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Graduate Program in Geography

A thesis submitted in partial fulfillment of the requirements for the degree in Master of Arts

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ATTRACTING AND RETAINING THE HIGHLY SKILLED IN MEDIUM-SIZED CITY-REGIONS OF ONTARIO: THE ROLE OF THE BUILT ENVIRONMENT

(Thesis format: Monograph)

by

Catherine McLean

Graduate Program in Geography

A thesis submitted in partial fulfillment
of the requirements for the degree of
Master of Arts

The School of Graduate and Postdoctoral Studies
The University of Western Ontario
London, Ontario, Canada

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ABSTRACT

This study set out to address the out-migration of highly skilled individuals from medium-sized city-regions in Ontario. In today's knowledge-based economy, city-regions that are able to attract, develop and retain valuable human capital have a distinct advantage that is crucial to economic growth. Using mixed qualitative methods, involving a policy document analysis and in-depth interviews with recent graduates, this study seeks to understand to what extent and in what ways policies of key institutions seek to attract and retain post-secondary graduates in medium-sized city-regions in Ontario? Does the built environment play a role in these policies? This study revealed that young professionals are primarily attracted to city-regions on the basis of employment opportunities, continuing education, and proximity to family and friends. Elements of the built environment are important in terms of overall attractiveness of the city, yet they are not significant factors guiding the mobility of the highly educated.

Keywords: post-secondary graduates, talent, human capital, creative class, highly skilled, highly educated, post-secondary institutions, economic development institutions, attract and retain, medium-sized city-regions, Ontario

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CHAPTER 1: INTRODUCTION

1.1 Study Context

In recent years, municipalities have shifted their economic development strategies from an industrial-based economy, focused primarily on manufacturing, to a knowledge-based economy geared toward innovation, information and technology services (Goldstein & Drucker, 2007; O'Neal, 2005). The creation of new knowledge and the use of intellectual property has become more important in most advanced economies and even the main driver of growth in some regions (City of Guelph, 2010). Traditional theories and past locational constraints associated with the need for proximity to natural resources and physical assets, no longer have the same importance due to this shift to intangible assets such as human capital (Gertler et al., 2002). In today's knowledge-based economy, "the presence of highly skilled people in a region is an important determinant of economic growth. Consequently, policy-makers are eager to try to keep highly skilled people in the region or attract them from elsewhere" (Venhorst et al., 2010, p.533).

There is a growing body of literature on the factors that influence the migration of human capital. The majority of these studies focus on traditional push and full factors influencing the migration of human capital, such as employment, higher education, proximity to family and friends, and personal characteristics. Scholars have been analysing the geographical distribution of human capital for years. Over the past decades, scholars, such as Edward Ullman (1958), Jane Jacobs (1969), Robert Lucas Jr. (1988), Simon (1998), and Berry & Glaeser (2005), documented the importance of human capital, innovation and creativity in supporting economic development. More recently, the literature has been centered on the work of Richard Florida who developed the creative class theory. His theory postulates that cities must foster the 3Ts: talent, tolerance and technology, in order to attract and retain what he calls the 'creative class' (Hansen et al., 2003). Talent, measured in terms of educational attainment, is essential for economic growth and prosperity in the knowledge economy. Florida states that regions that offer amenities and a high quality of life have the greatest success in talent attraction and retention (Florida, 2005). As indicated by Richard Florida (2002b) "Talent

does not simply show up in a region; rather, certain regional factors appear to play a role in creating an environment or habitat that can attract and retain talent or human capital" (p.754). Although Florida's concepts are based on empirical data from large metropolitan regions in the United States, his findings have influenced urban economic development policies in cities of all sizes across the world (Donegan et al., 2008).

Several studies have been published on the positive regional economic impact of post-secondary institutions in the knowledge economy (Blackwell et al., 2002; Bleaney et al., 1992; Felsenstein, 1996; Goldstein & Drucker, 2006; Goldstein & Drucker, 2007; Goldstein & Renault, 2005). Post-secondary institutions are primarily known for the creation of human capital through knowledge transfer, by providing students with the range of skills necessary to be productive in the knowledge economy (Plosila, 2004). The primary mission of higher education institutions is education and research; however, their activities extend far beyond this primary function (Felsenstein, 1996). Post-secondary institutions have various direct and indirect, short and long-run economic impacts on their surrounding area. The majority of the publications discuss the impact of higher education on the stock of human capital; however, few studies specifically address the role of the built environment in attracting and retaining human capital. Some authors examined the role of business incubators and research parks in attracting and retaining graduates; yet these are simply two of the many built environment features that can be used to attract talent (Campbell & Allen, 1987; Grimaldi & Grandi, 2005; McNamara & Markley, 1995).

1.2 Research Problem

In today's knowledge-based economy, city-regions that are able to develop, attract and retain human capital have a distinct advantage that is crucial to the economic growth and prosperity of municipalities, provinces and states, and entire countries (Gertler et al., 2002; Waldorf, 2009). However, this sought after human capital is not dispersed evenly across nations. Rather, these highly mobile individuals tend to migrate along the urban hierarchy and cluster in global cities such as Toronto, Vancouver and

Montreal (Beckstead et al., 2008; Gertler et al., 2002). Many students move to medium-sized cities to pursue their post secondary education. Upon completion of their degree, most graduates move to large urban centres.

As a result, many medium-sized city-regions within Ontario and across Canada are faced with the loss of knowledge resources due to the continuous internal migration of human capital to large urban centers, commonly referred to as the 'brain drain' (Knight, 1995). These cities are faced with challenges associated with a small or negative net migration rate of the 20 to 34 age cohort to the point that some cities may soon be facing labour shortages (McMullin et al, 2004; Thorn. et al., 2009). This poses demographic and economic concerns for small and medium-sized city-regions across Canada (Beckstead et al., 2008; Brown et al., 2010). The 20 to 34 age cohort captures recently graduated undergraduate and graduate students who are at the critical transitional moment of completing their studies and making decisions about where to locate and initiate their careers. Recent graduates are very mobile yet their spatial mobility is highly dependent upon a variety of factors, which presents a challenge for policy makers (Venhorst et al., 2010). Since knowledge resources are intangible, they are often overlooked. In order for cities to develop their knowledge resources, they must attract, develop and retain human capital by providing the infrastructure, built environment and support services necessary for fostering investment and development.

In 2009, the province of Newfoundland and Labrador addressed the out-migration of youth by creating a strategy entitled "Creating a Province of Choice: A Youth Retention and Attraction Strategy for Newfoundland and Labrador". The provincial government committed $1.3 million to create a policy framework and another $15 million to implement these strategies (Newfoundland & Labrador, 2009). The policy framework set out to address eight policy directions including: youth engagement, promotion and marketing, education, employment and job creation, quality of life and access to regional services, culture and diversity, and incentives to stay or return (Newfoundland & Labrador, 2009). Although it is too soon to evaluate the success of these strategies, their initiatives demonstrate the need to address the net out-migration of youth.

Due to the out-migration of university and college graduates from medium-sized city-regions and the importance of such talented individuals for local economic growth, it is important to gain a better understanding of the factors that influence the migration of human capital. City-regions are all in the race for talent and only those with attractive environments will be successful in attracting skilled human capital. Since quality of life, which includes various components of the built environment, is highly regarded throughout the literature as a magnet for talent, it is important to understand the infrastructure, design and built environment needs of university and college graduates and determine whether their needs are being met through the policies implemented by the local municipalities, economic development institutions and post-secondary institutions.

1.3 Purpose and Objectives

The purpose of this study is to advance our understanding of the mobility of human capital by focusing specifically on the role of the built environment. This study aims to gain a better understanding of the factors that influence the mobility of the highly skilled and understand what role if any is played by the built environment in their locational decisions. By merging this with the institutions literature, it can be determined whether the young professionals' needs are being meet through the economic development strategies implemented in the nine selected medium-sized city-regions across Ontario.

This study aims to answer the following question:

> *To what extent and in what ways do policies of key institutions seek to attract and retain post-secondary graduates in medium-sized city-regions in Ontario? Does the built environment play a role in these policies?*

Based on this overarching research question, this study seeks to address the following research objectives:

1) Document and analyse the economic development policies implemented by local municipalities, economic development institutions and post-secondary institutions to counteract the loss of human capital.
2) Analyse whether and to what extent these policies discuss the role of infrastructure, design and the built environment in fostering investment and development.
3) Analyse and interpret what factors influence post-secondary graduates' location decisions and determine their design and built environment needs.
4) Analyse and interpret how infrastructure, design and the built environment may be used to attract and retain university and college graduates, and highlight policy options that grow out of the literature, policy documents and interview research.

1.4 Methodology

The research was undertaken using mixed qualitative methods, specifically a policy document analysis and semi-structured in-depth interviews. A qualitative content analysis was conducted of the strategic policy documents published by municipalities, economic development institutions and post-secondary institutions in nine medium-sized city-regions across Ontario. Ontario was selected as the study region as it is home to a large proportion of Canada's medium-sized city-regions. This study specifically targets medium-sized city-regions as they are faced with challenges associated with the out-migration of human capital and must compete with large metropolitan regions in the race for talent (Brown et al., 2010; Beckstead et al., 2008). The long term economic development success of these city-regions, hinge in part, on their ability to attract and retain talent (Windsor Essex Economic Development Corporation, 2011). The medium-sized city-regions were selected based on their population size and the presence of post-secondary institutions, including both a university and college. As indicated by Darchen & Tremblay (2010), post-secondary institutions are a key component of the knowledge economy, as they play a major role in youth attraction and are the primary source of highly skilled individuals. The nine city-regions that met the selection criteria and were

included in the policy document analysis are: Guelph, Hamilton, Kingston, Kitchener-Waterloo, London, Peterborough, St. Catharine's-Niagara, Sudbury and Windsor.

These city-regions are of comparable size and are all faced with similar challenges such as declining population growth rates or absolute population decline, low youth retention, small or negative net migration of the 20-34 age cohort. Meanwhile all are competing to attract and retain talent. A small net migration implies that there are few additional people remaining in the city. This occurs when there are either very few people migrating to a city or in cases where there is a large number or people migrating to a city, yet the number of people leaving is also substantial. There are other situations where there are in fact more people leaving than coming to a city, as in the case of Guelph, London and Sudbury's 25 to 29 age cohort (Statistics Canada, 2006). Appendix G provides a table with the migration statistics for the nine selected cities.

Each region's most recent institutional policy documents were assessed including the universities' and colleges' strategic plans as well as workforce strategic plans published by the local economic development institutions. Additional information on the policy document and city-region selection parameters can be found in Chapter 3. The policy documents were manually read and analysed using nine key indicators, found in Table 2, which were derived from the literature and used to answer the research question and assess the content of each institution's strategic policy document. The policy document analysis was conducted to identify which policies have been implemented by the selected institutions to counteract the loss of knowledge resources, and determine whether these policies discuss the role of infrastructure, design and the built environment in attracting and retaining university and college graduates. The findings are presented in Chapter 4.

A case study was conducted to complement and build upon the findings of the policy document analysis. The case study of London, Ontario, consisted of sixteen semi-structured in-depth interviews with graduates from Western University. London was selected as a case study for the interviews as it has both a university (Western University) and a college (Fanshawe College), suffers from a negative net migration rate of the 25 to

29 age cohort (Statistics Canada, 2006) and is representative of the other cities selected in terms of its population characteristics. The interviews examined graduates' locational trends and built environment needs, and provided detailed insight into the city-region's ability to attract and retain post-secondary graduates. A standardized interview guide, found in Appendix I, was used to guide each participant through the same set of questions, allowing for the easy identification of emerging themes. The case study findings are detailed in Chapter 5.

