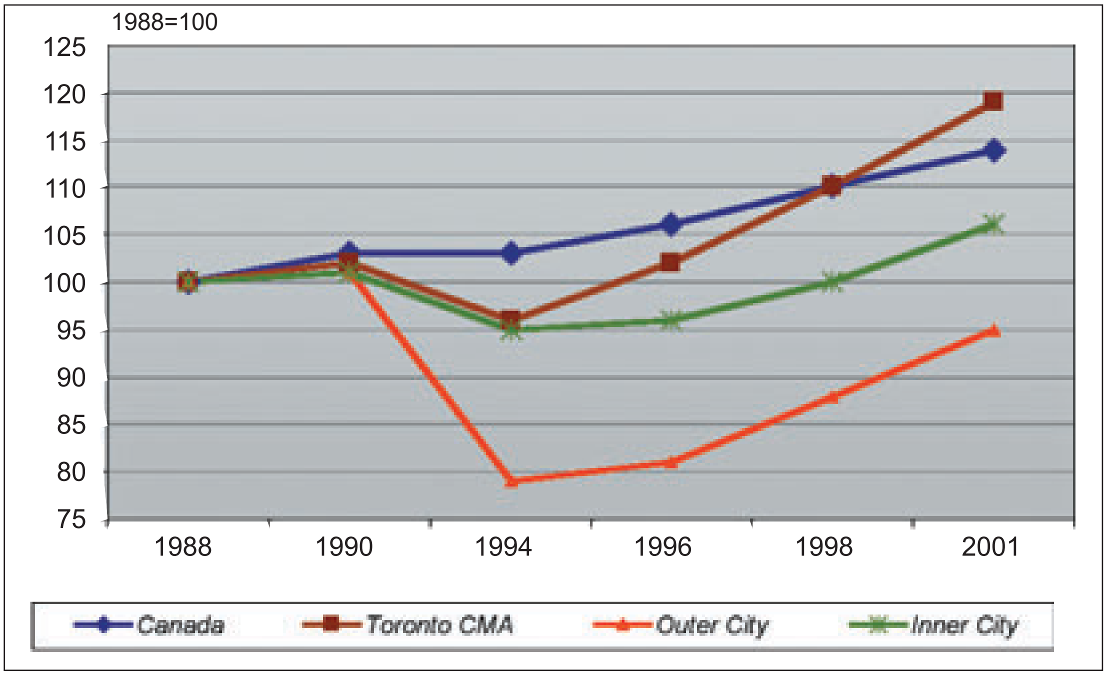


Source: Statistics Canada, Labour Force Survey, various Years

Between 1996 and 2001, the Toronto CMA saw an increase of 13% in employed labour force, representing an additional 311,000 employed persons. The strongest growth has occurred in construction employment and services (Figure 1). In both of these sectors, the growth rates for the period have been higher in the Toronto CMA than in the City of Toronto or the province as a whole.

FIGURE 2

Change in Employed Labour Force 1988-2000



Source: Statistics Canada, Labour Force Survey, various years

Not all areas in the CMA have benefited equally in recent employment growth. Any assessment of the employment and skills picture of the region needs to recognize that there are spatial disparities within the CMA and even within the City itself (Figure 2). The Labour Force Survey suggests that the Outer City of Toronto (York, Etobicoke, North York and Scarborough) was more susceptible to reductions in the labour force than the Inner City (former City of Toronto). In terms of employment, the recession of the early 1990's had a more profound effect on the Outer City than the Inner City. Between 1990 and 1994, the employed labour force in the Outer City declined more steeply (-22%) compared to the Inner City (-6%).

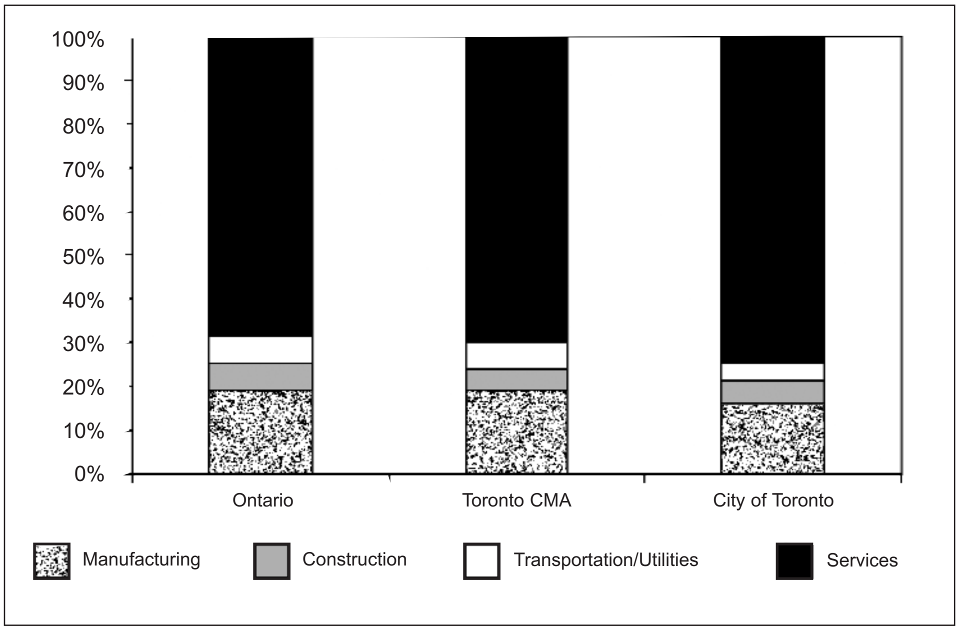
Structure and Recent Changes in Toronto's Employment

Recent Industrial Trends

Employment in services and the knowledge-producing industries is the core of Toronto's economy. For Canada, Ontario, the Toronto CMA, and the City, service industries constitute the largest share of employment (Figure 3). In

FIGURE 3

Share of Total Employment by Sector, 2001



Source: Statistics Canada, Labour Force Survey, 2001

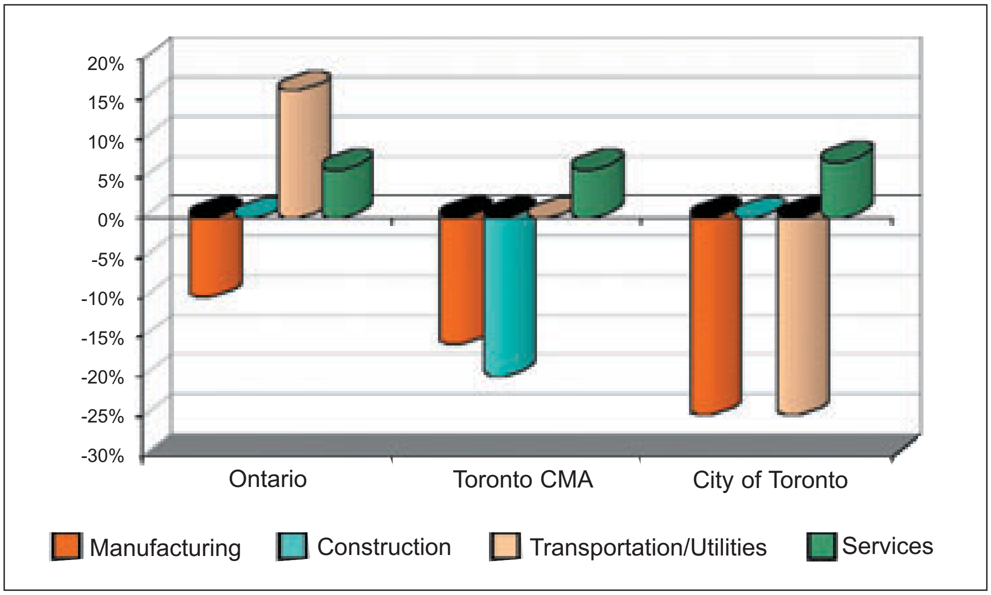
2001, services provided some 71 percent of employment opportunities at the provincial and CMA level and 74 percent within the City. Manufacturing, on the other hand had a higher share provincially and in the CMA (19%), compared to that in the City (16%).

Employment in services and the knowledge-producing industries is the core of Toronto's economy.

The share of service-based employment has increased since 1987 at all geographical levels (Figure 4). At all levels it appears there has been approximately a 6% increase in the share of service-based employment. In contrast the relative share of employment in manufacturing decreased, more dramatically in the City of Toronto in comparison to the province or the Toronto CMA. While industrial restructuring continues, "traditional" manufacturing remains a significant source of employment in the City.

FIGURE 4

Change in Share of Total Employment by Sector, 1987-2001



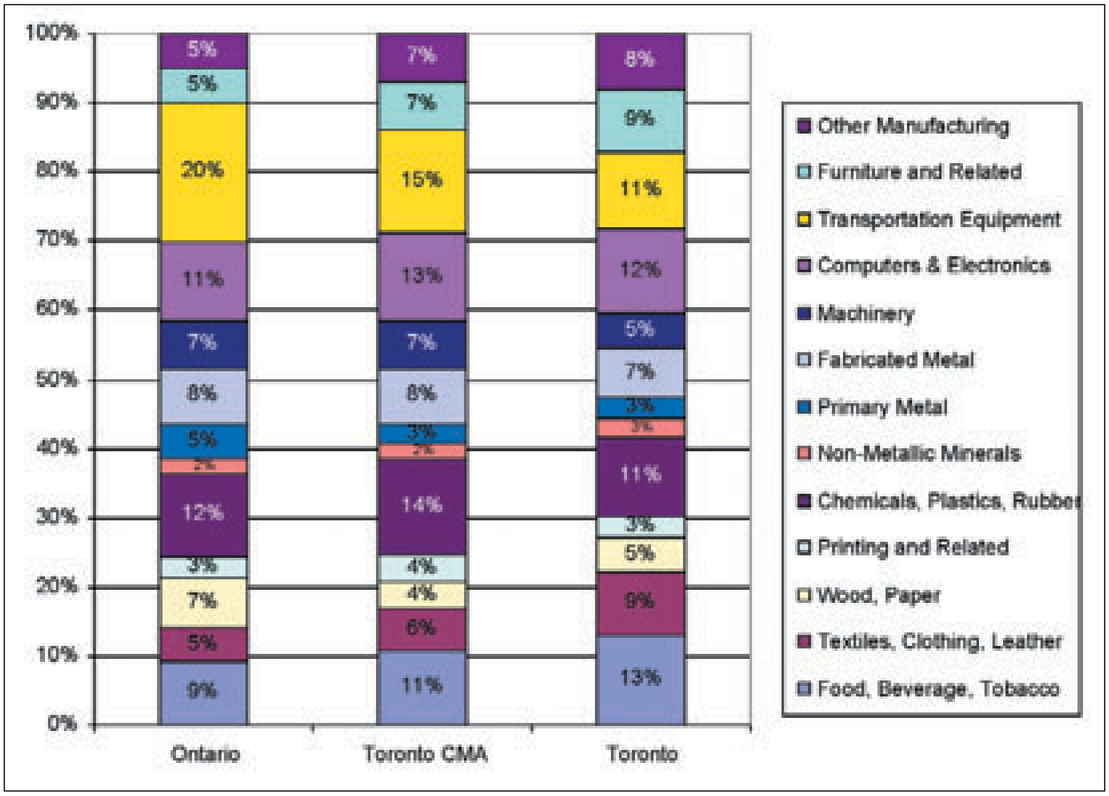
Source: Statistics Canada, Labour Force Survey, various years

In the City, the largest share of the employed labour force in manufacturing can be found in the food, beverage and tobacco industry.

Provincially, the transportation equipment industry is Ontario's largest manufacturing industry, employing 20 percent of the province's manufacturing employees (Figure 5). In the Toronto CMA as a whole, the largest share of manufacturing employment occurs in the chemical, plastics and rubber, and the computers and electronics industries. These proportions are larger than the share of these industries provincially. In the City, the largest share of the employed labour force in manufacturing can be found in the food, beverage and tobacco industry – at 13 percent a larger share than is the case at the province and the Toronto CMA. The next largest sub-sector is computer and electronics at 12 percent followed by chemicals, plastics and rubber, and transportation equipment, both at 11 percent. Textiles, clothing and leather, and furniture each hold 9 percent of manufacturing employment, this is higher than either the Toronto CMA or the provincial share for these sectors. The 'traditional' manufacturing sectors are still significant employers in the City, despite the decline in the importance of this sector over time.

FIGURE 5

Industry Share of Manufacturing Employment, 2001



Source: Statistics Canada, Labour Force Survey

In services, retail, business, health and finance insurance (FIRE) dominate, as can be seen in Figure 6.