1.5 Results

This study revealed that young professionals are primarily attracted to city-regions on the basis of employment opportunities and proximity to family and friends. Elements of the built environment, including the cost of living, city size and location, quality of life, cultural amenities, infrastructure and transportation are not significant factors guiding the mobility of the highly educated yet they are important "in shaping workers attitudes towards the attractiveness of the city's living environment" (Murphy & Redmond, 2009, p. 15).

Nevertheless, the graduates interviewed proposed general strategies and specific improvements to the built environment with the premise that it would aid the city in its talent recruitment efforts, allowing medium-sized city-regions to compete with the large metropolitan areas. Graduates recommended the following changes: increase the number and variety of employment opportunities; attract small and large businesses; run department specific networking events and career fairs; provide more internship and co-op opportunities; promote student engagement in the community; increase city promotion and marketing targeted towards youth and young professional; provide incentives to stay; and make changes to the built environment. Specifically, these changes to the built environment include: providing more affordable housing in downtown London geared towards young professionals; upgrading the transportation networks within the city and between major cities; creating more walkable communities; building more bicycle friendly streets; and providing additional extracurricular options for the 25-35 age cohort,

particularly during the winter months. Rather than making changes to the built environment, some graduates indicated that the city's built environment simply needs to be better marketed to promote its competitive advantages. The graduates believe that although London does not offer all the amenities available in large metropolitan areas, the city does however provide great alternatives which can be marketed to young professionals.

The policy document analysis revealed that there are large variations in content and detail of the policy documents, both geographically and institutionally variable with regards to youth attraction and retention. The post-secondary institutions generally did not indicate any interest in retaining youth in their respective city-region. On the other hand, the economic development institutions have adopted various strategies to attract and retain youth. These strategies include, in order of prevalence: 1) partnerships, 2) research parks and business incubators, 3) marketing, 4) education and training, 5) infrastructure and transportation, 6) quality of life, 7) employment opportunities, 8) city size and location, 9) arts and cultural amenities, 10) housing and costs of living, 11) foreign talent, and 12) youth engagement in the community.

Partnerships were the most commonly stated strategy to attract and retain youth. All economic development institutions recognize that human capital attraction and retention strategies can only be successful through strong partnerships with the post-secondary institutions; yet, there appears to be limited institutional collaboration and a lack of policy coordination between the institutions, as only a couple post-secondary institutions seeks to retain their graduates locally. Medium-sized regions should better utilize post-secondary institutions as a critical source of skilled human capital and take advantage of the large volume of youth that these post-secondary education institutions attract by finding ways to retain these bright minds within the community. The second most common strategy was research parks and business start-ups. Entrepreneurism is an important driving force in today's knowledge economy, yet as many graduates indicated, research parks and business start-ups only benefit a small fraction of graduates who intend on starting their own business.

This study contributes to the literature by providing empirical evidence on the factors that influence the migration of human capital and incorporating the role of the built environment in their locational decisions. In addition, this study contributes to local public policy by examining the local economic development policies required to meet the built environment needs of these young professionals.

1.6 Chapter Summaries

The thesis consists of six chapters. The second chapter, Literature Review, provides an overview of the relevant literature on the economic geography of talent, as well as associated institutional literature. Chapter 3, Methodology, outlines the study design including: rationale for qualitative methods, city-region and policy document selection, key informant selection and research methodologies.

The results are presented in Chapters four and five. Specifically, Chapter 4 provides the results from the policy document analysis which addresses the following research objectives: 1) document and analyse the economic development policies implemented by local municipalities, economic development institutions and post-secondary institutions to counteract the loss of human capital; and 2) analyse whether and to what extent these policies discuss the role of infrastructure, design and the built environment in fostering investment and development. Chapter 5 presents the findings from the critical case study of London, Ontario, which consisted of interviews with sixteen graduates from Western University. These graduates provided insight into the factors that influence their locational decisions and indicated their design and built environment needs.

Chapter 6, Discussion and Conclusion, presents the overall thesis conclusions by means of a discussion of the policy document analysis and interview results, and links these findings to the key literature presented in Chapter 2. This chapter also discusses the study contributions and limitations, as well as recommendations for future research.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter provides a foundation of the relevant literature pertaining to the migration of the highly skilled. A systematic literature search was conducted of all the relevant scholarly and institutional literature to gain insight into the past and present research in this field, identify any gaps in the literature and highlight areas in need of additional research. The literature review outlines the research conducted by previous scholars and assesses which factors, and more specifically which components of the built environment, are thought to influence the migration of the highly skilled. Thus far, there appear to be no existing systematic reviews examining the factors influencing the spatial behaviour of human capital. The literature review was designed with the overarching research question in mind: to what extent and in what ways do policies of key institutions seek to attract and retain post-secondary graduates in medium-sized city-regions in Ontario? Does the built environment play a role in these policies?

This chapter presents the findings from the systematic literature search as well as other relevant literature found throughout the research. The chapter was subdivided into four sections based on the key themes in the literature. Section 2.2 outlines the systematic review methodology, Section 2.3 reviews major theories within the economic geography literature, Section 2.4 outlines the significance of the highly skilled in the knowledge-based economy, and Section 2.5 looks at the factors that influence the mobility of the highly skilled, with a particular focus on the role of the built environment. The literature will be further discussed and compared with the results of this study in Chapter 6, Discussion and Conclusion.

2.2 Systematic Review Methodology

The systematic literature review was designed to identify all qualitative and quantitative, English and French peer reviewed journal articles published since 2000,

from United States, Canada and Europe, dealing with the migration of human capital. The search entailed a computerized search of three databases: Web of Science, GEOBASE and EconLit. Since this is a multidisciplinary topic, each database searches different subject areas; however, used together they make for an effective research tool, covering both the geographic and economic components of the research topic. GEOBASE is a source of geographic literature, EconLit provides the economic literature, while Web of Science covers multidisciplinary subject areas. The detailed search strategy is illustrated in Appendix A.

The systematic literature search resulted in 29 relevant journal articles published between 2000 and 2012, representing the literature leading up to and following Florida's creative class theory. The vast majority of the journal articles were published after 2006, with a steady increase up until 2010, followed by a large drop in publications. The diagram in Appendix B illustrates the year of publication of the journal articles. Among the selected studies, 11 originate from the United States, 4 from Canada and 14 from Europe. These studies employed a variety of qualitative and quantitative, single and mixed methods approaches to investigate the factors influencing the spatial behaviour of human capital. Key information was extracted from the articles including: authors, study location, methodology and findings, which are presented in a table in Appendix C. Additional literature that was found throughout the research process was also included in this chapter.

The selected publications were assessed for methodological quality in order to identify bias in the findings. Due to the large variety of study designs, a small number of standard questions were used to assess their methodological quality. The questions were created based on the quality appraisal established by Pont et al. (2009). The questions appraised the validity of the findings through the evaluation of the sample description, explanation on the participant section to ensure a representative view of the target population, inclusion of the number of participants and description of the study design, including data and analysis. The full questions are listed in Appendix D. Based on these questions, the articles were rated and received a score out of four. The findings from the

studies that were poorly rated for quality were assessed with caution, as the potential bias may have skewed the results.

The articles were assessed for methodological quality to distinguish those that clearly described their study designs from those that were missing some key methodological information. The quality assessment was conducted for the purpose of identifying articles that may have been subject to researcher bias. The results can be found in Appendix E. The quality assessment revealed that roughly half (14/29) the journal articles included in the review fulfilled all the study's criteria in terms of quality, a quarter (7) received a score of 3/4, another quarter obtained a score of 2/4 and one article received a score of zero. The majority of the studies (24/29) clearly described their sample. Roughly two thirds (20/29) of the articles gave detail about the criteria used for participant selection. The bulk of the studies (25/29) stated the number of participants included in the study. Surprisingly, only 19 of the journal articles clearly described their study design, including data and analysis. The ten studies that were assessed as limited in terms of study design omitted some key information; some provided an excellent description of data, yet failed to explain how the data were analysed, or vise versa. The article by Reiner (2010) was the only study to receive an overall score of zero for methodological quality. This was simply because the author took a different approach to the topic of talent attraction and retention by conceptualising a policy framework, rather than having to select a sample and describe participant selection. Given the importance of Richard Florida's work his score is notable. His articles only received a score of 2/4 for methodological quality. He provided a good explanation of the study design in terms of data collection and analysis, and stated the number of participants, yet failed to describe the sample and clearly explain how the participants were selected.

2.3 Theoretical Framework

The discussion of human capital shaping economic growth is not new. Over the past decades, scholars, such as Edward Ullman (1958), Jane Jacobs (1969), Robert Lucas Jr. (1988), Simon (1998), and Berry & Glaeser (2005), documented the importance of

human capital, innovation and creativity in supporting economic development. City-regions with high levels of human capital possess a competitive advantage; these regions grow more quickly as the highly skilled seek employment in innovative regions (Berry & Glaeser, 2005; Lucas, 1988).

More recently, the geographic literature addressing the mobility of human capital has been centered on the work of Richard Florida who developed the creative class theory. Florida's research looks at ways of attracting and retaining what he calls the 'creative class' through the use of amenities in order to foster economic growth and prosperity (Hansen et al., 2003). His ideas are based on empirical data from large metropolitan regions in the United States, yet his findings have influenced urban economic policies in cities of all sizes across the world (Donegan et al., 2008). His work was mentioned in 23 of the 29 articles selected in the systematic literature search: 2 journal articles were written by Florida himself, 11 articles discussed his work as part of the background literature and how his theories influenced the authors' ideas and 10 articles directly applied or tested his ideas within a different geographical context.

Richard Florida breaks down the creative class into two broad categories: the 'super creative core' and the 'creative professionals'. The 'super creative core' consists of scientists, engineers, university professors, poets, artists, musicians, architects and designers whose job is to create new ideas and technologies, whereas the 'creative professionals' includes people who work in business, finance, law, advertising and health care, and provide services for the members of the creative core (Martin-Berlot et al., 2010; Tormaney & Bradley, 2007). This creative class represents roughly 35% of the workforce and is said to be highly mobile (Hansen & Niedomysl, 2009).

Florida recommends policies that favour an attractive people climate as opposed to the more traditional business climate (Florida, 2002b). He believes that jobs follow people rather than the traditional view that people follow jobs (Bontje & Musterd, 2009; Donegan, 2008). Florida's theory stipulates that cities must foster the 3Ts: talent, tolerance and technology, in order to attract and retain the 'creative class' (Hansen et al., 2003). Talent, as measured in terms of educational attainment, is essential for economic

growth and prosperity in the knowledge economy. He believes that talented individuals are drawn to cities that are characterised by a diverse population, tolerant atmosphere, and a high quality of life (Bontje & Musterd, 2009; Florida, 2002b). Florida (1995) noted that geographical regions remain important in the race for talent, as these regions possess the infrastructure necessary to retrieve and store knowledge necessary to foster innovation.