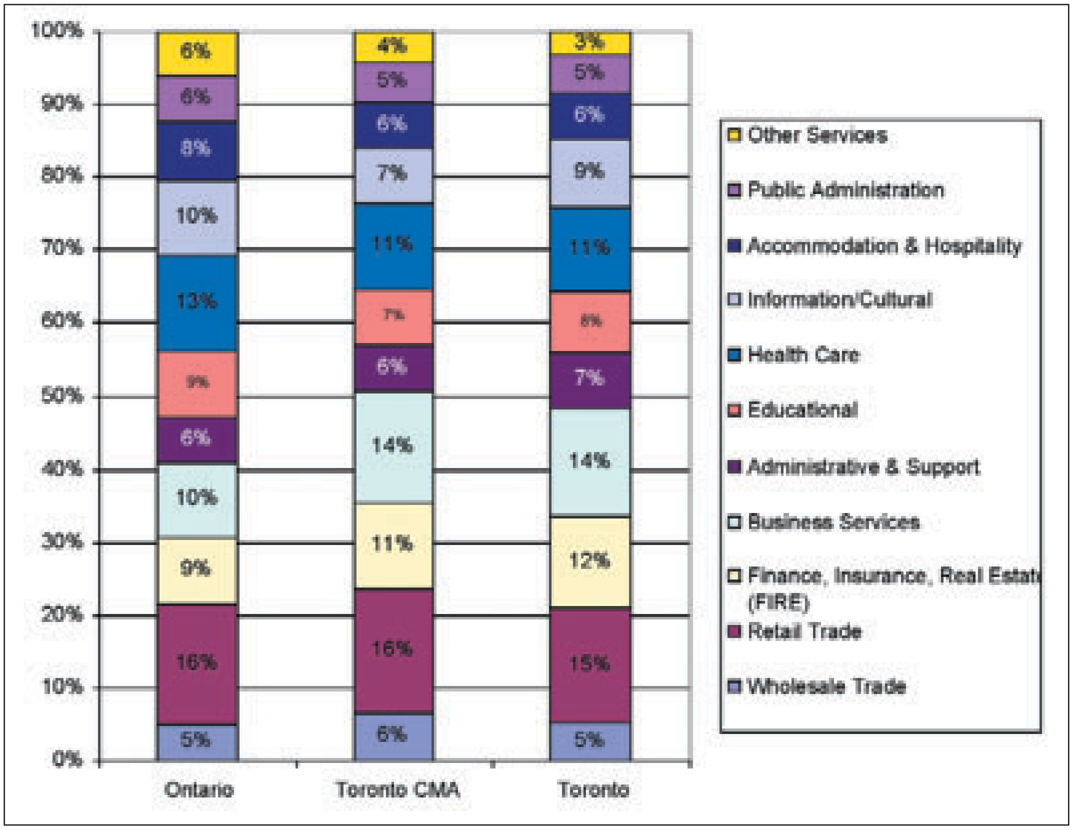
Retail trade is the largest employer of service sector workers at all geographical levels (Figure 6). Provincially, this is followed by employment in the health sector (13%) and business services (10%). Within the Toronto CMA as a whole, the next largest service sectors after retail are business services (14%), health (11%) and FIRE (11%). In the City, the largest service sectors are retail (15%), business services (14%), FIRE (12%) and health (11%). In addition, the proportion of the employed in information and cultural (9%), education (7%), and administrative and support (7%) industries is higher in the City of Toronto than that of the Toronto CMA.

Loss of Existing Workforce

It is estimated that Toronto will lose a major share of its existing workforce by 2010 as a result of the impact of the aging baby boom bulge. Just over a third of the current workforce is in the 45-64 age bracket, which suggests that replacing the existing workforce will be a critical issue over the next 10

FIGURE 6

Industry Share of Services Employment, 2001



Source: Statistics Canada, Labour Force Survey

years. A younger age profile of employees in the services sector means it may be slightly less affected. While the profile of employees in manufacturing differs little at the provincial, Toronto CMA and City levels, the services sector in the City has a higher share of labour force employment in the 25-44 age bracket – 55 percent compared to 51 percent at the provincial level and 52 percent in the Toronto CMA.

Skills Required by Industry

Services-based industries require a much higher skills base than manufacturing overall. In the Toronto CMA and the City, the proportion of employed labour force with a post-secondary qualification in manufacturing is between 50-55 percent. In contrast, the services sector has a much higher skills base amongst its employees with between 74-76 percent of employees in services in the Toronto CMA and the City having a post-secondary education. As the proportion of employment opportunities continues to shift towards services, this has implications for the education and training infrastructure to deliver the higher skills base.

The requirement for skills within manufacturing is mixed. In the City and in the Toronto CMA a higher proportion of employees in manufacturing have a university qualification – approximately 20 percent compared to 16 percent in the province as a whole – suggesting more value added activities taking place. However, alongside this picture the City has a higher share of employees in manufacturing with a high school or less education, 50% compared to 45% for the CMA and 43% for the province.

5 PROSPECTS FOR THE FUTURE – SKILLS FORECASTS TO 2010[13]

Building on the snapshot of Toronto's current labour force provided in the previous section, this section explores how employment is expected to change over the next few years. This section also addresses how employment skill needs may change over the period to 2010.

By 2010, it is forecast that Ontario's employment level will be 7 million workers.

The data in this section of the report are drawn from Human Resources Development Canada's (HRDC) Canadian Occupational Projection System (COPS). The projections begin with the Toronto region's share of Ontario employment in 1996 (COPS data are based on the 1996 census), and then assume that the region maintains its 1996 share of Ontario employment growth. This constant share approach is also carried through to forecasting changes in particular occupations and skills over next few years. The share of each occupation with a given industry sector is drawn from the COPS database, and held constant over the period of the forecast.[14] This is a conservative approach to projecting employment change, one that results in an absolute employment forecast that is towards the lower end of the scale when compared with others (for example the Conference Board of Canada and Strategic Projections Inc.). Studies of employment change in the Toronto region forecast absolute employment growth anywhere between 400,000 and 600,000 over the next 10 years. Due to the conservative methodology employed in this study, the forecast here is towards the lower end of this range. However, because one of the purposes of this study is to identify the change in skills needs in the Toronto region, it is appropriate to base these on conservative growth assumptions.

Continued Employment Growth Forecast

By 2010, it is forecast that Ontario's employment level will be 7 million workers (Table 3). Within the Toronto region, employment is forecast to grow to just over 3 million, a 13% increase over the 10 year period 2000-2010. Compared with the 13 percent increase in the four years between 1996 and 2000, this forecast is not overly optimistic and is deliberately cautious

TABLE 3

GTA Employment Projections, 1996-2010[15]

	1996	2000	2004	2008	2010
Ontario	5,190,800	5,874,100	6,283,900	6,648,200	6,819,100
GTA	2,331,700	2,643,300	2,828,200	2,993,200	3,054,400

Source: COPS Data, HRDC

Most forecasters agree that amongst other things, the rate of baby boomer exit from the labour force is expected to have a constraining effect on employment growth within the Toronto region.

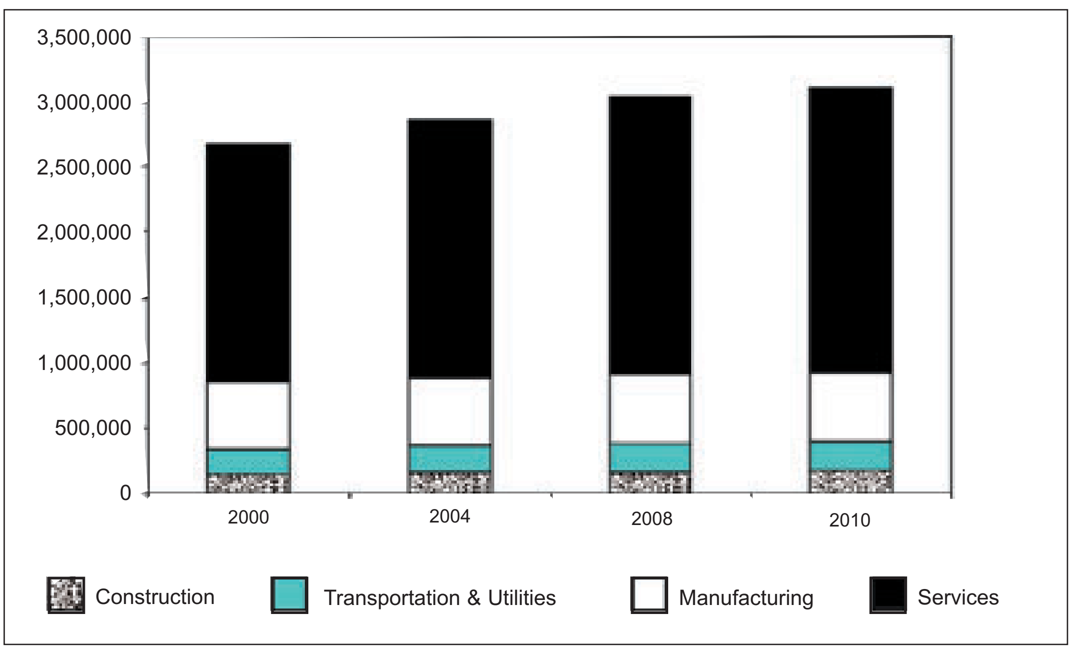
given the current economic conditions and the consequences of changing demographics.

While the Toronto region is expected to grow to 3 million employees in the next 8 years, the highest rate of growth is expected to occur between 2001 and 2008. The projected growth rate is expected to slow after 2008, which is partly indicative of the baby boom generation leaving the workforce at that time. Most forecasters agree that amongst other things, the rate of baby boomer exit from the labour force is expected to have a constraining effect on employment growth within the Toronto region.[16]

Employment is projected to grow and the proportion of workers in each major industry sector is expected to remain fairly stable, although the historical trend towards a greater share of employment in services is expected to continue. For example, employment in manufacturing is projected to grow in absolute terms (to approximately 536,000 by 2010) but its share of total employment is expected to decrease slightly to about 17.5% over the next few years from its current 2001 share of 19% of all employment.

FIGURE 7

Toronto Region Employment Change by Sector 2000 - 2010



Source: HRDC COPS data

Projected Growth in Some Manufacturing Sub-sectors

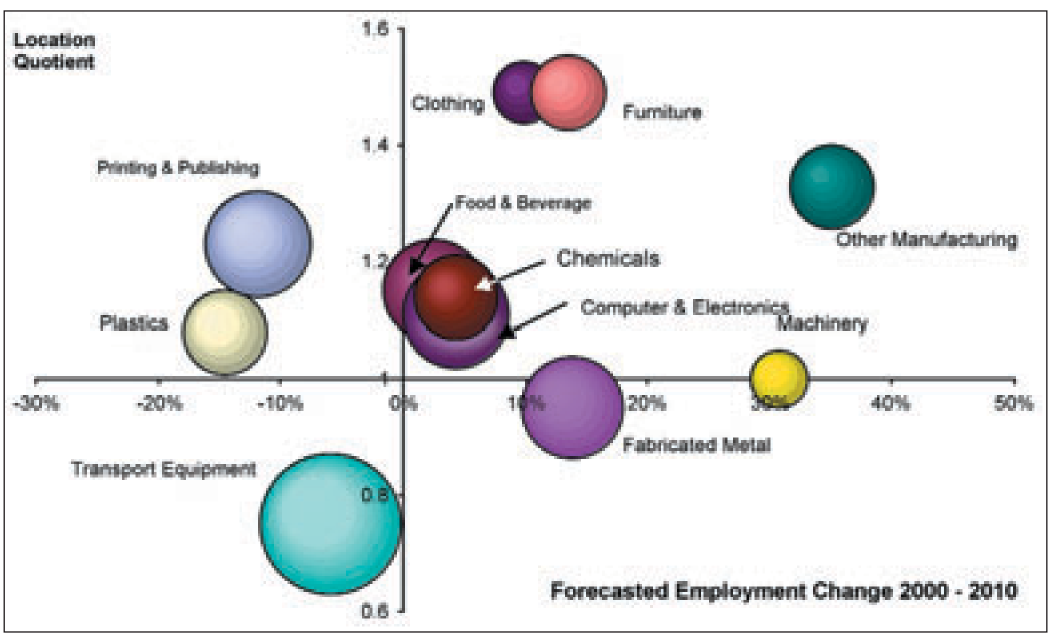
Overall, manufacturing sectors with a concentration in the Toronto region are forecast to grow. 'Other' manufacturing - a highly diverse group of manufacturing activities including scientific and professional equipment, jewellery and sporting goods - is expected to have the highest rate of growth. In contrast, the only sectors with a Toronto region concentration expected to fall in employment are printing and publishing, and plastics. Transportation Equipment is also expected to lose employment.

Figures 8a through 9b combine three significant pieces of information for each industrial grouping:

- The size of employment in a particular grouping (the size of the bubble);
- The rate of growth (or decline) in employment in that grouping between 2000 and 2010 (location on the X axis); and
- The relative concentration of that activity in a small area compared to a larger one (location on the Y axis). In this case the relative concentration of that activity in the Toronto region compared to the Province as a whole (8a and 9a) or the City of Toronto compared to the Toronto region (8b and 9b). This location on the Y axis is described as a Location Quotient and represents the ratio of

FIGURE 8A

Forecasted Manufacturing Employment Change, Toronto Region 2000 - 2010

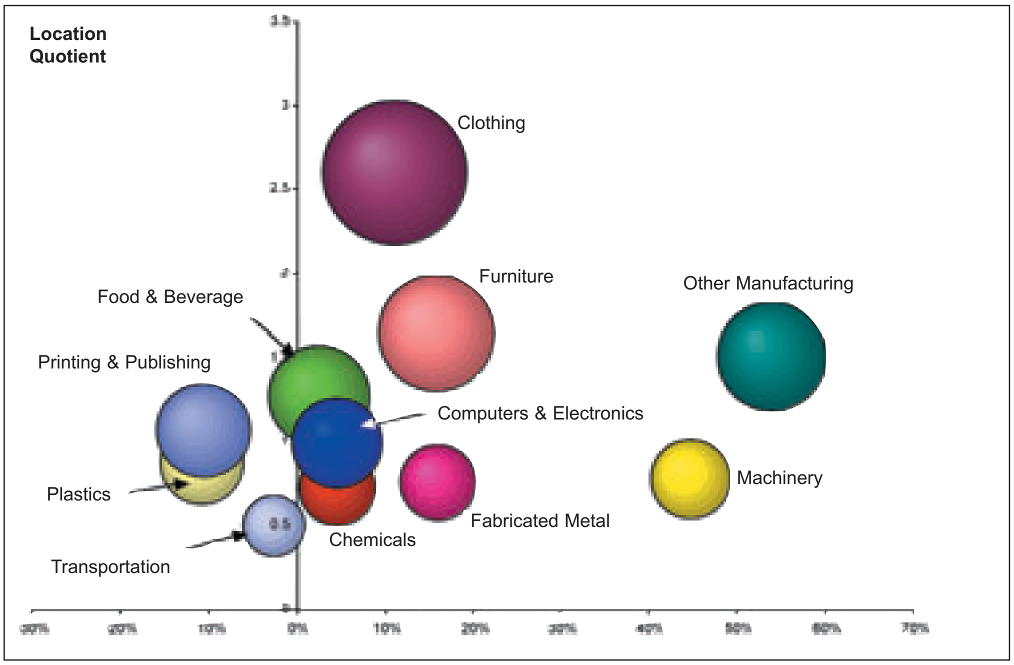


Source: HRDC COPS data

employment in a particular sector in either the Toronto region or the City of Toronto relative to the same ratio for the Province or the Toronto region respectively. Hence, any sector shown as greater than 1 is relatively more concentrated in either the Toronto region or the City of Toronto than in the province or the Toronto region.

FIGURE 8B

Forecasted Manufacturing Employment Change, City of Toronto 2000 - 2010



Source: HRDC COPS data

In terms of occupations however, trades, transport, equipment operators and occupations unique to processing and manufacturing are projected to have a slower rate of increase than other occupations across the Toronto region (Table 4). Overall, this collection of occupations currently constitutes the largest share of employment in manufacturing, 56 percent in total. Given the expectation that employment in manufacturing overall will grow, the lower rates of growth for these occupations in particular suggests that the occupation and skills mix within the sector may change with other occupations becoming a larger share of the manufacturing workforce than trades, transport, equipment operators and occupations unique to processing and manufacturing.

TABLE 4

Toronto Region Projected Employment Change by Occupation Group 2000 - 2010

Occupation	2000	2010	2000 – 2010 (Increase)	2000 – 2010 (% Change)
Business/Finance/Administration	664,000	785,500	121,500	16%
Natural & Applied Sciences	168,200	193,700	25,500	13%
Health	125,200	146,100	20,900	14%
Social Science/Government/Education	195,100	228,900	33,800	15%
Art/Culture/Recreation/Sport	96,700	111,500	14,800	13%
Sales & Service	746,400	881,800	135,400	15%
Trades/Transportation/Equip Operators	335,300	364,500	29,200	8%
Unique to Primary	25,700	32,500	6,800	21%
Unique to Processing/Manufacturing	258,800	271,000	12,200	5%
TOTAL	**2,615,400**	**3,015,500**	**400,100**	**13%**

Source: COPS Data, HRDC

Future Growth in Services Employment

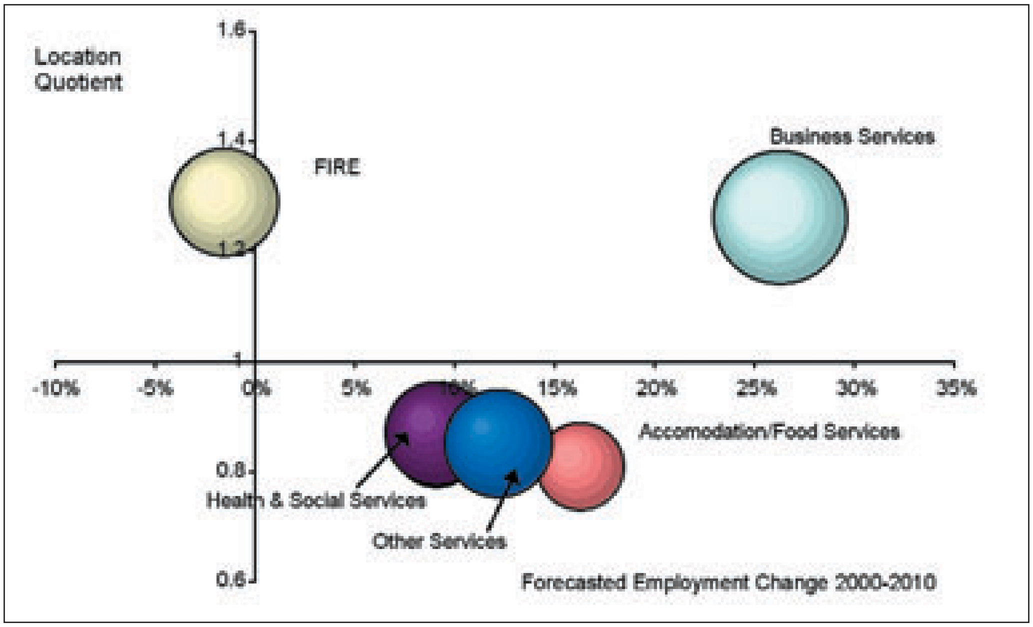
Relative to the province as a whole, business services and finance, insurance, real estate (FIRE) are concentrated in the Toronto region (Figure 9a). However, FIRE is expected to show a slight decline in employment overall whereas business services are expected to grow significantly, representing a continuing shift of large employers in the FIRE sector to offload many of their operations to consultants and specialized service providers who are no longer part of the FIRE group, but become part of the "business services" group. Health and social services, other services and accommodation and food services are not concentrated within the Toronto region relative to the province as a whole, but they are expected to grow over the next 10 years.

Growth Expected in 'Quality of Life' Occupations

Looking across all the occupation categories, a significant area of growth is expected to occur in those occupations associated with 'quality of life' factors: health, social science, education and government service occupations, and art, culture, recreation and sport (Figures 9a and 9b). 'Quality of life' is one of the most significant components in the retention of firms and for inward investment and while the Toronto region ranks relatively highly amongst world cities, continued government investment in health, education and leisure facilities is essential[17].

FIGURE 9A

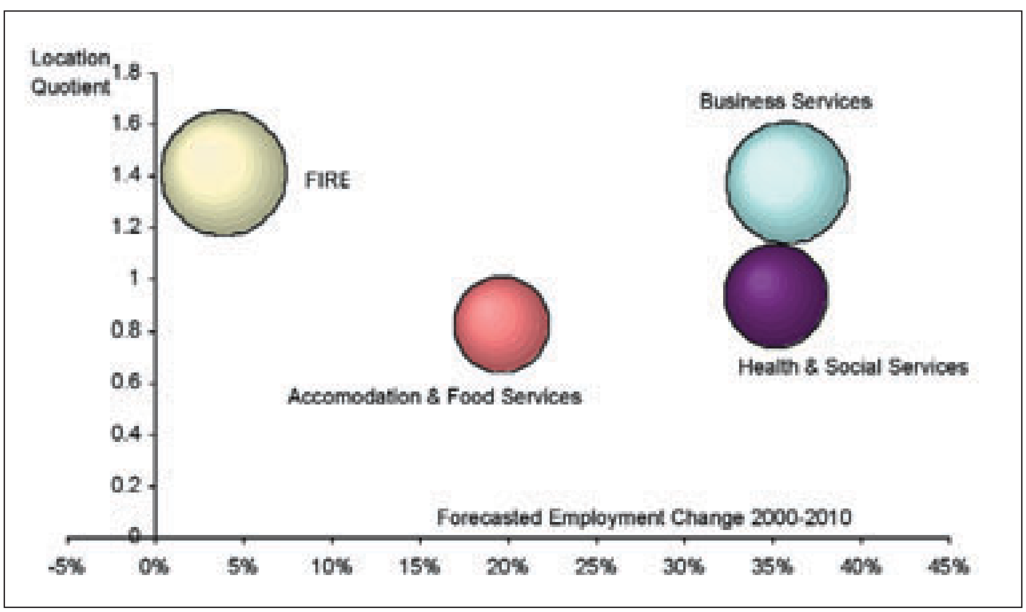
Forecasted Services Employment Change, Toronto Region 2000 - 2010



Source: COPS Data, HRDC

FIGURE 9B

Forecasted Services Employment Change, City of Toronto 2000 – 2010



Source: HRDC, COPS data

Higher Level Skills Increasingly in Demand

Demand across all skills groups is expected to grow over the next 10 years. However, it is expected that a higher percentage increase will be seen in occupations that require a university degree (Table 5). At the same time however, there have been large increases in tuition costs and decreases in money available for student loans over the past ten to fifteen years. This trend raises the question of whether some prospective students will find higher tuition a disincentive to attend a post secondary institution as well as the concern that with reduction to student loan and grant eligibility, some students may not be able to afford access to education.

TABLE 5

Toronto Region Employment Change by Skills Requirement, 2000 – 2010

Skills Requirement (NOC classification)[18]	2000	2010	2000 - 2010	% change 2000-2010
Management	265,800	303,600	37,800	12%
University Education	441,700	516,900	75,200	15%
College or Apprenticeship Training	670,400	771,800	101,400	13%
Secondary School and/or Job Related Training	936,600	1,075,900	139,300	13%
On the Job Training	300,900	347,500	46,600	13%

Source: COPS Data, HRDC

While demand across the highest skill requirement (occupations requiring university education) is expected to have the highest percentage increase, the largest absolute increase in demand will occur in occupations requiring community college or apprenticeship training, or a high school diploma. The largest absolute increase is expected to occur in Business, Finance, and Administration occupations that require a high school diploma (Table 6). This is followed by sales and service occupations requiring high school, and those requiring on-the-job training only, and Business, Finance, and Administration occupations that require a community college diploma or certificate. This highlights the importance of non-university acquired skills in the future growth of Toronto's labour market.