Although popular and influential, Florida's work has been heavily criticised by numerous scholars for its lack of consistency and empirical rigour. Others have made specific critiques of this work. Some of the selected articles tested Florida's ideas to illustrate the reasoning behind their criticisms. Some scholars believe that the creative class is not as mobile as Florida suggests (Hansen & Niedomysl, 2009; Martin-Brelot et al., 2010). Others have expressed concern over the fact that Florida has grouped all the members of the creative class together, representing roughly 35% of the workforce (Hansen & Niedomysl, 2009). Florida assumes they share common locational preferences, and yet this large group exhibits numerous intra-group differences with varying personal preferences and lifestyle choices (Donegan et al., 2008). This is especially true as his theories target primarily young single professionals and do not apply to families (Anderson et al., 2010a; Martin-Brelot et al., 2010). In addition, some scholars have indicated that Florida's theories only apply to large North American city-regions and cannot be applied to other regions with a different urban hierarchy and varying cultural and political climate (Anderson et al., 2010a and 2010b). Lewis & Donald (2010) stressed the lack of attention paid to smaller city-regions in terms of the applicability of the creative class thesis, which is addressed in this study. Lewis and Donald (2010) believe that Florida's theories tend to marginalize smaller Canadian city-regions as they do not have the assets to attract human capital; this raises concerns as many small and medium-sized city-regions have modeled their urban economic policies after the creative class thesis (Beckstead et al, 2008). Bontje and Musterd (2009) believe that despite these criticisms, Richard Florida's ideas should not be dismissed altogether; rather researchers should continue to search for more empirical evidence to support or reject his theories.

2.4 Significance of the Highly Skilled in the Knowledge-based Economy

In recent years, city-regions have shifted their economic development strategies from an industrial-based economy, focused primarily on manufacturing, to a knowledge-based economy geared towards innovation, information and technology services (Goldstein & Drucker, 2007; O'Neal, 2005). Therefore, economies now rely on the creation of new knowledge and the use of intellectual property as opposed to the production of goods and services (City of Guelph, 2010). Traditional theories and past locational constraints associated with the need for proximity to natural resources and physical assets, no longer have the same importance due to this shift to intangible assets such as human capital (Gertler et al., 2002). In today's knowledge-based economy, highly skilled individuals have become increasingly important for increasing regions' competitiveness and promoting economic growth (Bontje & Musterd, 2009; Venhorst et al., 2010). Yet, many small and medium-sized city-regions have been faced with negative net migration rates and the loss of knowledge resources, due to the outflow of human capital to larger metropolitan areas, commonly referred to as the "brain drain" (Hansen et al., 2003; Houston et al., 2008). As a result, policy makers have been trying to get a better understanding of graduates' spatial behaviour in order to stem the brain drain by keeping graduates within the region and attracting human capital from elsewhere (Gottlieb & Joseph, 2006; Venhorst et al., 2010). This presents a challenge for policy makers as those with higher education exhibit greater mobility (Venhorst et al., 2010). Graduates make trade-off between an array of factors when deciding where to start and develop their careers (Grant & Kronstal, 2010). The following section examines the relevant literature to determine which factors are most important in guiding the locational decisions of human capital.

2.5 Factors Influencing Graduates' Locational Decisions

Scholars noted that the locational decision making process is highly complex and depends on a variety of socioeconomic and personal factors; among the most common were the availability of employment opportunities, presence of post-secondary institutions, housing costs and proximity to family and friends. The findings are presented in Appendix C and a graph illustrating the number of articles that discussed each factor can be found in Appendix F. To simplify the analysis, the following sections were divided based on the type of factors: hard locational factors, soft locational factors and personal characteristics. Hard factors refer to the tangible conditions such as the availability of public services, the transportation infrastructure and housing, whereas soft factors refer to the more intangible factors, such as the city's environment, quality of life, tolerance and openness (Murphy & Redmond, 2009). Personal characteristics include factors such as: age, academic achievement, previous mobility, gender, nationality, proximity to family and friends, birthplace and location of the post-secondary institution attended.

There are a variety of terms used in the literature to refer to human capital: creative class, creative capital, talent, alumni, youth, graduates and knowledge workers. Some articles were selected although they did not specifically refer to post-secondary graduates. These articles looked at attracting and retaining the creative class; however, they were still included as the majority of creative occupations require a university degree or professional qualification (Donegan et al., 2008). Many of the authors focused their research on a particular group of graduates. For instance, Gottlieb & Joseph (2006), Hansen et al. (2003) and Darchen & Tremblay (2010) specifically looked at the migration behaviour of science, technology and engineering graduates. Some studies, such as Faggian et al. (2007), Franco et al. (2010) and Venhorst et al. (2011), examined the mobility of university and college graduates, whereas, others such as Kodrzycki (2001) simply examined youth in general. In most cases the reasoning for these selections was not explicitly stated, yet in some cases it was simply due to data availability.

2.5.1 Hard Locational Factors

According to fifteen of the twenty nine studies, employment opportunities are the primary drivers of migration. Jobs were found to be much more important than amenities and the built environment in attracting and retaining human capital (Hansen & Niedomysl, 2009; Lepawsky et al., 2010). Contrary to Florida's theories, Houston et al. (2008) found that most individuals secure a job prior to moving to a new location. In general, job opportunities pull individuals to cities, whereas specific aspects of quality of life retain them (Anderson et al., 2010). Young graduates are drawn to regions with a strong labour market, that offer a variety of positions with competitive salaries and benefits (Hansen et al., 2003; Houston et al., 2008; Venhorst et al., 2011; Winters, 2011). As graduates age and start families, their priorities shift from employment considerations to finding an area that is safe and offers all the amenities needed to raise a family, including good local public schools and child care (Hansen et al., 2003; Reese, 2012).

Eleven articles discussed the importance of post-secondary institutions in the spatial distribution of human capital. City-regions that host post-secondary institutions have a competitive advantage in the race for talent. Universities and colleges are an essential component of the knowledge economy as they naturally attract students and produce highly skilled individuals necessary to attract investment, promote knowledge and technology transfers, foster regional innovation and stimulate entrepreneurship (Berry & Glaeser, 2005; Bramwell & Wolfe, 2008; Darchen & Tremblay, 2010; Florida et al., 2010; Gertler & Vindorai, 2005; Grant & Kronstal, 2010; Huffman & Quigley, 2002; Venhorst et al., 2010). Furthermore, post-secondary institutions contribute to tolerance which creates the necessary environment to attract and retain talent (Gertler & Vindorai, 2005).

Universities tend to have the greatest economic impact in small and medium-sized city-regions (Goldstein & Drucker, 2006). The quality of the university is generally the primary factor explaining student migration, not the location of the institutions (Darchen & Tremblay, 2010; Hansen et al., 2003). Although most city-regions strive to retain a portion of their graduates, Hansen et al. (2003) pointed out that if city-regions were

aiming to retain all the graduates it would simply imply that the highly skilled individuals produced by the local educational institutions are not valued elsewhere. However, medium-sized city-regions across Ontario and Canada, are struggling to retain enough post-secondary graduates to stem the brain drain.

Post-secondary institutions alone are not sufficient to support economic growth. The success of local universities and colleges in talent attraction and retention depends upon a number of local resources. City-regions must ensure that they can retain and utilize the knowledge, technology and human capital that the local post-secondary institutions attract and produce (Florida, 2002c). This can be achieved through collaborative partnerships between post-secondary institutions, local economic development institutions, governments of all levels and the private sector. Such institutional collaboration is said to boost the region's competitiveness and strengthen the local economy (Leibovitz, 2003).

While pursuing their education, students establish networks and contacts within the community and develop relationships with local employers through: networking events, funding and research relationships, on-campus recruiting firms, internships, scholarships, business incubators and business plan competitions (Huffman & Quigley, 2002; Winters, 2011). Due to these local attachments, upon graduation, many of these students remain in the region in which they were educated to start their career (Huffman & Quigley, 2002; Winters, 2011). As for young entrepreneurs, they are more likely to stay in the city in which they completed their education, if the city-region provides the facilities, services and funding needed to start and develop their business (Huffman & Quigley, 2002; Winters, 2011).

Kodrzycki (2001) and Gottlieb & Joseph (2006) noted that it is easier to retain students who attended a post-secondary institution in the area than students who went to high school in the area but attended university or college elsewhere. Furthermore, Hansen et al. (2003) noted that if recent graduates obtained their secondary school education within the same region as their post-secondary education, there is a far greater chance that their social ties will retain them within the regional community. On the other

hand, since many students go away for school and end up returning home upon completion of their post-secondary degree, it raises the question whether cities should be creating policies to attract professionals, or whether they should be targeting high school students by encouraging them to attend the local university or college (Martin-Brelot et al., 2010). Regions can gain a relative advantage by persuading local high school students to remain in the area for their post-secondary education. However, the policy objectives of university and college officials are at odds with local government officials; post-secondary institutions seek to attract the brightest students regardless of their future locational plans, whereas, local municipalities simply strive to keep a large proportion of graduates within the region (Gottlieb & Joseph, 2006) in order to seek future benefit from their large earnings and thus large tax revenue (Huffman & Quigley, 2002).

Housing costs and cost of living are commonly discussed within the literature on attracting and retaining a highly skilled workforce, yet there are mixed views with regards to its impact on individual's mobility. Whisler et al. (2008) noted that youth are very mobile and indicated that the high cost of living acts as a push factor driving youth to migrate elsewhere, yet on the other hand, Kodrzycki (2001) believes that expensive housing does not cause out-migration. Venhorst et al. (2011) noted that housing costs impact university and college graduates differently. They concluded that housing costs have a weak influence on migration for university graduates, yet are the second most important factor influencing the locational decisions of college graduates, behind employment opportunities (Venhorst et al., 2011). As Tomaney & Bradley (2007) indicated, in today's job market, highly educated individuals can now work from home and as a result their attention has shifted from looking for good employment opportunities to searching for good housing. The provision of luxury downtown apartments is not sufficient to attract and retain human capital; members of the creative class require a range of housing options that will meet their needs at various stages of their lives (Tomaney & Bradley, 2007). Several scholars indicated that housing becomes more important to graduates as they grow older and start families (Gottlieb & Joseph, 2006; Kodrzycki, 2001; Tomaney & Bradley, 2007; Kodrzycki, 2001).

Grant & Kronstal (2010), Hansen et al. (2003) and Martin-Brelot et al. (2010) all considered the effectiveness of the transportation networks as an important factor influencing human capital attraction and retention. Individuals seek areas with efficient transportation networks free of congestion easing the commute to and from work. Yet no additional information is provided in terms of the preferred design of efficient transportation networks or favoured modes of transportation.

According to five of the articles, although the absolute and relative size and location of the city is generally not the main factor influencing individuals' mobility, it still matters for locational decisions (Lepawsky et al., 2010). As indicated by Lepawsky et al. (2010), a city's size and location relative to provincial, national and international networks impacts its ability to attract and retain talent. For instance, St. John's, Newfoundland, Canada, may be large relative to provincial standards, yet its small size and isolation relative to larger more nationally and internationally connected city-regions, limits its ability to attract and retain human capital (Lepawsky et al., 2010). This explains why scholars noted discrepancies when applying the creative class theory to smaller city-regions (Lewis & Donald, 2010).