TABLE 6

Toronto Region Expected Skills Requirement Change by Occupation Group 2000 - 2010

Occupation	University	College / Apprenticeship	Secondary School / Job Related	On-the-job
Business/Finance/ Administration	14,300	32,500	63,000	-
Natural & Applied Sciences	16,100	7,600	-	-
Health	10,800	4,200	3,500	-
Social Science/ Government/Education	27,500	3,800	-	-
Art/Culture/ Recreation/Sport	6,500	7,600	-	-
Sales & Service	-	26,300	47,900	40,100
Trades/Transportation/ Equip Operators	-	15,400	16,000	1,600
Unique to Primary	-	2,900	2,000	1,900
Unique to Processing / Manufacturing	-	1,100	6,900	3,000
TOTAL	**75,200**	**101,400**	**139,300**	**46,600**

Source: COPS Data, HRDC

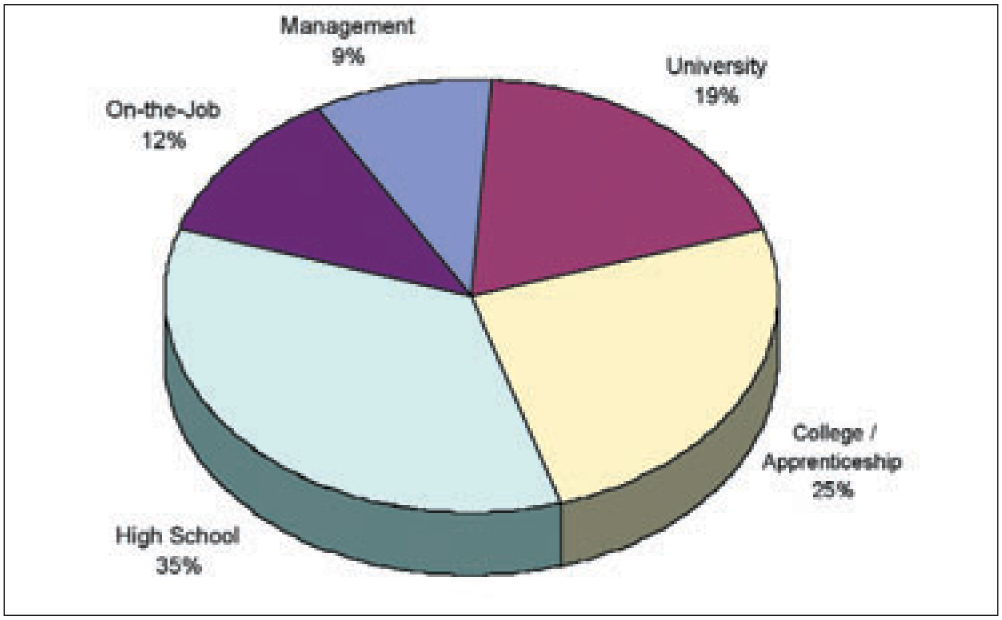
The importance of non-university acquired skills and training is also evident when the expected growth in Toronto's employment is broken out by skill (Figure 10).[19] Approximately 60% of the growth in employment is expected to occur in those occupations that require either a college diploma or apprenticeship certificate, or a high school diploma, with the largest percentage occurring in the latter. A further 19% of the growth is expected to occur in occupations requiring a university degree, followed by those requiring on-the-job training only. These data confirm that a strategy to address employment change must simultaneously address all four skill levels, as stated earlier.

Conclusions

This section presented the expectations for growth of the Toronto region workforce over the next 10 years, based on a model of employment change. Based on the model data, the outlook for employment growth in the Toronto region appears positive.

FIGURE 10

Toronto Region Distribution of Expected Employment Change 2000 - 2010, by Skill Level



Source: COPS Data, HRDC

Overall employment growth is expected in all sectors, including manufacturing, with the proportion of workers in each sector expected to remain stable. Within the manufacturing sector, the highest rate of employment growth is expected to be within the trades, transportation, and equipment operation occupations. Within services, the most significant growth is expected to be within business services occupations.

With respect to skills requirements, demand across all skills groups is expected to grow over the next 10 years. A larger percentage increase is expected in occupations that require a university degree. However, the largest absolute increase is expected to occur in occupations requiring community college or apprenticeship training or a high school diploma.

With this in mind, it is extremely important then that any strategy to enhance labour force development in the region is inclusive of all skills levels as all are expected to grow over the next decade.

6 EVIDENCE FROM EMPLOYERS SURVEY

The two previous sections of this report have presented a current picture of Toronto's employment, and forecasted how employment and skills demand may change by the end of the decade. These data were drawn from available secondary sources, or based on projections made from these secondary data sources. On the other hand, this section summarizes the key results of primary data, obtained through a survey of employers in the Toronto area. A more detailed description of the survey results can be found in the Employers Survey Technical Report, that accompanies this report. While the survey dealt with many aspects of employment demand and supply, the focus was on skills demand – the types of skills required by employers now and in the future, and the difficulties faced by employers in satisfying their skills needs.

The survey was administered by telephone to over 1,000 employers from within the Toronto region, between September and November of 2001 (the vast majority of employers were interviewed after September 11). Its key purpose was to:

- Support the Toronto labour force projections (discussed in the previous section);
- Inform the independent profiles of the Construction, Information Technology, and Hospitality sectors;
- Identify the current and future occupation and skills needs of the region's employers, their hiring strategies, and the difficulties they experienced in hiring and continuing to hire skilled employees; and
- Provide information for the development of labour force adjustment strategies.

Originally, the survey over-sampled three sectors - construction, hospitality and ICT industries, however, in order to provide a picture of employer views generally for this section of the report, the sample was re-weighted to bring the results in line with the industrial structure of the Toronto region. Consequently, in this summary of the analysis, the figures quoted here are taken from the 'weighted' sample.

Selected Characteristics of Survey Firms

Size

The majority of survey respondents were small firms - approximately 90% had 50 employees or less. However, in relation to share of total employment, larger firms are the most significant group of employers. Firms with more than 200 employees account for some 87% of total employment.

Ownership

The majority of respondent firms were Canadian owned single-site establishments (74%). Approximately 3% were the branch plants of foreign-owned multinationals, the majority of which have their headquarters in the US.

Sector

Less than 1 percent of respondents in the survey identified their main activity as primary industry; 9% were in manufacturing; 9% in construction; 3% in transportation/utilities; and 78% in services.

Age

Approximately 41% of firms stated they had no employees over the age of 50.

Approximately 6% of respondent firms indicated they had been located in the Toronto region for more than 50 years; 32% said 21 to 50 years; 29% said 11 to 20 years; 22% said 6 to 10 years and 11% said less than 5 years. The average was 23 years.

Workforce

Over half the firms in the survey have only full-time employees. On average, 72% of employees are full-time with the remaining employees either part-time, temporary or seasonal. In addition, 4% of firms reported employing some proportion of their workforce on a seasonal basis.

Approximately 41% of firms stated they had no employees over the age of 50. At the other extreme, 7% of respondents indicated that all their employees were over the age of 50. On average, the proportion of staff over 50 was 15%. Similarly, the survey explored what proportion of staff were under the age of 24. Some 68% of firms said that they had no employees under 24 years of age. Twenty-four percent said they had up to a quarter of employees under the age of 24 and only 8% said they had more than quarter of employees under the age of 24. On average, firms have 12% of employees under the age of 24.

Eight percent of respondents stated that their firm was unionized.

Employment Change – Past History, Future Prospects and Recruitment

- In general employment has grown in the past year with more employers indicating they had recruited staff than decreased their employment levels. This increase in recruitment was found among all skills categories. The greatest increase in recruitment occurred in the manufacturing sector, however this was concentrated among clerical, trades, and sales occupations.

- The prospects for future employment growth over the next year are, by and large, positive. Although the vast majority of employers expect the status quo to remain, of those that do anticipate change, most expect their workforce to increase. This anticipation of a positive change is greatest among employers in the construction and manufacturing sectors, with an anticipated high demand for skilled trades in these industries. For those employers who expect their workforce to increase, the impetus for the change is a strategic business planning initiative at the firm.
- Although newspapers and other print media remain the most popular method for recruitment, the methods used by employers appear to be changing. In particular, the Internet is emerging as a popular choice among employers for hiring employees.

Skills Gaps in the Existing Workforce

Investment in skills training is not a priority for the majority of Toronto region employers.

- Skills gaps are not limited to particular occupations; instead they cut across all occupations. The key types of skill that employers identified as lacking include: occupation specific skills; basic high school education; management skills; and second language skills. Interestingly, the main concern reported by Toronto employers with skills gaps in the current workforce tend to relate to specific vocational/occupational skills. This is different from other jurisdictions, for example the United Kingdom, where concerns with the lack of basic high school skills are a more important issue for employers. This suggests a degree of satisfaction with the education system on the part of Toronto employers, and that the solution for those firms with difficulties lies in more specific vocational skills provision, employer-led training and experiential learning.
- Investment in skills training is not a priority for the majority of Toronto region employers, contrary to the situation in other jurisdictions, e.g. the UK. Some 61% of surveyed employers had not invested in the skills development of their workforce in the last year. For the small number that do invest, training is seen as a key component of an effective business development strategy.

General Conclusions From The Employers Survey

The employers survey confirms that the future prospects for employment growth across all skills levels are generally positive in the Toronto region.

The employers survey confirms that the future prospects for employment growth across all skills levels are generally positive in the Toronto region. In helping to identify the current and future occupation and skills needs of the region's employers, their hiring strategies, and the difficulties they experienced in hiring and continuing to hire skilled employees, it is clear that for some firms there are labour supply and skills issues that are affecting their business and their existing workforce.

One of the things that did not emerge as an issue for the Toronto employers that were surveyed that have emerged in surveys in other jurisdictions (e.g. the UK) was the lack of employers' concerns with core skills (defined as basic high school skills). In Toronto, the concern appears to be more with specific vocational skills and experience i.e. employers are reporting that workers come to them having already been through the learning process and are competent to do the job. Nevertheless, conversations with other employers and labour market analysts suggest that upgrading core skills will need to be a critical part of labour force strategies in the future.

Because this is the first survey of its kind – in one sense it is a baseline – and as it is only a snapshot of only one period in time we don't really know if the figures here are the same, worse than or better than in the past. Longitudinal work on a key set of indicators for all businesses (for example, a bi-annual business survey) combined with a rolling programme of in-depth sector studies would be very valuable in determining whether the data acquired in this study are part of longer term trends.

7 THE FOUNDATIONS OF A LABOUR FORCE READINESS PLAN

Indirectly, the City can influence the supply of labour through enhancing the quality of urban and city-region life.

It is clear from the data obtained through labour force projections and the employers survey discussed in the previous sections of this report that the future is positive for the demand for labour to grow in the Toronto region. In addition, the data appear to bear out the view expressed at the beginning of the report that a comprehensive labour force readiness plan must address all skill levels rather than just focus on one. Although occupations requiring university obtained skills are anticipated to have the highest rate of growth over the next ten years, the largest absolute increase is expected in occupations that require community college, apprenticeship, or high school training. In short, all skill levels are expected to grow, therefore a labour force readiness plan must be multi-faceted to address the development of each skill level.

In developing a labour force readiness plan, the City of Toronto is limited in the extent to which it can influence the demand for labour. As suggested earlier in this report, it may be able to do this indirectly through attracting investment to the City, or with their regional partners, to the region. On the supply side however, the City may have more of an influence. Indirectly, the City can influence the supply of labour through enhancing the quality of urban and city-region life. Directly, the City can enhance the supply of labour through education and training and in delivering programs to address the settlement of immigrant and migrant workers, however the responsibility for funding these programs will need to be provided by the federal government since immigration policy is clearly a federal responsibility. The influence of the City in affecting supply issues will be particularly effective through developing partnerships with other regional municipalities, and the provincial and federal governments.

This section explores the role that education, training and immigration can play in ensuring all skill levels are addressed.

The Role of Education and Training

In general, there is wide recognition that education and training are key to facilitate the flexibility and adaptability that is increasingly required in the new knowledge economy with its ever changing job requirements. An educated and trained workforce is key to the knowledge spillovers of clusters especially in urban areas and sectors like IT, and it is key to sustaining a high wage, high value added workforce. The Toronto region has an advantage in this realm given the institutions of higher education that are in the area, as well as in the surrounding regions. But as mentioned throughout this study, higher education cannot be the sole focus of a labour force devel-

"Education is now the main barometer of competitiveness among countries – more than capital, and more than technology."

opment plan. With increasing demands and higher skill requirements placed on workers at all skill levels in the new knowledge economy, labour force development needs to address the importance of upgrading and adapting skills and training at all levels.

There are conditions that are necessary to facilitate the connection between education and training and the world of work. For high schools, guidance counsellors are critical in facilitating the school-to-work transition and in identifying careers and changing opportunities. For vocational schools and community colleges, interaction with employers is crucial to ensure that the curriculum is relevant, and that these institutions are training for areas of demand. For universities, similar issues prevail. Co-op programs have been increasingly popular to bridge the school-to-work transition. For universities there is an added issue of linking research to practical applications. It is no coincidence, for example, that the dynamic development of Silicon Valley in California, Route 128 around Boston, and the Raleigh-Durham Chapel Hill Research Triangle are all in areas of world-renowned universities that interact with the surrounding community.

The Significance of Investing in Skills

'Education is now the main barometer of competitiveness among countries – more than capital, and more than technology. More than ever, learning is intimately linked with the wealth and well being of nations. Our environment is making new demands on all of us, especially in the way we think about education. It has become a linchpin in planning for Canada's future.' (Jean Monty, President and C.E.O., BCE, May 2000)

'Technology is revolutionising the workplace, making work more complex, and demanding higher levels of skills. The change will accelerate to the point where it is expected that half of the jobs people will have in 15 years time will require skills to operate technology that is not yet invented. This is a significant challenge. Especially when you realize that more than half of the people that will make up Ontario's workforce in 2015 are already working. That means these employees have completed what we traditionally consider their education. These challenges mean that we have to rethink how and where education and training is delivered. We will have to ensure that our employees can keep pace with changing workforce needs while they juggle the demands of career and family.' (Dianne Cunningham, Minister TCU, 2001).

Supporting the Post Secondary Education and Training Infrastructure

Effectively tackling the issue of widening participation in higher education is a critical issue for the future of the Toronto labour market. As indicated in the employment forecasts for the Toronto region, there will be increasing demand for higher-level skills. In order to meet that demand there is a need to extend the opportunities and the take-up of higher education amongst non-traditional students.

Non-traditional Entrants to Higher Education – Ryerson University

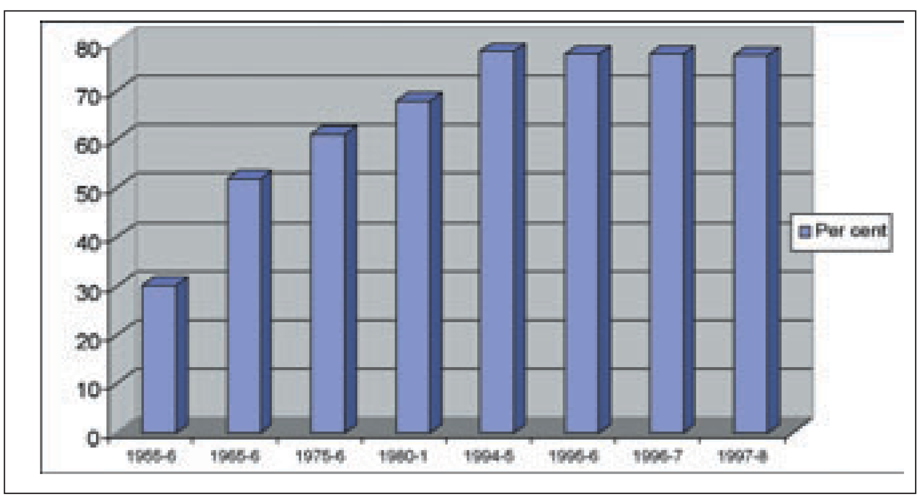
Continuing Education provision at Ryerson has increased by 13% over the past year. The university has developed an approach which provides non-traditional entrants with a structure to work towards degrees. The programme starts with short taster courses leading to an Introductory Certificate, then onto an Intermediate Level Certificate and finally degree level qualification. The aim is to reward students as they progress and to reinforce positive achievement.

Source: Interview with Ryerson University

This is particularly important as the proportion of students graduating from secondary education has increased little in the last 5 years across Ontario (Figure 11).

FIGURE 11

Secondary School Graduation Rates 1955-56 to 1997-98



Source: Ontario Ministry of Training, Colleges and Universities

Today, more than ever before, without Grade 12, potential labour force participants are beginning their work careers with a tremendous handicap.

This issue gains added significance given the fact that many training programs in Ontario, for example the apprenticeship program, now require Grade 12 as a minimum education level for entry. Today, more than ever before, without Grade 12, potential labour force participants are beginning their work careers with a tremendous handicap. At a minimum, an objective of the labour force strategy should be to ensure that all labour force participants have at least Grade 12 education.

A further rise of 25% in enrolments in post-Grade 12 education is expected over next decade – a result of a combination of demographics, the double cohort and demand for qualifications in the job market.[20] The effect of the 'double cohort' on student enrolments has been the subject of considerable debate, with differing views emerging on the scale of its impact.[21] Some expect an increase in demand, which will be difficult for the existing infrastructure to cope with, despite forward investment such as the provincial government's "SuperBuild" programme. Others expect that the impact of the double cohort will be 'smoothed out' over the next four to five years, given the practice of finishing a year late combined with students' plans to graduate early or late to avoid congestion, or their plans to relocate to other provinces or the US. Irrespective of the scale of the impact of the double cohort, it is clear that numerical demand will continue to increase through a combination of double cohort and general demographic effects, and the continuing trend towards participation in post-school education.

To support the development of higher-level education, the Toronto region has a large, sophisticated education and training infrastructure with real centres of excellence. Currently the Toronto region has 6 publicly funded colleges and 4 universities, providing learning opportunities for students from within the Toronto region and beyond.

The two tables below set out the latest key performance indicators for the Toronto region's post-secondary institutions. The colleges for the most part are close to or perform above the average for the province on the key performance indicators.

TABLE 7A

Key Performance Indicator Results for Community Colleges within the Toronto Region (%)

	Graduation rates %	Employment rates %	Employer satisfaction %	Graduate satisfaction %	Student satisfaction %	Loan default rates (2000) %	Loan default rates (1999) %
Centennial	Not known	87.8	90.2	79.2	76.6	19.7	25.6
Durham	Not known	94.1	90.8	82.7	79.9	19.0	20.8
George Brown	61.3	89.6	89.3	79.9	64.8	17.4	21.4
Humber	Not known	92.2	91.0	85.5	74.4	14.6	19.2
Seneca	Not known	88.5	92.4	79.3	78.2	13.5	18.4
Sheridan	67.0	92.6	92.0	81.1	72.0	15.7	15.9
Ontario average	Not known	91.0	90.9	82.6	74.9	17.2	20.1

Source: Ontario Ministry of Training, Colleges and Universities

NOTE: Satisfaction figures: April 2001, for 2000 Graduates (% 'satisfied' or 'very satisfied'). Graduation rates: 2000-01. Employment rates: 2000 Graduates after six months

TABLE 7B

Key Performance Indicators for Universities within the Toronto Region

	Graduation rates	Employment rates (6 months)	Employment rates (2 years)	Loan default rates (2000)	Loan default rates (1999)
University of Toronto	78.4%	93.8%	96.1%	5.1%	6.9%
York University	69.4%	93.8%	95.4%	10.8%	11.1%
Ryerson Polytechnic University	61.0%	93.0%	97.9%	5.8%	8.6%
Ontario College of Art & Design	Not known	87%	90%	15.2%	14.7%
Ontario average	73.2%	93.1%	96.4%	7.1%	8.4%

Source: Council of Ontario Universities and Ministry of Training, Colleges and Universities

NOTE: 2001 survey results are based on a survey directed at 1998 Graduates; University of Toronto and Ryerson Polytechnic University employment rates are for 2000 (i.e. a survey of 1997 graduates)

For Toronto universities, the University of Toronto consistently performs above the average for the province. The Ontario College of Art and Design (OCAD)[22] performs less well. The somewhat lower employment rates of OCAD may be associated with the nature of the degree subjects offered and their associated labour markets. Consequently OCAD loan default rates are higher than seen elsewhere in the Toronto region and in the province. These results may say more about the limitations of the indicators as performance measures for the institution than about the quality of offer itself. Similarly, while Ryerson performs well on most indicators it has a lower graduation rate – this may be due to taking in a larger proportion of non-traditional students.

This, or very similar information, was on all the university websites with regards to graduation rates: MTCU has calculated graduation rates using a single entering cohort of students and determining whether or not they graduated within 7 years. The methodology involves the selection of all 1991-92 full-time, first-year, first-time undergraduate students in both direct-entry and second-entry programs. The subset is then matched against the records for students who received a degree (in any program) from the same institution during the period 1992 to 1998. Graduation rates are generally understated since students who transfer to other universities are categorized as "not graduating".

In addition to the pressure of the double cohort, there are two other threats to the existing post secondary system's capacity:

- Recruiting lecturing staff – key issues are the imminent retirement of many experienced staff and the lack of suitable replacement candidates. While at least some institutions consider that they will be able to 'muddle on' in volume terms, all had qualitative concerns in terms of the impact on the 'quality of tuition', raised student/staff ratios, etc.; and
- The cost of being a student – recent increases in tuition fees were felt to be having some effect on the nature of students attending college, notably non-Toronto residents who had to face city accommodation costs. While many felt the recent increases were having an effect, this effect has not been quantified and may be worthy of further research.

A number of solutions have been devised to address the issue of sufficient lecturing staff, although none were felt to have offered a complete solution. Only one university admitted to setting their sights lower in terms of the qualifications of potential staff, although they are unlikely to be the only one so doing. Approaches include:

- Salary increases/'market adjustments' – although this approach had proven not to work in at least one case;
- Recruiting 'non-traditional' staff – such as non-PhD staff (who can

work towards PhDs, or from areas such as new media where there may be no PhD's available), and 'down-shifters' from the private sector;

- Sessional/part-time instructors;
- Expanding consultancy activities – to enhance individuals' revenue opportunities;
- Improving retention – for example through mentoring of new staff, and encouraging retirees to continue on a part-time basis;
- Examining spousal housing arrangements;
- Elimination of mandatory retirement or raising the mandatory retirement age for faculty; and
- Diluting the 'hire Canadians first' approach.

The role of the City in creating an environment where a high quality of life flourishes cannot be overstated.

In the views of many, an integrated approach is required, which includes 'hard selling' Toronto as a place to live and work, with a high quality of life, and excellent opportunities. Once again, the role of the City in creating an environment where a high quality of life flourishes cannot be overstated.

The growth in student demand for training varies between different subject areas and modes of study. The most commonly identified subject growth areas include:

- Information Technology – the most frequently identified, with demand often outstripping supply. For example, Ryerson University reported having 3,000 applicants for a 300 place IT Management course.
- Media – as befits Toronto's status as a 'media city', with a range of new provision in the ICT/new media field. Film and television remain extremely popular, with Humber College receiving 1,600 applications for a 60 place TV course.
- Health and Nursing – driven by changes in government spending priorities and new qualification requirements. Current high demand for nurses is translating into student demand.

Change in demand by mode of learning has also been identified, with considerable interest in alternative forms of provision, modular provision and e-learning. However, the drivers of this change in demand are not clear – is it faculty or students? – with the wider view that students make their choice of study by subject rather than mode of delivery.

Some students are more interested in particular learning modes than others. For example those planning to work in an IT environment can benefit from studying in a way that reflects their future work environment. Elsewhere part-time or employed students may find modular and distance learning approaches attractive. However, some colleges reported finding younger students less interested in distance/e-learning, for whom leaving home and the social aspects of college life are an important part of the college experience.

The Apprenticeship System

Another key component of the education and training infrastructure involves the training of apprentices in the development of trade-related occupations, for example, construction trades, mechanics etc. Apprenticeships fulfil a very important function in developing the skills base of the Toronto region.

Currently, apprenticeship training is provided through the Ontario Apprenticeship program administered through the provincial Ministry of Training, Colleges, and Universities. This program is open to anyone in Ontario who has a high-school education. A variation, targeted towards younger (at least 16 years old) high school students is the Ontario Youth Apprenticeship Program (OYAP).

The process of training an apprentice works in the following manner:

Although apprenticeship training has been growing over the last number of years, it is still not a career of choice for young people.

- Potential apprentices first approach an employer. Then, the apprentice will either train with the employer, or the employer will provide the training in collaboration with MTCU.
- The training, whether it is provided by the employer alone or in cooperation with MTCU, comprises two principal elements:
  - Workplace – experiential learning and theory
  - Community Colleges and Trade Associations–theoretical training (carpenters are an example of a trade association that provides its own training outside of the community college system).
- Wage subsidies are provided through the youth-focussed Job Connect program.

Although apprenticeship training has been growing over the last number of years, it is still not a career of choice for young people.[23] There is also a difficulty in identifying potential employers to take on new apprentices. It is important then to work with industry to recruit employers who will act as apprentice trainers, especially as the employers provide the resources for training, with assistance from MTCU. In addition, it is important that young people become aware of the skilled trades as early as possible. The school system is beginning to recognize this, however, the issue of funding the training is complex. Greater discussion needs to take place with the school boards to explore partnership arrangements for skills training.

While these are concerns associated with the apprenticeship system, they are being addressed at the provincial level. Over the last two years, the Ontario government through MTCU has begun a strategy to reform the apprenticeship system in the province. Over the next three or four years, with a budget of $33 million, MTCU aims to double the number of entrants to the skilled trades, by working with industry groups, educators, and trainers. Among the main components of this new strategy to reform apprenticeship training is the following:

- Introduction of new legislation – The Apprenticeship and Certification Act 2000 provides for a more streamlined approach to attracting new employers and emerging trades into the apprenticeship system and encourages greater industry involvement in the system;
- Extension of the Ontario Cooperative Education Tax credit to employers training apprentices in specific skilled trades (computer aided design, automated manufacturing, and information and telecommunications technology);
- Introduction of the Loans for Tools program that provides loans to new apprentices to cover the cost of buying tools;
- New funding for the Ontario Youth Apprenticeship Program (OYAP) to assist high school students who wish to learn a skilled trade;
- Allocation of $3.8 million to the Women in Skilled Trades Initiative to recruit and train women into pre-apprenticeship programs in the automotive industry; and
- Establishment of the Apprenticeship Innovation Fund that will provide $5 million annually, over a three-year period, to expand apprenticeship training to new skilled trades.