There are 'pros and cons' to living in either a small or large city; large cities tend to have more job opportunities (Anderson et al., 2010a). On the other hand, although smaller regions may have limited job opportunities in some fields, they offer more affordable housing, and their social networks provide mutual supports and help build a strong sense of community (Grant & Kronstal, 2010; Lepawsky et al., 2010). Respondents in several studies indicated the importance of living in a city that is just the 'right size', meaning it has all the conveniences of a large city without having to deal issues such as traffic congestion and high housing costs (Anderson et al., 2010a; Grant & Kronstal, 2010; Lepawsky et al., 2010). In general, "young graduates show a preference for big metropolitan areas, whereas families with children prefer lower-density settings" (Whistler et al., 2008, p. 89).

2.5.2 Soft Locational Factors

Although soft factors play a limited role in attracting human capital, they play a significant role in talent retention (Murphy & Redmond, 2009). Grant & Kronstal (2010) and Martin-Brelot et al. (2010) both indicated the importance of the region's natural beauty. For instance, in Grant & Kronstal's study (2010) of talent attraction in Halifax, Canada, three quarters of those interviewed mentioned their proximity to nature, parks, oceans and lakes as an asset of living in the region.

There are mixed views with regards to the promotion of tolerance and openness for attracting and retaining talent. Florida advocates that tolerant environments promote diversity, which attracts creative individuals which in turn boosts the region's economic performance (Donegan et al., 2008). Contrarily, Grant & Kronstal (2010) concluded that developing cities with a strong workplace dynamics and quality of life are more essential than fostering a tolerant environment, as tolerance had little influence in attracting talent to Halifax. Only one study discussed the correlation between loyalty to place and spatial mobility. Lepawsky et al.'s (2010) study on talent attraction and retention in the St. John's region in Canada, indicated loyalty to place as being one of the four common reasons for retaining highly skilled individuals within the region despite the area lacking some key economic opportunities available elsewhere.

The use of amenities for attracting and retaining human capital is very controversial. The term amenities can be defined as: "geographic, social, cultural, and recreational attributes of a particular location not directly related to the job itself or to family considerations" (Hansen et al., 2003, p. 134). Of the nine articles that discussed its use, five studies found that amenities do impact graduates' locational decisions (Florida, 2002b; Kodrzycki, 2001; Murphy & Redmond, 2009; Tomaney & Bradley, 2007 & Whisler et al., 2008), and four studies concluded that amenities do not impact mobility (Gottlieb & Joseph, 2006; Hansen et al., 2003; Lepawsky et al., 2010; Reese, 2012). Although Reese (2012) believes these amenities would make cities a nicer place to live, she does not believe that it promotes economic prosperity. Other scholars indicated that investments in the cultural and recreational opportunities could help retain

youth (Grant & Kronstal, 2010; Whisler et al., 2008). Individuals' amenity preferences vary according to their level of education (Gottlieb & Joseph, 2006) and evolve when their needs change as they age (Whisler et al., 2008).

Seven studies discussed the importance of fostering a strong quality of life. There is no generally accepted definition for quality of life (Dissart et al., 2000), yet Darchen & Tremblay (2010) define it as: security, social welfare, quality of the urban environment and quality of public transportation. Florida (2005) indicates that regions that offer a high quality of life have the greatest success in talent attraction and retention. Kodrzycki (2001) believe that quality of life influences migration, while on the other hand, Darchen & Tremblay (2010) found that although it may have an influence, it is not sufficient to explain the mobility of human capital. Darchen & Tremblay (2010) believe that quality of life is not as important as employment opportunities in shaping mobility. However, it's influence is difficult to assess as individuals are considering an array of factors in their locaitonal decisions (Darchen & Tremblay, 2010). Individuals value quality of life differently over the course of their lives; it is typically of little importance to young graduates, yet gains value as individuals' age and accumulate human capital (Gottlieb & Joseph, 2006; Whisler et al., 2008). The importance of quality of life can also vary from region to region, as demonstrated in Darchen & Tremblay's (2010) study of Montreal and Ottawa, in which case quality of life had a greater impact on attracting graduates to Ottawa than Montreal.

The term quality of life encompasses various aspects of the built environment, which is the key focus of this study. Only two articles looked specifically at the impact of the 'built environment' per se in talent attraction and retention, yet other scholars looked at various components of the built environment on their own. The built environment refers to the form and character of communities; it includes the manmade elements of the physical environment, such as: land use patterns, distribution of activities across space, housing, offices, malls, restaurants, parks, transportation system and physical infrastructure including roads, sidewalks and bike paths (Frank et al., 2003; Handy et al., 2002; Saelens et al., 2008). The built environment ranked poorly in Martin-Brelot et al.'s (2010) study in terms of reasons for selecting the city, yet Grant & Kronstal

(2010) indicated the importance of the quality of the built environment for individuals working in specific fields, such as architecture, engineering and planning.

Four articles noted the importance of a large stock of human capital, as it is found to act as a pull factor, attracting individuals and discouraging out migration. In general, graduates tend to migrate to better educated places (Gottlieb & Joseph, 2006). The presence of a well educated population creates a welcoming environment that attracts other highly educated individuals through the formation of strong social networks (Florida, 2002a).

2.5.3 Personal Characteristics

Although many scholars and policy makers have shifted their attention to attracting the creative class, it cannot be assumed that the entire creative class share common locational preferences (Asheim & Hansen, 2009). The creative class is said to represent roughly 35% of the workforce (Hansen & Niedomysl, 2009); yet a group of this size is certainly not homogeneous, making it impossible to apply a one-size-fits all approach (Grant & Kronstal, 2010; Hansen et al., 2003). The various subgroups within the creative class each have different needs (Anderson et al., 2010). Several authors examined variations in individuals' locational choices based on: age, gender, nationality, birthplace, previous mobility, educational attainment and family ties.

According to two studies, previous migration is highly correlated with subsequent migration (Faggian, McCann & Sheppard, 2007), as mobility rates are highest among graduates who moved frequently during childhood and/or to attend college or university (Kodrzycki, 2001). Birthplace acts as a major pull factor drawing graduates back to their hometown (Murphy & Redmond, 2009). Gottlieb & Joseph (2006) found than individuals who complete their most recent degree in the same region where they were born, were found to be less likely to migrate than those who were born elsewhere. Two studies indicated that one's nationality is a good predictor of spatial behaviour. Foreign graduates typically migrate to areas where there are concentrations of others of their

nationality (Gottlieb & Joseph, 2006). Furthermore, foreign bachelor and masters graduates are more likely to remain in the region where they pursued their post-secondary education than domestic students, yet this does not stand true for foreign PhD graduates (Gottlieb & Joseph, 2006). Proximity to family and friends was ranked fourth in terms of importance in attracting and retaining youth. The eight studies indicated how it is common for graduates to migrate back home or locate in areas where they have established social networks.

Seven of the twenty nine articles indicated variations in the mobility rates based on life phase. Mobility rates are highest within five years of graduation (Kodrzycki, 2001) and decline with age (Faggian, McCann & Sheppard, 2007; Gottlieb & Joseph, 2006). The features that attract individuals are not necessarily the same factors that will retain them over the long term, as individual's needs and preferences change as they age (Reese, 2012; Whisler et al., 2008). For instance, young graduates tend to migrate to large metropolitan areas characterised by strong labour markets and diverse cultural amenities, whereas families tend to favour low density areas with good neighbourhood schools and numerous recreational opportunities (Reese, 2012; Whisler et al., 2008). Three studies indicated that spatial behaviour varies by gender; however, scholars' views are mixed. Venhorst et al. (2010) and Faggian et al. (2007) believe that female graduates are more mobile than male graduates for internal migration, yet men are more likely to move abroad, whereas Gottlieb & Joseph (2006) conclude that female PhD graduates have lower mobility rates than men. Faggian et al. (2007) attribute females' higher mobility rates with the desire to compensate for gender bias in the labour market, as women move to areas with better job opportunities, rather than the common belief of coupling issues, when woman are forced to relocate to follow a spouse or partner's job relocation.

Seven studies attributed differences in individuals' mobility rates to varying levels of human capital. As stated by Faggian, McCann & Sheppard (2007), "in general, individuals with higher levels of human capital tend to be more migratory" (p. 517): college educated are more mobile than those without post-secondary education (Kodrzycki, 2001), university graduates are more mobile than college graduates

(Venhorst et al., 2010) and doctorates are more mobile than those with a bachelor's degree (Hansen et al., 2003). Differences in levels of education also correspond to varying needs. PhD graduates pay closer attention to amenities than employment opportunities, as their high level of human capital allows them greater bargaining power in employment negotiations (Gottlieb & Joseph, 2006). Variations in mobility trends are also apparent between disciplines, as some job fields tend to be more regionally located (Venhorst, Van Dijk & Van Wissen, 2010). In addition, graduates' post-secondary grades are also a good indication of an individuals' likelihood to migrate, as those with the highest grades are more likely to move abroad (Venhorst et al., 2010). Martin-Brelot et al.'s (2010) findings ranked the location of graduates' university or college as the third most common reason for living in a particular city, due to the networks and contacts with local employers established during their studies.

2.6 Conclusion

This chapter provided an overview of the literature regarding the mobility of the highly skilled and represents a useful reference for future research in this field. The review assessed 29 peer reviewed journal articles published since 2000, from United States, Canada and Europe, plus any additional relevant literature found throughout the research process. Specifically, this chapter examined the importance of human capital in the knowledge economy, reviewed major theories of human capital migration within the economic geography literature, and looked at the various factors that influence the mobility of the highly skilled, with a particular focus on the role of the built environment.

There is a growing body of literature on the factors that influence the migration of human capital. The literature review illustrated that graduates are very mobile, yet their spatial mobility is highly dependent upon a variety of factors, such as graduates' personal characteristics, and the regions' hard and soft locational factors. Among the most commonly cited factors influencing graduates' mobility are: the availability of employment opportunities, presence of post-secondary institutions, housing costs and proximity to family and friends. Some factors are clearly strong determinants of

migration, yet others received mixed views. These differences highlight the need to understand geographical variations between city-regions.

Additional research is needed to build upon the current literature and clarify the use of certain factors in influencing individuals' spatial behaviour. Specifically more research is needed to shed light on the effectiveness of certain hard and soft locational factors including: the use of the built environment, housing and amenities, as well as the influence of tolerance and openness in attracting and retaining university and college graduates to city-regions. This additional information would help fill the current gaps in the literature and provide clarification for the areas with contradicting information. All future research must pay particular attention to the relative and absolute size and location of the city-region, as well as the social, economic and political context, as the findings indicate that this can greatly impact the effectiveness of the strategies.

This study seeks to address the gaps in the literature by providing clarification into the role of the built environment in attracting and retaining human capital. The literature will be further discussed and compared with the results of this study in Chapter 6, Discussion and Conclusion.

CHAPTER 3: METHODOLOGY

3.1 Introduction

In recent years, municipalities have shifted their economic development strategies from an industrial-based economy, focused primarily on manufacturing, to a knowledge-based economy geared towards innovation, information and technology services (Goldstein & Drucker, 2007; O'Neal, 2005). In today's knowledge-based economy, city-regions that are able to develop, attract and retain valuable human capital have a distinct advantage that is crucial to the economic growth and prosperity of municipalities, states and provinces, and entire nations (Gertler et al., 2002). However, this sought after talent is not dispersed evenly across nations. Rather, these highly mobile individuals tend to cluster in global cities such as Toronto, Vancouver and Montreal (Gertler et al., 2002). As a result, many medium-sized cities across the globe are faced with the loss of knowledge resources and most importantly the loss of recent graduates to the point that some may soon be faced with labour shortages (McMullin et al, 2004; Thorn et al., 2009).

Due to the out-migration of university and college graduates from medium-sized city-regions to large metropolitan regions and the importance of such talented individuals in economic growth, it is important to gain a better understanding of the factors that influence graduates' locational decisions. Since quality of life, which includes various components of the built environment, is highly regarded throughout the literature as a magnet for talent, it is important to understand the design and built environment needs of university and college graduates in order to promote talent attraction and retention in medium-sized city-region. Specifically, this study seeks to answer:

> *To what extent and in what ways do policies of key institutions seek to attract and retain post-secondary graduates in medium-sized city-regions in Ontario? Does the built environment play a role in these policies?*

This research question was addressed using mixed qualitative methods, which involved a content analysis of policy documents published by municipalities, economic

development institutions and post-secondary institutions in nine medium-sized city-regions across Ontario, as well as a case study of London, Ontario using semi-structured in-depth interviews with Western alumni. This chapter outlines the rationale for employing qualitative methods, details the city-region selection and examines the study methodology.

3.2 Rationale for Qualitative Methods

A qualitative approach was deemed appropriate for this study due to the nature of the research questions. Qualitative methods encompass an array of epistemologies, theoretical frameworks, and methodological approaches which sets it apart when studying social phenomena (Nagy Heisse-Biber & Leavy, 2004).

This study employed qualitative methods to determine the built environment needs of university and college graduates and establish whether their needs are being met through the policies implemented by the local municipalities, economic development institutions and post-secondary institutions. A qualitative approach was taken to address the research questions in great depth and detail, using a mixed-methods approach incorporating both qualitative content analysis and in-depth interviews. The qualitative content analysis was employed to assess which relevant institutions have integrated policies in their strategic plans to address talent attraction and retention by means of the built environment.

The findings from the content analysis were complemented by a case study which allowed for further insight into the research questions and narrowed down the scope of the study by describing in detail the issue of talent attraction and retention in London, Ontario. The case study involved semi-structured in-depth interviews with recent graduates from Western University. The interviews provided in-depth information on graduates' locational preferences and built environment needs that may not be considered in the institutions' strategic plans. Additional detail regarding the content analysis and in-depth interviews is provided in the following sections.

3.3 Policy Document Analysis

3.3.1 City-region and Policy Document Selection

The following section outlines the parameters for city-region selection. The study focused specifically on medium-sized city-regions within Ontario. Ontario was selected as the study region for numerous reasons (1) Ontario's population of 12,851,821 (Statistics Canada, 2011 Census) represents 38.4% of the nation's population (2) Ontario is home to 15 of the 33 Census Metropolitan Areas (CMAs) or nearly half of the Canadian CMAs, characterised by a population of 100,000 or more, of which 50,000 live in the large urban core (Statistics Canada, 2011 Census) (3) to eliminate jurisdictional, geographical and policy variations between provinces and territories. Gertler et al. (2002) conducted an analysis of Canadian city-regions and found that cities across Ontario have a strong social and cultural foundation on which to build successful local economies, yet rank poorly in terms of educational attainment levels relative to their United States counterparts.

There are various definitions used within the literature to describe 'medium-sized cities' or 'second tier cities' (STC); however, there is no single accepted definition (Wachsmuth, 2008). Markusen et al. (1999) define 'second tier' cities as "spatially distinct areas of economic activity where a specialized set of trade-oriented activities takes root and flourishes, establishing employment and population growth trajectories that are the envy of many other places" (p. 3). The context is important as second tier cities can only be classified relative to the first-tier cities with which they coexist (Markusen et al., 1999).

Based on the urban hierarchy of Ontarian cities, Wachsmuth (2008) classifies 'second-tier' cities as all city-regions with a population greater than 300,000 excluding the Greater Toronto Area, whereas Brown et al. (2010) defines medium-sized urban areas as CMAs with a population of 100,000 to 499,999. Walton-Roberts (2001) builds on Markusen et al.'s (1999) definition to specify that "it is not the population size per se of a

city that makes it a STC, but its relative position in the national urban hierarchy together with its economic structure" (p. 454). 'Second tier' city-regions are smaller than the large metropolitan regions, such as Toronto, Vancouver and Montreal, that dominate regional and national economies (Wachsmuth, 2008).

For the purpose of this study, the definition used to select the city-regions corresponds to the definition used in the Statistics Canada Canadian Economy in Transition report (Beckstead et al., 2008) and Brown et al.'s (2010) study, classifying medium-sized cities as urban areas with a population of 100,000 to 499,999. The selected city-regions have relatively smaller populations (typically 100,000 to 499,999, based on the 2011 Census) and are not regarded as 'global cities' (Sassen, 2001) as they play a secondary role in the urban hierarchy. These non-core cities in the urban hierarchy are losing out in the process of metropolitanisation and faced with the loss of knowledge resources due to the migration of human capital to larger metropolitan areas, commonly referred to as the 'brain drain' (Knight, 1995). Many students move to medium-sized cities to pursue their post secondary education. Upon completion of their degree, most graduates move to large urban centres, such as Toronto, Montreal and Vancouver. As a result, many medium-sized cities have been faced with a loss of the 20 to 34 year olds, to the point that some cities may soon be facing labour shortages (Thorn. et al., 2009). The selected city-regions are also home to the appropriate post-secondary education institutions, including both a college and university. As indicated by Winters (2001), smaller city-regions, without a university and college, are faced with greater challenges attracting human capital and therefore were excluded from this study. "Nonmetropolitan areas without access to higher education institutions have much greater difficulty attracting educated workers and thus are less able to build their human capital stock and grow their population" (Winters, 2001, p. 363). Darchen & Tremblay (2010) noted that post-secondary institutions are a key component of the knowledge economy, as they play a major role in youth attraction and are the primary source of highly skilled individuals.

There are nine city-regions across Ontario that met these criteria and were included in the policy document analysis: Guelph, Hamilton, Kingston, Kitchener-Waterloo, London, Peterborough, St. Catharine's-Niagara, Sudbury and Windsor. See

the map illustrated in Figure 1. Municipalities within the Greater Toronto Area and the City of Ottawa were excluded from this study as they are part of a different labour pool corresponding to the dominant regional and national economies. Thunder Bay was also excluded from the study as it has unique challenges of its own, due to its isolated Northern location.

Figure 1: Selected Medium-sized City-regions

Map provided by: Kathy Tang

Detailed information regarding the parameter selection for each of the selected city-regions can be found in Table 1. These cities of comparable size are all competing to attract and retain the brightest talent. These regions are all faced with similar challenges such as declining population growth rates, low youth retention and a small or negative net migration of the 20-34 age cohort. The net migration rates for each of the selected city-regions' targeted age cohorts are listed in Appendix G.

Table 1: Selected City-region Characteristics

City-region	Population*	Community College and University	Total Student Population
Guelph	141,097*	-Guelph University -Conestoga College	22,705 48,300
Hamilton	721,053**	-Mohawk College -McMaster University	62,500 27,989
Kingston	159,561*	-St. Lawrence College -Queens University	26,000 20,879
Kitchener – Waterloo	477,160***	-Conestoga College -University of Waterloo -Wilfred Laurier University	48,300 32,598 17,746
London	474,786*	-Fanshawe College -Western University	43,460 34,410
Peterborough	118,975*	-Trent University -Fleming College	6,977 15,000
St. Catharine's – Niagara	392,184*	-Niagara College -Brock University	24,000 17,650
Sudbury	106,840****	-Cambrian College -Collège Boréal -Laurentian University	12,500 1,600 9,164
Windsor	319,246*	-St. Clair College -University of Windsor	28,800 15,538

*Census Metropolitan Area (CMA) population based on the 2011 Census
** Hamilton was included, despite exceeding the population parameters, as it also faced with the challenge of attracting and retaining youth
***Population of the Kitchener-Cambridge-Waterloo Census Metropolitan Area
****Population of the Sudbury Population Centre based on the 2011 Census
Note 2: The university enrolment numbers are based on the 2012 Common University Data Ontario (CUDO) Report, using 2011 university statistics. The College enrolment numbers were found on the Ontario Colleges webpage, with the exception of Fanshawe College.

3.3.2 Policy Document Selection Period

In order to assess the institutions' current strategic directions, only the most recent and updated policy documents were used for analysis. The publication dates for the policy documents ranged between 2005 and 2012. Although only the most recent documents were used, it was important to also include older documents from institutions that have not published recent strategic directions. Therefore, policy documents

published between 2000 and 2012 were accepted, yet focus was primary on the most recent documents. In most cases there was only one document assessed per institution; however, in certain instances, some institutions split their plans into multiple sections and published each section within different documents. Appendix H, lists the documents selected from each institution as well as their publication date or period covered.

3.3.3 Methodology: Content Analysis

Content analysis is a highly flexible research method applied in qualitative, quantitative and mixed method approaches to systematically analyze written, verbal and visual documentation (Berg, 2009, White & Marsh, 2006). The purpose of the content analysis was to condense the information contained in the policy documents into common themes and patterns in order to identify the policies that guide the mobility of human capital (Bowen, 2009; Elo & Kyngäs, 2007; White & Marsh, 2006). The qualitative content analysis was conducted using the institutional policy documents from the nine selected city-regions to determine: (1) document and analyse the economic development policies implemented by local municipalities, economic development institutions and post-secondary institutions to counteract the loss of human capital; and (2) analyse whether and to what extent these policies discuss the role of infrastructure, design and the built environment in fostering investment and development. The selected policy documents include the universities' and colleges' strategic plans, as well as workforce strategic plans published by municipal economic development departments and economic development institutions.

The qualitative content analysis of the selected policy documents was conducted using an inductive approach. This approach is common when there is little former knowledge on the topic or if this knowledge is fragmented (Elo & Kyngäs, 2007), which is the case here as little is known on the role of the built environment in talent attraction and retention. Applying an inductive research approach, the research questions guided the data collection and analysis, and new themes emerged from further analysis of the data (White & Marsh, 2006).

Bruce Berg (2009) sets out the various stages involved in qualitative content analysis. The process begins by identifying the content-related categories based on the study's research questions; the data is then read and systematically condensed and sorted into the various categories; these categories are then analysed to identify themes and patterns in the data (Berg, 2009). The categories and selection criteria are continuously refined to account for emerging patterns in the data (Berg, 2009; White & Marsh, 2006). The findings are presented and explained in light of previous research and theory (Berg, 2009).

3.3.4 Themes and Indicators

As noted earlier, the sought after highly mobile human capital is drawn to regions that offer a high quality of life. Since quality of life, which includes various components of the built environment, is said to be essential in talent attraction and retention, and key to economic success, the focus of the policy document analysis was to determine what institutions have integrated policies into their strategic plans regarding the use of the built environment to attract and retain talent.

Table 2 indicates the thematic indicators used in the analysis. The nine indicators were derived from the research questions and based upon key themes discussed throughout the literature. The thematic indicators were divided into two broad categories: general policies to attract and retain talent and built environment policies to attract and retain talent.