Other initiatives under this strategy include the establishment of a pre-apprenticeship program, support for skills upgrading for skilled tradespeople; and a campaign to promote careers in skilled trades. In addition to this apprenticeship strategy, the provincial government has, under the Apprenticeship Enhancement Fund, allocated an additional $50 million over five years to modernize equipment and facilities in colleges for apprenticeship programs.

... in Canada, the majority of apprentices tend to begin their training at a much later age, usually after having explored a number of alternative career possibilities.

While the apprenticeship strategy targets younger people with the view to getting them interested in learning a skilled trade as early as possible, it also appears to recognize that in Canada, the majority of apprentices tend to begin their training at a much later age, usually after having explored a number of alternative career possibilities. This is the opposite of many European countries, where apprentices are usually much younger and in fact are often streamed into the skilled trades as part of the secondary school curriculum, and the system does not require the equivalent of Grade 12 to become an apprentice.

Supporting the Development of Core Non Post-Secondary Skills

Some 40% of employers surveyed in the Toronto area reported that they invested in training their staff.

A recent Toronto Training Board report quotes the Canadian Labour Force Development Board as stating that Canada, and by extension Toronto, is experiencing a 'national crisis' in training. The report goes on to say that changes to the eligibility requirements of Employment Insurance means that many of the unemployed do not have access to training funds. In addition, there has been a reduction in the overall level of funds available for adult education and training and related support.[24]

The reduction in funding for, and changes influencing access to, community-based learning provision have impacted on training opportunities for individuals most at risk of labour market marginalization. The move away from 'block purchase' contracting to a model based on 'individual choice' has had a range of impacts, including transferring the risk of not achieving outputs to the provider, and introducing monitoring requirements that smaller providers find hard to comply with.

Private sector provision has increased considerably, although there is evidence that this is largely concentrated in the area of IT. Some larger charitable/community-based providers considered the changes to have been beneficial, largely in weeding out some of the smaller, poorer performing community providers. However, this was balanced by the loss of some small but quality niche providers for the same reasons.

Within the city, Toronto Social Services (TSS) is also an important access point for training and employment supports. TSS delivers Ontario Works (OW), a provincial program the purpose of which is to promote independence through employment and provide financial assistance, ultimately by helping clients make the transition from welfare to work. Client participation in employment-oriented activities is mandatory.

Many clients are referred to programs and services funded by senior levels of government, or use TSS Employment Resource Centres to search for and find work. In addition, TSS directly provides training and employment placement opportunities to about 8,000 clients annually.

Workplace and Human Resource Practices Within Firms

Another significant player in creating skills supply are employers themselves, through their own investment in the skills and competencies of their workforce. Results from the employers survey of over 1000 employers suggest that a proportion of Toronto's employers do indeed play a key role, although significantly less than their European counterparts. Some 40% of employers surveyed in the Toronto area reported that they invested in training their staff. Interestingly 30% of these firms offered both on- and off-the-job training, 10% offered only off-the-job training and 20% said the training was on the job. In addition, for 60% of these firms, this training was not partnered. For those firms that did have partners for training, 30% partnered with an industry association, 20% partnered with equipment suppliers and 20% with HRDC or a provincial agency.

One of the indicators of the degree of formality of training is the extent to which it has some form of qualifications or certification associated with it. One argument is that issues of 'poaching' and labour market mobility are disincentives for firms to invest in formalized and certified training. However, in the case of Toronto, 50% of firms that invest in training have some form of certification associated with the investment.

Many employees will only take advantage of training and upgrading opportunities if these are offered as part of the job during regular working hours, because of family and other obligations.

From these observations and from in depth interviews with employers and training providers, it is clear that a critical part of a labour force plan is how best to involve employers more in employee training. This could involve a different approach to training than currently exists – one where training is delivered in a more flexible and less formalized way. For example, many employees will only take advantage of training and upgrading opportunities if these are offered as part of the job during regular working hours, because of family and other obligations. It may be useful to explore how partnerships can be developed between employers, trainers and government funders to provide better and more extensive on-the-job training that is convenient and accessible to employees.

Another issue that has emerged is the difference between generic skills which can be offered in a similar way across a number of employment centres in an industry or bridging more than one industry, and customized training tied to a particular job or group of jobs in a specific firm. A rough estimate from some industry analysts interviewed for this study is that 80% of training may be generic and 20% may be tied to the job. A flexible system would involve employers and trainers in resolving how best to combine these two types of training needs most efficiently and effectively.

A number of employers have also indicated that the existing array of co-op programs from different institutions makes it difficult at times to coordinate placements and to keep track of the range of co-op possibilities. While it is important to recognize that there will continue to be a need for different approaches to co-op placements by universities, colleges and trainers, and that it would be unwise to standardize all programs, it may nevertheless be helpful to employers at least to have a better sense of the different programs that exist, and if possible to try to standardize the approaches where this makes sense. In other words, there may be a role for a coordinated and more integrated approach to co-op placements.

As indicated earlier, labour supply responses to deal with labour market imbalances of shortages and surpluses are conventionally thought of in terms of quantity dimensions like labour force participation, hours of work, immigration and migration as well as quality dimensions pertaining to human capital formation – all occurring in external labour markets.

Labour supply adjustments can also occur through the workplace and human resource practices within the internal labour markets of firms. For example, broader-based job classifications can broaden the tasks that individuals can do, enabling shortages to be filled by the multi-tasking of others within the organization. Job rotation and multi-skilled, broad-based training can facilitate that multi-tasking. Workplace teams can facilitate both the multi-tasking and job rotation.

Various forms of non-standard employment can also provide important flexibility for employers and such alternative employment forms can meet the needs of employees, especially in balancing work and family pressures. This can be the case with fixed-term contracts, self-employment, part-time employment, temporary help agencies, telecommuting and home-work. While some of these innovative approaches to work can be of benefit to both employers and workers alike, sometimes such non-standard employment forms can also have associated with them a variety of problems (like uncertainty of work, lack of benefits, and piece-work, for workers; and lack of continuity and loss of "institutional memory" for employers, for example) that need to be both acknowledged and addressed.

Labour Market Information

A key issue in the education and training system's ability to deal with labour shortages is to reduce the various lags that exist in the system. Lags exist, for example, in recognizing a shortage, in developing programs, acquiring equipment and instructors to address the shortage, and in training and placing students. By the time the system responds to a shortage it may be a surplus, especially if large numbers come out of the system at the same time. This can give rise to a cobweb type over-adjustment process that can lead to dynamic shortages followed by surpluses and so forth.

Timely and accurate local labour market information is crucial for labour adjustment, education, training, job search and mobility.

Timely and accurate local labour market information is crucial for labour adjustment, education, training, job search and mobility.[25] Without such information it is not feasible to determine emerging shortages and surpluses and to develop the appropriate responses in terms of education, training, mobility and job search, as well as other policy responses. The City of Toronto is exploring ways to gather timely labour market information by incorporating questions on employers' skill needs and hiring practices into various survey tools, like the Employers Survey and the Business Outlook Survey. In this way, annual data on skills demand issues could be gathered and used to fine-tune the labour market readiness plan. In addition, with support from the other regional municipalities, such surveys could be extended to include the region's employers, and in doing so would provide for a more comprehensive regional labour market plan.

Additionally, the City could partner with the Ontario Ministry of Colleges, Training and Universities to receive provincial labour market projections. Currently, MTCU receives HRDC COPS data, and creates projections for the province for all occupations and skill levels. There may be an opportunity here for the City to partner with the province for the provision of regional and City projections in addition to provincial projections.

Immigration and Internal Migration

Credential recognition is also an important component of social inclusion, reducing the frustration associated with being excluded from jobs for which one is qualified and being relegated to jobs for which one is overqualified – a tremendous waste of talent.

Immigration can be an important supplement to natural population increase as a component of labour supply. In addition, immigration can also be a potentially important source of labour supply since immigrants can establish important forward linkages with potential customers for exports to their home countries, as well as backward linkages to suppliers. Furthermore, the diversity that is associated with immigration – and which was once regarded as a challenge – is increasingly regarded as an opportunity for increased interaction in the global economy. Cities like Toronto are particularly well positioned in that regard.

While immigration is a potentially important source of labour supply, the recognition of immigrant qualifications and credentials is as important as the numbers of immigrants settling in Toronto. This is especially the case given the shift away from source countries (England and Europe) where qualifications were based on a similar classification system to Canada's, and towards source countries (Asia, Latin America) where the qualification systems are not as easily transferable to Canadian circumstances. Credential recognition is also an important component of social inclusion, reducing the frustration associated with being excluded from jobs for which one is qualified and being relegated to jobs for which one is overqualified – a tremendous waste of talent. In this regard it is important to seek ways to accelerate the entry of skilled immigrants into the job market. Many immigrants have limited funds when they arrive in Canada and cannot afford to spend long periods of time or money to study, so they must get a job quickly. Once employed in a job they are over qualified for, this pattern of underemployment becomes hard to break. Among the ways these issues could be addressed are:

- Better provision of regional based labour market information by Canadian embassies abroad (different regions of Canada face different labour market pressures at the same period in time);
- An improved system for recognizing skills including training and education credentials obtained outside of Canada leading to accreditation in Canada;
- Support for individuals and families while Canadian training, certi-

fication and accreditation is being obtained; and

- Support for language training, particularly technical language training.

A somewhat controversial method of filling shortages that has been frequently debated is through temporary immigration permits designed explicitly to fill labour shortages. This occurs for seasonal workers as in agriculture, and has also been instituted in the past for shortage occupations like IT where a very prominent temporary immigration permit system exists. It also occurs in the hospitality industry in the U.S. where industry workers from the Caribbean work in U.S. hotels during the off-season in their home countries. There, they receive valuable training that they can draw upon when they return home. Additionally, the U.S. hotels are able to fill a temporary labour shortage when demand for labour is lower in the Caribbean.

The Toronto region is contiguous to a large number of other local labour markets that it can draw on or to which it can provide labour.

Internal mobility is particularly important even within areas like the Toronto region given that its sheer size means that sectors of labour shortage and surplus both likely exist simultaneously, albeit commuting and transportation issues are crucial in reallocating labour from surplus to shortage sectors. Furthermore, the Toronto region is contiguous to a large number of other local labour markets that it can draw on or to which it can provide labour.

Removing barriers to the internal mobility of labour is crucial to alleviating labour market imbalances be they shortages or surpluses. Some barriers can be natural, involving transaction and psychological costs associated with moving, especially if it involves the uprooting of families. Other barriers, however, are artificially created and while they can serve other social purposes it is imperative to serve these purposes without unduly inhibiting internal mobility. Occupational certification and licensing,[26] for example, can provide quality checks for consumers when it is difficult and important for them to otherwise judge the quality of the service. But they can also be designed to protect incumbents from competition, and hence artificially create shortages (with such shortages raising the pay and job security of incumbents).

Certification and licensing requirements can differ across regions, as can residency requirements and the recognition of qualifications and experience. Programs like the federal Interprovincial Standards (Red Seal) Program, established to provide greater mobility for skilled workers across Canada, are designed to facilitate common standards and the mutual recognition of qualifications across provinces. This process is being fostered by the 1995 Agreement on Internal Trade. However, provinces can still have preferential regional hiring practices when they issue permits for projects that favour workers from their own province, especially in areas like construction. Support for internal migrants, particularly those in the construction and other trades, could also be implemented in the form of housing tax credits, to help alleviate some of the difficulties in relocating to high cost areas like Toronto.

An Integrated Labour Force Development System

In this section we have explored some of the elements that could be addressed in a Labour Force Readiness Plan by the City of Toronto. On the demand side there is little the City can do. However, on the supply side, the importance of providing a good quality of life for its inhabitants, which is at the core of the City's functions, has been mentioned a number of times throughout this study. This is important for attracting investment and skilled labour and more generally, for building a strong economy. As part of the range of services that go into providing a good quality of life, many participants in the study emphasized in particular the importance of affordable housing and a well functioning transportation system.