Table 2: Policy Document Analysis Themes and Indicators

General Policies to Attract and Retain Talent			**Built Environment Policies to Attract and Retain Talent**					
Partnerships	Employment Opportunities	Education and Training	Research Park and Business Start-ups	Housing	Infrastructure and Transportation	Arts and cultural amenities	Quality of Life	City Size and Location

The first category of indicators, general policies to attract and retain talent, was included to answer the following research objective: document and analyse the economic

development policies implemented by local municipalities, economic development institutions and post-secondary institutions to counteract the loss of human capital. Three key indicators were used to address this objective: 1) partnerships, 2) employment opportunities and 3) education and training.

The partnerships indicator looks at which institutions utilise collaborative partnerships to develop effective talent recruitment and retention strategies. The employment opportunities indicator assesses what strategies are in place to ensure that graduates have access to a wide range of employment positions. The education and training indicator was developed to determine which institutions discuss the provision of continuing education and ongoing training to maintain and attract a strong workforce.

The second category of indicators focuses specifically on the various components of the built environment that play a role in talent attraction and retention. This category builds on the overarching research question discussed above and addresses the following research objective, which is to: 1) analyse whether and to what extent these policies discuss the role of infrastructure, design and the built environment in fostering investment and development. There were six key indicators used within the built environment category to address these research objectives: 1) research parks and business start-ups, 2) housing, 3) infrastructure and transportation, 4) arts and cultural amenities, 5) quality of life, and 6) city size and location.

The indicator for research parks and business start-ups establishes what programs and services are available to promote the start-up and growth of new businesses and, more specifically, which institutions promote the availability of facilities, funding, and support services, for fostering the development of small businesses. The housing indicator assesses which institutions discuss housing availability and the cost of living for attracting and retaining young professionals. The infrastructure and transportation indicator was developed to determine which institutions discussed current and future investments in transportation and related infrastructure upgrades necessary to attract human capital and promote growth. The arts and cultural amenities indicator examines which institutions value the importance of art and cultural resources in attracting the

creative class. The quality of life indicator examines which institutions foster and promote their region's quality of life as a means of attracting and retaining youth. The city size and location indicator sets out to identify which institutions draw young professionals to the region by promoting the regions' location relative to other major city centers and transportation networks, as well as its geographic and population size.

3.3.5 Policy Document Classification

The qualitative content analysis was conducted by manually reading the policy documents to identify the presence of the key themes discussed above. In order to systematically and consistently classify the policy documents, the indicators were assigned a value of 1 (stated), 2 (implied) and 3 (unstated) allowing to easily identify their presence within the policy documents. Table 3 lists and defines the codes used in the policy document analysis.

Table 3: Policy Document Classifications and Definitions

Code	Meaning	Description
1	Stated	The indicator was clearly stated within the document.
2	Implied	The indicator was indirectly referred to within the document.
3	Unstated	The indicator was not mentioned in any capacity.

3.4 Case Study

A case study was conducted to complement and build upon the findings of the policy document analysis. The case study of London, Ontario, consisted of interviews with graduates from Western University. The interviews examined graduates' locational trends and provided detailed insight into the city-region's ability to attract and retain post-secondary graduates. London was selected as a case study for the interviews as it has both a university (Western University) and a college (Fanshawe College), suffers from a negative net migration rate of the 25 to 29 age cohort (Statistics Canada, 2006) and is representative of the other cities selected in terms of its population characteristics.

Several studies critically assessed London's economic development performance which further emphasised the need to study this region's ability to attract and retain human capital. In the past two decades, the London region has been faced by the loss of corporate head offices and the closure of numerous manufacturing plants (Bradford, 2010). This coupled with the region's slow population growth rate and labour shortages, due to the loss of young professionals and aging Baby Boomers, has impacted the region's economic performance to the point that it now lags behind many of the key competing medium-sized city-regions in Southwestern Ontario (Bradford, 2009). The Martin Prosperity Institute's (2009) study of the London region found, that despite the presence of Western University, the city ranks below comparable North American city-regions in terms of human capital levels, with only 9% of the population holding a graduate or professional degree. They suggest that this is as a consequence of the brain drain resulting from the loss of students upon graduation and indicated that London would benefit from improved performance of the 3Ts, technology, talent and tolerance when competing to attract and retain talent in the creative economy (Martin Prosperity Institute, 2009). For instance, to illustrate the loss of human capital in the London region, during the 2011-2012 academic year, 23% of full-time first year students at Western were from the London and Middlesex region, and yet only 15% of Western alumni currently live in London (Western Facts, 2012). Gertler et al. (2002) conducted a study to evaluate the performance of city-regions in Ontario relative to other city-regions in North America. Their study highlighted London's strong performance in all four creative class indexes: Talent Index, Bohemian Index, the Mosaic Index and the Tech Pole Index. Gertler et al. (2002) indicated that London's strong performance in all four indices suggests that the region has a strong social and cultural foundation on which to build a successful local economy. Contrary to the Martin Prosperity Institute (2009), Gertler et al. (2002) ranked London 28th in North America on the talent index which is above the Canadian average, based on the proportion of the population with a bachelor's degree or higher. The variation in findings regarding the presence of an educated population only emphasises the need to further investigate the situation in London, Ontario.

3.4.1 Key informant Selection

The case study was based on 16 semi-structure in-depth interviews with graduates from Western University. These recent graduates are at the critical stage of labour force entry and thereby are making decisions about where to locate and initiate their careers. The potential interviewees were initially contacted by email and invited to participate in the study by the office of the Vice-President of External Relations at Western, which is responsible for alumni relations (Department of Alumni Relations & Development). Fanshawe College alumni were not included in the study due to ethical reasons as the process of getting in touch with alumni was lengthy and ultimately a time constraint.

Those invited to participate were initially selected from a stratified random sample of alumni who met the following criteria: (1) undergraduate alumni including professional graduates Medicine, Dentistry, Engineering, Law, etc, (2) graduated in the past 5 years, (3) under 34 years of age (4) have a valid email address by which they could be contacted, and (5) Canadian residents, as it is hard to justify policy implications and recommendations for alumni residing outside the country. Among this pool of potential candidates, half were living in the London area, representing the alumni that have remained in London post graduation, and the other half were living in Canada, yet outside the London region, representing the portion of graduates who have left London and settled in another city or province. By stratifying the pool of candidates in such a way, it was possible to compare the reasoning behind why some graduates have stayed in London and others have left. Those who have left "offer different perspectives on the city-region, perhaps highlighting the city's shortcomings" (Grant & Kronstal, 2010, p. 362). Those excluded from the study were: (1) faculty/staff in order to get a good understanding of the policy impact for alumni outside the 'Western bubble', (2) current students, such as undergraduates alumni that have returned to pursue graduate studies, (3) deceased, (4) alumni from any of the affiliated colleges (Huron, Brescia, Kings), and (5) those that have requested that their name be removed from any mailing list or research study.

Alumni that met these criteria were sent an initial email from the office of the Vice-President of External Relations inviting them to participate in the study. The first email was sent October 23rd, 2012 to 1,936 alumni. Of the 17% of alumni who opened the email, eight graduates showed interest in the study, and five took part in an interview. Due to the low response rate, a second email was sent on November 17th, 2012 to the remaining 4,024 graduates who met the inclusion criteria, of which 19% opened the email, 22 indicated an interest in the study and 11 participated in an interview. There were a total of 16 interviews, by which time saturation, referring to substantially similar and overlapping information, had been achieved. The participants provided a diverse range of perspectives on the role of the built environment in talent attraction and retention due to the array of graduates interviewed, both males and females from a variety of disciplines, which included both leavers and stayers. By interviewing both graduates who have stayed in London and others who have left, it was possible to get a better understanding of the factors influencing their locational decisions. A total of 16 interviews were conducted with 6 females and 10 males, 4 stayers and 12 leavers. The participants' personal characteristics are summarized in Appendix J. Unlike previous studies, this research was not limited to graduates in specific fields such as: engineering, science and technology (Hansen at al., 2003; Darchen & Tremblay, 2010) as it is important to meet the design and built environment needs of all graduates.

3.4.2 Methodology: In-Depth Interviews

Semi-structured in-depth interviews were employed in this research to complement the findings of the policy document analysis. The policy document analysis provided insightful information on the current policies in place to counteract the loss of knowledge resources and the use of infrastructure, design and the built environment to help attract and retain university and college graduates. The in-depth interviews were conducted to expand on the themes presented in the policy document analysis, by allowing for further investigation into whether the graduates' built environment needs are being met through the policies implemented by the various institutions.

Within the literature, a variety of qualitative and quantitative, single and mixed methods approaches are employed to investigate the factors influencing the spatial behaviour of human capital. The most commonly used approach in this field of research employs quantitative methods, specifically surveys (Asheim & Hansen, 2009; Franco et al., 2010; Gottlieb & Joseph, 2006; Hansen & Niedomysl, 2009; Huffman & Quigley, 2002; Kodrzycki, 2001; Martin-Brelot et al., 2010; Muphy et al., 2009; Reese, 2012; Tomaney & Bradley, 2007; Venhorst et al., 2010; Venhorst et al., 2011; Waldoft, 2009). Other scholars have investigated the topic using qualitative methods such as interviews (Andersen et al., 2010a; Bontje & Musterd, 2009; Darchen & Tremblay, 2010; Grant & Kronstal, 2010; Lepawsky et al., 2010) and focus groups (Anderson et al., 2010a) or both (Florida 2002a; Florida 2002b; Walton-Roberts, 2011). Other scholars took a mixed methods approach combining both qualitative and quantitative methods (Darchen & Tremblay, 2010; Hansen et al., 2003; Houston et al., 2008). In this study, interviews were selected as primary method rather than surveys as the goals was to obtain in-depth information on alumni locational decisions and built environment needs, rather than collecting a large volume of data. The use of interviews allowed for a more detailed analysis of the underlying themes guiding the research questions.

Interviews explore the thoughts, views, beliefs and knowledge of individuals on a specific topic (Gill et al., 2008; Lambert & Loiselle, 2008). In this research, interviews were used to gain detailed insight from university graduates regarding the factors that influence their locational decisions in order to determine the role of the built environment in shaping their spatial patterns. The use of semi-structured interviews allowed for flexibility in the interview process. The predetermined open ended questions helped guide the dialogue; however, the semi-structured format allowed the interviewer to diverge from the original questions to ask for elaboration regarding some of the ideas that emerged from the dialogue (DiCicco-Bloom & Crabtree, 2006; Gill et al, 2008).

Hansen et al. (2003) provide a good framework of questions on which the interview questions were built. These questions were altered to address the following research objective, which is to: analyse and interpret what factors influence post-secondary graduates' location decisions and determine their design and built environment

needs. Various topics were covered during the interviews. The first topic area looked at the graduates' background information to determine what initially brought them to London. These questions included what attracted them to pursue their post-secondary degree in London and what factors were most important when selecting a university or college. The next set of questions dealt with their reasons for staying in or leaving London, whether due to employment, starting a business, art and cultural resources, housing, parks and recreation, and proximity to friends and family. If their decisions were made due to employment considerations, they were asked which characteristics they consider important when looking for a job, and whether the location of their job is important. They were also asked about their job history since graduation. The third set of questions looked at the impact of the built environment in their locational decisions, how it affected their enjoyment of the region and whether London offers the built environment necessary to engage in their favourite activities. The following set of questions were designed to get a feel for the graduate' take on the situation, to determine what changes they feel are necessary in London to make the region more attractive to recent graduates. The final question touched upon their future plans and whether they plan on remaining in or returning to London in the long run. The full list of questions is outline in the interview guide found in Appendix I.

For the interviewees currently living in London, the interviews were conducted in person at a location of their choosing, such as Williams Coffee Pub, allowing them to be comfortable and to help ease the dialogue. All other graduates were interviewed by phone or Skype. The interviews took approximately 60 minutes to complete and were audio recorded with the permission of the interviewee.

3.4.3 Analysis

The audio recordings from the interviews were transcribed verbatim into text format for analysis. The transcriptions were manually read to identify and categorize key themes. These themes include: 1) Initial Attraction to London, Ontario, 2) Reasons for Staying in or Leaving London, Ontario, 3) Important Job Characteristics, 4) Impact of the

Built Environment on Graduates' Mobility, 5) Assessment of London's Built Environment, 6) Reasons Why London has Difficulty Attracting and Retaining University and College Graduates, 7) Internships and Co-ops, and 8) Graduates' Future Locational Plans. The results are discussed in greater detail in chapter 5.

3.5 Rigour

Rigour is an essential component of qualitative research for protecting against bias and achieving reliability and validity of the findings (Mays & Pope, 1995; Tobin & Begley, 2004). Baxter and Eyles's (1997) analysis of thirty-one empirical studies found that rigour is most commonly achieved by providing a rationale for the methodological approach, using multiple methods through triangulation, providing information on participant selection and using verbatim quotations to illustrate the conclusions.

Various steps were taken to ensure rigour in this study. These steps included: explaining the purpose of the research, methodology rationale, participant selection, data collection and analysis, and results (Baxter & Eyles, 1997). The mixed-methods approach, employing both qualitative content analysis and in-depth interviews, was used to enable triangulation. Triangulation of data originating from at least two different, independent methods provided validity and completeness of the findings (Baxter &Eyles, 1997; Mays & Pope, 1995; Tobin & Begley, 2004). Furthermore, additional steps were taken to ensure validity and reliability in the interview process. The study stated how the participants were recruited and the number of graduates interviewed (Baxter & Eyles, 1997). The process of recruitment through random sampling ensured a representative sample of Western alumni (Mays & Pope, 1995). In addition, a standardized interview guide was used to enhance rigour by guiding each participant through the same set of questions, allowing for the easy identification of emerging themes (Baxter & Eyles, 1997). The interviews were audio recorded, transcribed verbatim and documented in detail to ensure the reliability of the data (Mays & Pope, 1995). During the analysis of the interview data, the participant's verbatim quotations were utilised to illustrate the findings (Baxter & Eyles, 1997).

CHAPTER 4: POLICY DOCUMENT ANALYSIS

4.1 Introduction

This chapter presents the findings from the policy document analysis. The purpose of the policy document analysis was to gain insight into the strategies currently in place to attract and retain youth, and determine whether these strategies discuss the role of the built environment. The policy document analysis seeks to address the overarching research question: to what extent and in what ways do policies of key institutions seek to attract and retain post-secondary graduates in medium-sized city-regions in Ontario? Does the built environment play a role in these policies?

A qualitative content analysis was conducted of the institutional policy documents published by the nine selected medium-sized city-regions. The selected policy documents include the universities' and colleges' strategic plans, as well as workforce strategic plans published by the local economic development institutions. The policy document analysis was conducted to address the following research objectives: (1) document and analyse the economic development policies implemented by local municipalities, economic development institutions and post-secondary institutions to counteract the loss of human capital; and (2) analyse whether and to what extent these policies discuss the role of infrastructure, design and the built environment in fostering investment and development.

These research questions were addressed using nine key indicators to assess the content of the policy documents. The indicators were derived from the research questions and based upon key themes discussed in the literature reviewed in Chapter 2. The thematic indicators were divided into two broad categories: general policies to attract and retain talent, and built environment policies to attract and retain talent.

In general two broad policy themes emerged from this analysis: 1) large variations in content and detail of the policy documents (geographically and institutionally variable), 2) a patchwork quilt of strategies exist to attract and retain youth. The

highlights from the content analysis are presented in detail throughout the chapter. Summary results are presented in Appendix K.

4.2 Findings

As discussed in Chapter 3, the nine medium-size city-regions were selected based on population size, between 100,000 and 499,999, and the presence of post-secondary institutions including both a university and college. There are nine city-regions across Ontario that met these criteria and were included in the policy document analysis: Guelph, Hamilton, Kingston, Kitchener-Waterloo, London, Peterborough, St. Catharine's-Niagara, Sudbury and Windsor. These cities of comparable size are all competing to attract and retain the brightest talent. These regions are all faced with similar challenges such as declining population growth rates, low youth retention and a small or negative net migration of the 20-34 age cohort. Each region's most recent institutional policy documents were assessed including the universities' and colleges' strategic plans, as well as workforce strategic plans published by the local economic development institutions.

The selected institutions highlighted in their policy documents the need to development strategies to reverse the 'brain drain' in order to prevent future workforce shortages. Medium-sized city-regions across Ontario are faced with increased labour shortages in what some call a 'demographic time bomb' resulting from: an aging workforce, poor youth retention and slow population growth rates caused by low birth rates and poor immigration attraction (London Economic Development Corporation, 2007). In spite of these numerous demographic challenges, municipalities are most concerned with the net out-migration of the youth demographic which, as indicated by many of the selected municipalities, can present many economic challenges (City of Hamilton, 2010; Greater Peterborough Area, 2010; The City of Waterloo, 2008; Windsor Essex Economic Development Corporation, 2011). The significant out migration of university and college alumni has resulted in missed market opportunities, workforce shortages and limiting economic growth, leaving many local businesses at risk if they

cannot meet their human resource requirements (London Economic Development Corporation, 2007; Niagara Region, 2009; Windsor-Essex Economic Development Corporation, 2011). Some attribute this shortage of graduates to the lack of alignment between the skills taught in the education system and industry needs; therefore, forcing graduates to leave medium-sized cities to find suitable employment in large metropolitan regions (Windsor Essex Economic Development Corporation, 2011).

Ontario's socio-economic future is threatened by the looming workforce shortage which, by 2025, is forecasted to reach a deficit 360,000 skilled workers (City of Hamilton, 2010; Niagara College Canada, 2009). The provincial and federal governments have taken measures to minimize the looming workforce shortage, yet municipalities must do their part to prevent the loss of graduates and skilled workers (London Economic Development Corporation, 2007). Each of the selected city-regions has their own unique challenges due to their vast geographical and socioeconomic differences. The selected medium-sized city-regions must all compete for talent, yet they are at a disadvantage compared to large metropolitan regions as they cannot provide the same diversity and volume of amenities (Greater Sudbury Development Corporation, 2009; KEDCO, 2008). In order to compete with large urban centers, medium-sized cities must provide attractive environments where youth want to live (The City of Catharine's, 2011; Windsor-Essex Economic Development Corporation, 2011). Communities that can provide businesses with a skilled labour pool are better positioned for business investment and economic growth (City of Hamilton, 2010; Windsor-Essex Economic Development Corporation, 2011). As indicated by the Niagara Region (2009), "It is clear that Niagara's future prosperity depends on the strength of its people and on its capacity to produce and attract skilled graduates and versatile workers" (p.9).

Despite the numerous challenges associated with the loss of graduates, youth attraction and retention strategies are often overlooked (City of Hamilton, 2010). The City of Waterloo (2007) believes that: "The City must recognize the importance of the Creative Class to the local economy, and create a specific strategy for building the kind of community that will attract and retain these knowledge-based workers" (p. 90).

Given the economic implications resulting from the shortage of human resources, the selected medium-size cities have established strategies to attract and retain youth. Among these strategies, some municipalities have made talent attraction and retention a strategic priority through the establishment of youth retention programs and marketing strategies. The most common strategies for attracting and retaining youth are: 1) partnerships, 2) research parks and business incubators, 3) marketing, 4) education and training, 5) infrastructure and transportation, 6) quality of life, 7) employment opportunities, 8) city size and location, 9) arts and cultural amenities, 10) housing and costs of living, 11) foreign talent, and 12) youth engagement in the community. These strategies will be discussed in greater detail later in this chapter.

4.3 Key Indicators

Nine key indicators were derived from the literature and used to assess the content of the policy documents and answer the research questions. Each indicator represents a common strategy found in the literature to attract and retain youth. The thematic indicators were divided into two broad categories: general policies to attract and retain talent and built environment policies to attract and retain talent.

4.3.1 General Policies to Attract and Retain Talent

The first category of indicators, general policies to attract and retain talent, was included to answer the following research objective: document and analyse the economic development policies implemented by local municipalities, economic development institutions and post-secondary institutions to counteract the loss of human capital. Three key indicators were used to address this question: 1) partnerships, 2) employment opportunities 3) education and training.

Partnerships help key community stakeholders combine resources and share knowledge, skills and experiences, in order to strengthen the region’s economy, promote

knowledge transfer and foster innovation in the knowledge economy (Leibovitz, 2003). The partnership indicator was set out to identify what policies are in place to support industry and community partnerships with the post-secondary institutions, with the view that strong partnerships help raise awareness of local opportunities and build students' ties within the community.

The literature review revealed that employment opportunities are the most commonly regarded factor influencing graduates' mobility. Young graduates are attracted to regions with numerous high paying jobs and a strong labour market. The employment indicator was set out to determine whether policy makers have followed suit by implementing policies geared towards providing graduates with appropriate employment opportunities that will encourage them to start and develop their careers locally.

The strong presence of education and training in the literature indicates the importance of post-secondary institutions in the spatial distribution of human capital. Educational institutions play a large role in fostering innovation and advancing economic development by providing the skilled workforce necessary to attract investment (City of Hamilton, 2010). This indicator identifies which institutions discuss the provision of continuing education and ongoing training to maintain and attract a strong workforce.

4.3.2 Built Environment Policies to Attract and Retain Talent

The second category of indicators focuses specifically on the various components of the built environment that play a role in talent attraction and retention. This category builds on the research question discussed above and addresses the following research objective: analyse whether and to what extent these policies discuss the role of infrastructure, design and the built environment in fostering investment and development. There were six key indicators used within the built environment category to address these research objectives: 1) research parks and business start-ups, 2) housing, 3) infrastructure

and transportation, 4) arts and cultural amenities, 5) quality of life, and 6) city size and location.

The research parks and business start-ups indicator establishes which institutions promote talent attraction and retention through the availability of facilities, funding and support services, that foster the development and growth of new businesses. These small business services are said to support entrepreneurship and enhance the city's attractiveness to the new generation of talent by promoting job creation, which in turn stimulates local economic growth. Business incubators and research parks were not initially flagged as key factors influencing graduate's locational decisions due to their limited discussion in the literature; yet, this indicator was added as they are the most commonly discussed strategy used by the selected institutions to attract and retain human capital.

Housing costs and costs of living were one of the most commonly discussed factors in the literature on talent attraction and retention, and were therefore selected as one of the key indicators in the policy document analysis. The housing indicator assesses which institutions discuss the provision of adequate, affordable and quality housing to attract and retain human capital. The availability of quality housing and the cost of living can have a large impact on where graduates decide to locate. City-regions want to provide attractive residential environments that meet the changing needs of the creative workforce.