In addition, the City can use its influence and linkages to help coordinate and improve the education and training infrastructure delivered either by educational institutions, employers or through senior government programs. These include:

- Supporting the post secondary educational and training infrastructure in Toronto to ensure that the large, sophisticated educational infrastructure and centres of excellence can continue to flourish. Particular issues in this regard include: the need to sort out problems and provide a smooth transition for the double cohort; addressing retirements and shortages for faculty in post secondary institutions; and facilitating partnerships to enhance and expand centres of excellence, particularly in the areas of research and development.
- Working with the provincial government to ensure that apprenticeship programs are adapted to the emerging needs of the Toronto economy in light of the large looming demand for highly skilled labour. In order to achieve this, it will be important to respect the particular cultural context that has developed in Ontario with regards to apprenticeships, while at the same time developing programs that will provide more employer buy-in to the apprenticeship system. The City also has an interest to ensure that it gets its fair share of new provincial funding dedicated to enhancing and expanding the apprenticeship program.
- Supporting the development of core skills by searching for ways to improve and expand the opportunities for unemployed persons to access the Employment Insurance Skills Development Employment Benefit and to search for ways to expand the training dimension of

One approach to supporting a broader spectrum of labour market readiness in the Toronto region could be through the establishment of an "Integrated Labour Force Development System".

the Ontario Works program. The City should work with the Federal government and the Province of Ontario to ensure that the opportunities provided by Ontario Works be expanded and that these opportunities reflect the needs of the participants. Additional issues in this regard include general literacy and numeracy training and providing everyone in the workforce with the opportunity to achieve at least a Grade 12 level of education.

- Bringing employers, trainers and government together to enhance and expand on-the-job training and upgrading and in particular, to ensure that training is flexible for employees, that the need for both generic and job specific skills upgrading is addressed and that a system exists to deliver information to employers about various coop placement programs.
- Establishing a system for providing up-to-date labour market information by including skills development and labour market issues in the City's annual employers survey, and possibly conducting a more detailed survey focussed on skills and training issues on a regular basis. The City could also explore with the province how to better coordinate the sharing of provincial information on industrial and occupational trends.
- Working with the federal and provincial governments to expand and better focus immigrant and migrant resettlement programs in Toronto, particularly in light of the increasing importance of immigration and migration to the future Toronto labour force. These initiatives need to include: a better distribution of resources for immigrant resettlement to Toronto; better information in embassies abroad about labour force needs on a regional basis; improving the assessment and recognition of prior learning for immigrants; providing support to immigrants while they pursue certification and accreditation in their professions; and language training, particularly technical language skills. For migrants this could involve initiatives such as housing tax credits to address the high cost of housing in Toronto.

These elements represent only part of a possible labour force readiness plan for Toronto. One approach to supporting a broader spectrum of labour market readiness in the Toronto region could be through the establishment of an "Integrated Labour Force Development System".[27] Recognizing the relationship between the labour market and the social and economic systems of the region, a series of programs and services could be brought together under one system. The components of such a system could include:

- labour market information;

- career and employment counselling and on-going support;
- pre-employment services such as literacy, numeracy, life skills and language training;
- skills training, upgrading and retraining;
- recognition of prior learning; and
- job placement and matching services.

Ultimately the elements of an integrated labour force readiness system will need to be discussed and debated with a broad range of interest groups, each of whom are involved in some way in labour force issues either as employers, trainers, regulators or as funding agencies. The City has an important role to coordinate this discussion.

BIBLIOGRAPHY

Advisory Council on Science and Technology. 2000. *Stepping Up: Skills and Opportunities in the Knowledge Economy: Report of the Expert Panel on Skills*. Ottawa: Industry Canada.

Annie E. Casey Foundation. 2000. *Stronger Links: New Ways to Connect Low Skilled Workers to Better Jobs.* Baltimore: The Annie E. Casey Foundation.

Archambault, Richard. 1999. *New COPS Occupational Projection Methodology Ottawa.* Human Resources Development Canada, Applied Research Branch, Strategic Policy.

Baldwin, John R. and Valerie Peters. 2001. *Training as a Human Resource Strategy: the Response to Staff Shortages and Technological Change.* Ottawa: Statistics Canada, Micro-Economic Analysis Division.

Baran, Joni, Gilles Berube, Richard Roy and Wendy Salmon. 2000. *Adult Education and Training in Canada: Key Knowledge Gaps.* Ottawa: Human Resources Development Canada, Applied Research Branch.

Bourne, L. and Starkweather, S. 2000. *Social Polarization and Income Inequality in Toronto.* University of Toronto.

Brouwer, Andrew. 2000. *Immigrants Need Not Apply.* Caledon Institute of Social Policy.

Brown, Susan. 2001. *Toronto Training Board 2001-2002 Environmental Scan: Training for Change.* Toronto Training Board.

Bruce, Doug and Andrea Dulipovici. 2001. *Help Wanted: Results of CFIB Surveys on the Shortage of Qualified Labour.* Canadian Federation of Independent Business.

City of Toronto. 2002*. Survey of People Leaving Ontario Works: Key Findings and Implications.* Community and Neighbourhood Services.

City of Toronto / GHK International (Canada). 2002. *Growing Together: Prospects for the Renewal of the Toronto Region.* Toronto.

Council of Ministers of Education, Canada. 1999. *Educational Initiatives in Canada 1998.* Toronto

Council for Urban Economic Development. 1998. *Help Wanted: Building a Competitive Workforce.* Conference Proceedings.

Critoph, U. 2002. *An Integrated Labour Force Development System for Toronto—A Conceptual Framework: Toronto Labour Force Readiness Plan Report #6*. City of Toronto.

–––––– 2002. *A Labour Market Development Agreement for Ontario? The Implications for Toronto: Toronto Labour Force Readiness Plan Report #5.* City of Toronto.

Federation of Canadian Municipalities. 1999. *The FCM Quality of Life Reporting System: Quality of Life in Canadian Communities.* Federation of Canadian Municipalities.

Finnie, Ross. 2001. *The Brain Drain, Myth and Reality: What is it, What Should be Done.* School of Policy Studies, Queen's University, Ontario.

Florida, Richard. 2000. *Competing in the Age of Talent: Environment, Amenities and the New Economy.* Pittsburgh: Prepared for the R.K. Mellon Foundation, Heinz Endowments and Sustainable Pittsburgh.

Florida, Richard. 2000. *Competing in the Age of Talent: Quality of place and the New Economy. Pittsburgh.* Prepared for the R.K. Mellon Foundation, Heinz Endowments and Sustainable Pittsburgh.

Green, David A. and W. Craig Riddell. 2001. *Literacy, Numeracy and Labour Market Outcomes in Canada.* Ottawa: Statistics Canada.

GTA Steering Committee on Employment for the Greater Toronto Area. 2000. *Report to the Greater Toronto Coordinating Committee.* Toronto.

Hasula, Susanne. January 25, 2001. *The Learning Labour Crisis in Canadian Science.* Toronto: Digital Eve Toronto.

Hemson Consulting. 1993. *The Outlook for Population and Employment in the GTA.* Toronto.

Hiebert, Daniel. 1999. *Local Geographies of Labour Market Segmentation: Montreal, Toronto and Vancouver.* Economic Geography.

Human Resources Development Canada. 1999. *International Migration of Skilled Workers: Facts and Factors.* Ottawa.

Job Start. 2001. *Access for Foreign-Trained IT Professionals: an Exploration of Systematic Barriers to Employment.* Etobicoke, Ontario: Job Start.

KPMG. 2002. *Competitive Alternatives: Comparing Business Costs in North America, Europe and Japan, G7-2002* (www.CompetitiveAlternatives.com).

Le Roy, Greg, Fiona Hsu, and Sara Hinkley. 2000. *The Policy Shift to Good Jobs: Cities, States and Counties Attaching Job Quality Standards to Development Subsidies.* Washington, D.C.: Good Jobs First.

Looker, E. Dianne and Graham S. Lowe. 2001. *Research Workshop on Post-Secondary Access and Student Financial Aid: Summary of Workshop Discussion*. Ottawa: Canadian Policy Research Networks.

Looker, E. Dianne. 2001. *Post-Secondary Access and Student Financial Aid in Canada: Current Knowledge and Research Gaps.* Ottawa: Canadian Policy Research Networks.

Lowe, Graham S. and Grant Schellenberg. 2001. *What's a Good Job?: The Importance of Employment Relationships.* Ottawa: Canadian Policy Research Networks Inc.

Martin, Roger L. and Michael E. Porter. 2001. *Canadian Competitiveness: A Decade after the Crossroads. Toronto?* CD Howe Institute and Joseph L. Rotman School of Management, University of Toronto.

Masse, Philippe, Richard Roy and Yves Gingras. 1998. *The Changing Skill Structure of Employment in Canada.* Ottawa: Human Resources Development Canada, Applied Research Branch.

Maytree Foundation. 2001. *Annual Report 2000.* Toronto: Maytree Foundation.

McCarthy, Shawn. February 27, 2001. "Skilled-Worker Shortage Could Reach One Million: Life-Long Learning to be Top Priority in Addressing, Stewart Says." Toronto: *Globe and Mail.*

BIBLIOGRAPHY

Ministry of Training, Colleges and Universities. 2001. *The Professions and Trades System in Ontario, Occupational Fact Sheet.* Queen's Printer for Ontario.

Omidvar, Ratna. 2001. *Social Inclusion: A New Vision of Immigrant Settlement in Canada.* Caledon Institute of Social Policy.

Ontario Confederation of University Faculty Associations. 2001. *Less Isn't More: Ontario's Faculty Shortage Crisis.* Toronto: Ontario Confederation of University Faculty Associations.

Ornstein, Michael. 2000. *Ethno-Racial Inequality in the City of Toronto: An Analysis of the 1996 Census.* Toronto: City of Toronto.

Pereboom, Bert. 1999. *A Note on Demographic Factors and Implications for Skills Development. Ottawa.* Advisory Council on Science and Technology, Expert Panel on Skills.

Picot, G., A. Heisz and A. Nakamura. 2001. *Job Tenure, Worker Mobility and the Youth Labour Market during the 1990s.* Ottawa: Statistics Canada.

Registered Nurses Association of Ontario. 2000. *Ensuring the Care will be There: Report on Nursing Recruitment and Retention in Ontario.* Toronto. Registered Nurses Association of Ontario.

–––– 2000. *Earning Their Return: When and Why Ontario's RNs left Canada, And What Will Bring Them Back. Toronto*: Registered Nurses Association of Ontario.

Simich, L. 2000. *Towards a Greater Toronto Charter: Implications for Immigrant Settlement.* Toronto: Maytree Foundation.

Statistics Canada. 2001. *Population Projections 2000 to 2026.* The Daily. Ottawa.

–––––––––––- 2001. *Benchmarking Adult Literacy in North America.* The Daily, March 13. Ottawa.

–––––––––––- 2001. *Labour Market Outcomes of Arts and Culture Graduates.* The Daily, March 16. Ottawa.

Statistics Canada. Various Years. *Labour Force Survey.* Ottawa.

Status of Women Canada and Canadian Housing Renewal Association. 2001. *Building Capacity: Enhancing Women's Economic Participation through Housing.* Ottawa: Status of Women Canada and Canadian Housing Renewal Association.

Steed, Judy. 2001. *Company-Wide Effort Keeps Talent on Board:* Deloitte and Touche Profits from Offering Workers a More Humane Workplace. Toronto: Toronto Star, May 6, 2001.

Strategic Projections Inc. 2000. *GTA Population and Employment Projections, Final Report.* Toronto.

Theodore, Nikolas and Virginia L. Corson. 1998. "Targeting Job Opportunities: Developing Measures of Local Employment." *Economic Development Quarterly* 12, 2: 137-149.

Theodore, Nikolas. 1999. *Workforce Investment Act: Recommendations for Implementation in Illinois. Chicago.* Chicago Workforce Development Partnership.

Toronto Community Foundation. 2001. *Vital Signs: The Vitality of the Greater Toronto Area.* Toronto.

BIBLIOGRAPHY

Torjman, S. 2002. *Labour Market Information Needs in a Changing Economy. Presentation to Labour Market Information Working Group, Forum of Labour Market Ministers*. Caledon Institute of Social Policy.

Tufts, Steven. (2001) "It all Depends on Where you Live – Contradictions in the Mobilization of a Spatially Dispersed Hotel Workforce in the City of Toronto". Paper presented to the 50th Annual Meeting of the Canadian Association of Geographers. Montreal, Quebec, June 2001.

United Kingdom Department for Education and Skills. 2002. *Learning and Training at Work* 2001. London, UK.

United Way of Greater Toronto. 2000. *A Decade of Decline: Poverty and Income Inequality in the City of Toronto in the 1990's*. Toronto.

Viswanathan, Leela. 2000. Toronto Training Board *2000-2001 Environmental Scan: Training for Toronto's "New" Economy*. Toronto: Toronto Training Board.

Wisconsin Regional Training Partnership. *1997 Annual Report: Building Partnerships between Employers, Unions, and Communities in the Manufacturing Sector.* Milwaukee: Wisconsin Regional Training Partnership.

APPENDIX A: NATIONAL OCCUPATIONAL CLASSIFICATION SKILLS MATRIX

	1. BUSINESS, FINANCE AND ADMINISTRATION OCCUPATIONS	2. NATURAL AND APPLIED SCIENCES AND RELATED OCCUPATIONS
0 MANAGEMENT OCCUPATIONS	Major Group 00 Senior Management Occupations 001 Legislators and Senior Management	
	011 Administrative Managers 012 Managers in Financial and Business Services	02 Managers in Engineering, Architecture, Science and Information Systems
Skill Level A	**Major Group 11** *Professional Occupations in Business and Finance* 111 Auditors, Accountants and Investment Professionals 112 Human Resources and Business Service Professionals	**Major Group 21** *Professional Occupations in Natural and Applied Sciences* 211 Physical Science Professionals 212 Life Science Professionals 213 Civil, Mechanical, Electrical and Chemical Engineers 214 Other Engineers
Skill Level B	**Major Group 12** *Skilled Administrators and Business Occupations* 121 Clerical Supervisors 122 Administrative and Regulatory Occupations 123 Finance and Insurance Administrative Occupations 124 Secretaries, Recorders and Transcriptionists	**Major Group 22** *Technical Occupations Related to Natural and Applied Sciences* 221 Technical Occupations in Physical Sciences 222 Technical Occupations/Life Sciences 223 Technical Occupations in Civil, Mechanical and Industrial Engineering 224 Technical Occupations In Electronics and Electrical Engineering
Skill Level C	**Major Group 14** *Clerical Occupations* 141 Clerical Occupations, General Office Skills 142 Office Equipment Operators 143 Finance and Insurance Clerks 144 Administrative Support Clerks 146 Mail and Message Distribution Occupations 147 Recording, Scheduling and Distributing Occupations	
Skill Level D		

	3. HEALTH OCCUPATIONS	4. SOCIAL SCIENCES, EDUCATION, GOVERNMENT SERVICES AND RELIGION OCCUPATIONS
0 MANAGEMENT OCCUPATIONS	Major Group 00 Senior Management Occupations 001 Legislators and Senior Management 031 Managers in Health, Education and Community Services 041 Managers in Public Administration	
Skill Level A	**Major Group 31** *Professional Occupations In Health* 311 Physicians, Dentists and Veterinarians 312 Optometrists, Chiropractors and Other Health Diagnosing and Treating Professionals 313 Pharmacists, Dietitians and Nutritionists	**Major Group 41** *Professional Occupations in Social Sciences, Education, Government Services and Religion* 411 Judges, Lawyers and Quebec Notaries 412 University Professors and Assistants
Skill Level B	**Major Group 32** *Technical and Skilled Occupations in Health* 321 Medical Technologists and Technicians (except Dental Health) 322 Technical Occupations In Dental Health Care 323 Other Technical Occupations in Health Care (except Dental)	**Major Group 42** *Paraprofessional Occupations in Law, Social Services, Education and Religion* 421 Paralegals, Social Service Workers and Occupations in Education and Religion
Skill Level C	**Major Group 34** *Assisting Occupations in Support of Health Services* 341 Assisting Occupations in Support of Health Services	
Skill Level D		

	5 . OCCUPATIONS IN ART, CULTURE, RECREATION AND SPORT	6 . SALES AND SERVICE OCCUPATIONS	7. TRADES, TRANSPORT AND EQUIPMENT OPERATORS AND RELATED OCCUPATIONS
0 MANAGEMENT OCCUPATIONS	Major Group 00 Senior Management Occupations 001 Legislators and Senior Management		
	051 Managers in Art., Culture, Recreation and Sport	061 Sales, Marketing and Advertising Managers 062 Managers in Retail Trade	071 Managers in Construction and Transport 072 Facility Operation and Maintenance Management
Skill Level A	**Major Group 51** *Professional Occupations in Art and Culture* 511 Librarians, Archivists, Conservators and Curators 512 Writing, Translating and Public Relations Professionals		
Skill Level B	**Major Group 52** *Technical and Skilled Occupations in Art, Culture, Recreation and Sport* 521 Technical Occupations In Libraries, Archives, Museums and Galleries Photographers, Graphic Arts Technicians and Technical Occupations In Motion Pictures, Broadcasting and the Performing Arts	**Major Group 62** *Skilled Sales and Service Occupations* 621 Sales and Service Supervisors 622 Technical Sales Specialists, Wholesale Trade 623 Insurance and Real Estate Sales Occupations and Buyers 624 Chefs and Cooks 625 Butchers and Bakers 626 Police Officers and Firefighters	**Major Group 72/73** *Trades and Skilled Transport and Equipment Operators* 721 Contractors and Supervisors, Trades and Related Workers 722 Supervisors, Railway and Motor Transportation Occupations 723 Machinists and Related Occupations 724 Electrical Trades and Telecommunications 725 Plumbers, Pipefitters and Gas Fitters
Skill Level C		**Major Group 64** *Intermediate Sales and Service Occupations* 641 Sales Representatives, Wholesale Trade 642 Retail Salespersons and Sales Clerks 643 Occupations in Travel and Accommodation 644 Tour and Recreational Guides and Amusement Occupations 645 Occupations in Food and Beverage Service	**Major Group 74** *Intermediate Occupations In Transport, Equipment Operation, Installation and Maintenance* 741 Motor Vehicle and Transit Drivers 742 Heavy Equipment Operators 743 Other Transport Equipment Operators and Related 744 Other Installers, Repairers and Servicers 745 Longshore Workers and Material Handlers
Skill Level D		**Major Group 66** *Elemental Sales and Service Occupations* 661 Cashiers 662 Other Sales and Related Occupations 663 Elemental Medical and Hospital Assistants 664 Food Counter Attendants and Kitchen Helpers	**Major Group 76** *Trades Helpers, Construction Labourers and Related Occupations* 761 Trades Helpers and Labourers 762 Public Works and Other Labourers

	8. OCCUPATIONS UNIQUE TO PRIMARY INDUSTRY	9. OCCUPATIONS UNIQUE TO PROCESSING, MANUFACTURING AND UTILITIES
0 MANAGEMENT OCCUPATIONS	Major Group 00 Senior Management Occupations 001 Legislators and Senior Management	
	081 Managers in Primary Production (except Agriculture)	091 Managers in Manufacturing and Utilities
Skill Level A		
Skill Level B	**Major Group 82** *Skilled Occupations in Primary Industry* 821 Supervisors, Logging and Forestry 822 Supervisors, Mining, Oil and Gas 823 Underground Miners, Oil and Gas Drillers and Related 824 Logging Machine Operators 825 Contractors, Operators and Supervisors in Agriculture, Horticulture and Aquaculture	**Major Group 92** *Processing, Manufacturing and Utilities Supervisors and Skilled Operators* 921 Supervisors, Processing Occupations 922 Supervisors, Assembly and Fabrication 923 Central Control and Processing Operators in Manufacturing and Processing
Skill Level C	**Major Group 84** *Intermediate Occupations in Primary Industry* 841 Mine Service Workers and Operators in Oil and Gas Drilling 842 Logging and Forestry Workers 843 Agriculture and Horticulture Workers 844 Other Fishing and Trapping Occupations	**Major Group 94/95** *Processing and Manufacturing Machine Operators and Assemblers* 941 Machine Operators and Related Workers in Metal and Mineral Products Processing 942 Machine Operators in Chemical, Plastic and Rubber Processing 943 Machine Operators and Related Workers in Pulp and Paper Production and Wood Processing
Skill Level D	**Major Group 86** *Labourers in Primary Industry* 861 Primary Production Workers	**Major Group 96** *Labourers in Processing, Manufacturing and Utilities* 961 Labourers in Processing, Manufacturing and Utilities

Source: Human Resources Development Canada (HRDC)

ENDNOTES

[1] For population growth forecasts, please see GHK/City of Toronto (2002) "Growing Together: Prospects for the Renewal of the Toronto Region"; Strategic Projections Inc. (2000) "GTA Employment and Population Projections"; and Hemson Consulting (1993) "The Outlook for Population and Employment in the GTA".

[2] Statistics Canada, 2001 Census.

[3] Quoted in Susan Brown, *Toronto Training Board 2001-2002 Environmental Scan Update: Training for Change* (Toronto: Toronto Training Board, 2001), p. 20.

[4] StatCan, Labour Force Survey 2001.

[5] There is an issue as to whether Canada's ability to rely on skilled immigrants as a source of labour supply has in the long-run reduced our indigenous training system. If trained people can easily be "imported" why "produce" them?

[6] The Maytree Foundation estimates that in 1997-98, Ontario received 53% of new immigrants to Canada but only 34% of federal funding allotted to settlement services. Quebec, on the other hand received 12% of new immigrants and 30% of settlement services funding.

[7] Please see Steven Tufts, "It All Depends on Where You Live: Contradictions in the Mobilization of a Spacially Dispersed Hotel Workforce in the City of Toronto," paper presented to the 50th Annual Meeting of the Canadian Association of Geographers, Montreal, Quebec, June 2001.

[8] While this is the case nationally, Toronto does receive more immigrants than internal migrants annually.

[9] Please see "A Decade of Decline: Poverty and Income Inequality in the City of Toronto in the 1990s" (Toronto: United Way of Greater Toronto and the Canadian Council on Social Development, 2002), (http://www.uwgt.org).

[10] L. Bourne and S. Starkweather, *Social Polarization and Income Inequality in Toronto* (Toronto: University of Toronto, 2000).

[11] Please see Richard Florida (2001), "The Economic Geography of Talent", Working Paper, Carnegie Mellon University, Pittsburg.

[12] Goods Producing includes Primary, Manufacturing and Construction sectors; Service Producing includes Services and Transportation/Utilities Sectors.

[13] Data for this section are drawn from projections derived from Canadian Occupational Projections Survey (COPS), HRDC.

[14] Please see *Toronto Region Labour Force Projections Methodology Technical Note* to this report.

[15] Data for 2000 and following years are projections. The COPS Data are drawn from the Canadian Census, and 1996 is at the time of writing, the latest available Census.

[16] See for example, Strategic Projections Inc., GTA Population and Employment Projections, January 2000 and Final Report of the GTA Steering Committee on Employment for the Greater Toronto Area: Report to the Greater Toronto Coordinating Committee, January, 2000.

[17] Please see KPMG's Competitive Alternatives report, www.CompetitiveAlternatives.com.

[18] The National Occupational Classification (NOC) used by HRDC relates 'skill' to the type of education/training required for each occupation. It is classified according to four types: Skill A requires university education, Skill B requires college or apprenticeship training, Skill C requires secondary school and/or job-specific training, and Skill D requires on-the-job training alone. Management is included because it reflects a specific set of skills that are not captured in the other skill categories. This is recognized by

ENDNOTES

HRDC as it is also appears as a separate category under the NOC.

[19] As stated in the introduction to this section of the report, the forecasts for occupation and skill are drawn from a constant share approach to forecasting, where the distribution of occupations by industry are derived from the COPS dataset, and held constant over the period of the forecast. This is a conservative approach, though one that provides a solid base for discussing occupation and skill change.

[20] Leela Viswanathan, *Toronto Training Board 2000-2001 Environmental Scan: Training for Toronto's "New" Economy*, (Toronto: Toronto Training Board, 2000).

[21] The 'double cohort' refers to the elimination of Grade 13 from Ontario high schools. The effect of this will be that in the next 2 years, the last remaining Grade 13 classes will graduate at the same time as the grade 12 classes, resulting in a potential doubling of demand for university places and jobs.

[22] Although at the time of writing OCAD is not a degree granting institution, there is currently a Bill before the Ontario Legislature to convey to OCAD the right to grant degrees.

[23] Interview with Mary Jo Freire, Ministry of Training Colleges and Universities, October 2001.

[24] Susan Brown, *Toronto Training Board 2001-2002 Environmental Scan Update: Training for Change* (Toronto: Toronto Training Board, 2001).

[25] It is difficult to get accurate labour market information at the Toronto region level. Statistics Canada's Labour Force Survey gathers data at the Toronto CMA level as opposed to the Toronto region level.

[26] Certification generally refers to having the "exclusive right to *title*" with only those with the certification being allowed to use that title, but others being allowed to practice. Licensing generally refers to having the "exclusive right to *practice*" with only those with the licence being allowed to practice the trade or profession. Sometimes the phrase voluntary is used to describe certification, while mandatory is used to describe licensing. In construction, for example, equipment operators are often certified as such (but others can operate the equipment) while electricians are licensed and only they can do electrical work.

[27] For a comprehensive discussion of this please see Ursule Critoph, "An Integrated Labour Force Development System for Toronto—A Conceptual Framework: Toronto Labour Force Readiness Plan Report #6" (Toronto: City of Toronto, 2002).

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Toronto Economic Development
Metro Hall, 8th Floor, 55 John Street
Toronto, Ontario M5V 3C6
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ISBN 1-895739-38-1