As the literature suggests, the effectiveness of the transportation network is an important factor in talent attraction and retention (Grant & Kronstal, 2010; Hansen et al., 2003 & Martin-Brelot et al., 2010). Individuals seek areas with efficient transportation networks free of congestion, easing the commute to and from work. The infrastructure and transportation indicator was developed to determine which institutions consider infrastructure and transportation in their strategic plans for attracting and retaining talent. Infrastructure includes: transportation infrastructure (airports, marine ports, rail infrastructure and roads), systems for the delivery of water, power and waste disposal services, cross-border infrastructure, business and industrial park infrastructure,

telecommunications infrastructure and energy infrastructure. It is important for city-regions to develop the infrastructure needed to attract human capital and promote growth. Such strategies include implementing the necessary infrastructure to offer shorter commute times, accommodate a diversified and mobile labour market, and meet the needs of local businesses.

The arts and cultural amenities indicator assesses which institutions consider the use of cultural amenities for attracting and retaining talent. This concept is based on the work of Richard Florida (2002b), who stressed the use arts and culture amenities as a magnet for attracting and retaining the human capital necessary to foster a region's economic prosperity.

Quality of life was commonly discussed throughout the literature as a means to attract and retain the creative class. These ideas stem from the work of Richard Florida who advocates creating vibrant communities, rich in culture and fostering a strong quality of life, as it is said to draw knowledge workers. The quality of life indicator examines which institutions foster and promote their region's quality of life as a means of attracting and retaining youth.

As indicated in the literature, the city's size and location relative to provincial, national and international networks impacts its ability to attract and retain talent (Lepawsky et al., 2010). This indicator sets out to identify which institutions draw youth to the region by promoting the regions' location relative to other major city centers and transportation networks, as well as its geographic and population size.

4.4 Key Themes

Two key themes were derived from the policy document analysis which was based upon the findings from the nine indicators.

1) Large variations in content and detail of the policy documents, both geographically and institutionally variable

2) Twelve key strategies to attract and retain youth

4.4.1 Variation in the Content and Detail of the Policy Documents

There are large variations in the content and detail of the policy documents with regards to the use of the built environment to attract and retain talent. These variations are both geographic and institutional. The geographic variations are less apparent than the institutional variations; however, they are still worth noting. Some regions such as Hamilton, Kitchener-Waterloo and London say more in terms of the use of the built environment to attract and retain youth, yet these variations are relatively small.

On the other hand, there are large institutional variations between the content of the post-secondary institutions and the economic development institutions regarding the built environment's impact on individuals' mobility. Not only do the economic development institutions say more in terms of the built environment but they say more in terms of talent attraction and retention in general. Post-secondary institutions generally do not indicate any interest in retaining post-secondary graduates within their respective city regions. These institutional variations emphasize differing strategic priorities, which "is not surprising given the differing mandate and agenda priorities of the selected institutions" (Clemens, 2012, p. 68). Despite the numerous partnerships between post-secondary institutions and their respective city-region to boost local economic development, there appears to be a lack of policy coordination in terms of attracting and retaining human capital. Post-secondary institutions seek to attract the brightest students regardless of their future locational plans and preparing them for their professional careers, within local, provincial, national and international environments (Laurentian University, 2008; Queen's University, 2006; The University of Waterloo, 2007; University of Guelph, 2011; University of Western Ontario, 2007). In other words, universities and colleges are not encouraging graduates to remain in the area where they completed their studies. On the other hand, local municipalities have identified the attraction and retention of the highly skilled as a strategic priority and strive to keep a

large proportion of graduates within the region despite their generally limited actions to address this issue (Clemens, 2012).

There are also large variations among the economic development institutions. The Kingston Economic Development Corporation (2008) and the City of Hamilton (2010) were the only two institutions to have specific documents on attracting and retaining youth.

The Kingston Economic Development Corporation conducted a collaborative study with Queen's University on graduate retention which is entitled: "Creative Economy Challenges: Retention of Queen's Graduates in the Greater Kingston Area", published separately from their strategic plan. "Recognizing that Queen's University attracts some of the best and brightest minds from Canada and beyond, KEDCO commissioned a study to determine factors that affect the retention and attraction of knowledge workers in general, and specifically Queen's graduates" (Kingston Economic Development Corporation, 2008, p. 4). The study consisted of a series of focus groups with upper year undergraduate and graduate students which guided the questions used in their survey of 3,000 alumni and 900 students from Queen's University. The questions were designed to determine what factors play a role in graduate attraction and retention. The survey findings indicated that only a small portion of graduates considered finding employment Kingston upon graduation for multiple reasons: limited employment prospects, proximity to family and friends, lack of lifestyle amenities, limited cultural diversity and poor infrastructure. They concluded that in order to capitalise on this talent pool and retain students post graduation, they must focus on increasing the number of employment opportunities available for recent graduates and make students feel welcome in the community, as those that consider themselves members of the community are more likely to stay upon graduation.

The City of Hamilton prepared a report entitled "Youth Retention, Attraction, Engagement and Hamilton", which can be found as an appendix in the Hamilton Economic Development Strategy 2010-2015. In this report, they reviewed existing youth attraction and retention strategies implemented in other Canadian regions. Following an

assessment of the current situation, they assessed the city's strengths, weaknesses, opportunities and threats in terms of youth attraction and retention. Based on these findings, they made a series of recommendations to address the situation, the strategies include: establishing the Taskforce on Youth Retention and Attraction, developing the Youth Retention and Attraction Strategy for the City of Hamilton, creating a web portal, expanding the existing Hamilton Business Ambassador program, and recognising students as members of the community by including them in community organisations and developing welcome programs. Additional information about the youth attraction and retention strategies will be discussed later in this chapter.

As for the other economic development institutions, the London Economic Development Corporation's policy document was a workforce development strategy for the City of London. It examined general workforce issues and was not geared specifically towards retaining youth. Emerging Leaders, an incorporated non-profit organisation in London, published a document promoting graduate retention through youth engagement in the London community, yet it was not included in the policy document analysis as it was not published by or in association with the economic development corporation; yet, it was included in other sections of this research.

The City of Kitchener, Niagara Region and Windsor-Essex Economic Development Corporation each had a 2 page section in their strategic plan devoted specifically towards talent attract and retention as a core area of focus. The other economic institutions, including the Greater Sudbury Development Corporation, Greater Peterborough Area, City of Guelph, The City of St. Catharine's and The City of Waterloo, each briefly touched upon youth attraction and retention, yet these ideas were embedded in other sections of their strategic plan and were not given major consideration. However, some of these institutions indicated the need to create youth specific workforce development strategies, labour attraction and retention strategies and taskforces.

4.4.2 Twelve Key Strategies to Attract and Retain Youth

Based on the analysis of the policy documents, it was determined that there are twelve key strategies used by economic development institutions and post-secondary institutions to attract and retain talent to their respective city-regions. Similar to the indicator classification, the strategies were divided into two broad categories: general policies to attract and retain talent and built environment policies to attract and retain talent. These categories include all nine indicators plus the other key strategies found throughout the analysis.

The following paragraphs examine the general policies to attract and retain talent, which include: partnerships, employment opportunities, education and training, youth engagement in the community, foreign talent and marketing.

Partnerships were the most commonly stated method to attract and retain talent. All eleven economic development institutions and three post-secondary institutions indicated the value of collaborative partnerships in the race for talent. Partnerships are essential for establishing strong links between local academic institutions, local economic development institutions, community organizations, governments of all levels, public and private corporations, and local employers. Partnerships help key community stakeholders combine resources, share knowledge, skills and experiences, which in turn help strengthen the region's economy and promote innovation in the knowledge economy (Kingston Economic Development Corporation, 2011; Leibovitz, 2003). Collaborative partnerships allow the selected medium-sized cities to better position themselves to compete globally and sustain economic growth (Greater Peterborough Area, 2010; Kingston Economic Development Corporation, 2011; Windsor-Essex Economic Development Corporation, 2011).

> Partnerships are a critical component to our overall success. Building strong local, regional and extra-regional partnerships to develop collaborative activities enhance economic and tourism development capacity in our city and the greater region. Partnerships assist in adding greater value to what we do and drive success in realizing job and investment growth (Kingston Economic Development Corporation, 2011, p. 2).

In addition to fulfilling their primary role as educators and leader in the community, many post-secondary institutions expressed the desire to work in partnership with their respective community to support local economic development and contribute to the prosperity and well being of their region (Brock University, 2010; Collège Boréal, 2010; Fleming College, 2010; Laurentian University, 2008; McMaster University, 2011; Niagara College, 2009; St. Laurence College, 2010; The University of Waterloo, 2007; The University of Western Ontario, 2007; The University of Windsor, 2010; Trent University, 2010).

> Niagara College is a key partner in the economic development and success of the Niagara Region. This is our mandate as a responsive and responsible college. We support economic development by providing highly skilled graduates who are taught by talented and committed faculty in responsive academic programs, supported by services such as workforce development and training initiatives, and applied research and business support. Our strategic objectives for the next five years: ...Strengthen our partnership with Brock University to attract and retain youth, and produce skilled graduates for a transitioning economy (Niagara College, 2009, p.13).

Universities and colleges can also greatly benefit from strong partnerships. Western University (2007) and Trent University (2010) both indicated that they have received strong support from the community and value their close and mutually supportive relationship.

> The Trent community seeks to be an engaged community at local, regional, provincial, national and international levels. In particular, Trent has been supported by the larger Peterborough community and in turn is a major contributor to the social, economic and cultural fabric of this region. These relationships are important to both parties and can be strengthened to our mutual advantage (Trent University, 2010, p. 14).

Through these partnerships, post-secondary institutions can ensure that their graduates are equipped with the skills necessary to meet the needs of the community (Conestoga College, 2010; Fanshawe College, 2011; Laurentian University, 2008; Niagara College, 2009; Queen's University, 2006; St. Claire College, 2010). Conestoga College (2010) values the importance of partnerships, stating: **"**Partnerships continue to

be essential to the development of innovative programs focused on addressing skills shortages, meeting labour market demands and contributing to the local, provincial and national economies" (p. 13). In many city-regions, partners are working together to develop a workforce development task force responsible for creating strategies that foster human capital growth and meet industry needs (City of Guelph, 2010; London Economic Development Corporation, 2007). The City of Hamilton has created a task force specifically concerned with youth attraction and retention (City of Hamilton, 2010).

Although all the post-secondary institutions discuss partnerships, Conestoga College, Niagara College and Mohawk College were the only ones to specifically link partnerships with talent attraction and retention. As put by Mohawk College (2012): "Our Strategic Plan... positions Mohawk as an ideal college for employers interested in partnering with us and in recruiting our highly desirable graduates" (p. 19).

The economic development institutions indicated the importance their partnerships with educational institutions as they are the primary source of research, innovation and skilled human capital needed to build a strong workforce and support economic growth (Greater Sudbury Development Corporation, 2009; Niagara Region, 2009; The City of Kitchener, 2011; Windsor-Essex Economic Development Corporation, 2011).

> The strategy reaffirms the importance of our educational infrastructure and specialized research institutions as a major asset and a primary source of local talent pool development. It calls for the strengthening and leveraging of unique expertise, resources and partnerships especially from Brock University and Niagara Colleg (Niagara Region, 2009, p. 4).

> Enhancing links between learning and working
> London employers rely on educational and training institutions to provide them with skilled and educated workers, and to help retrain and upgrade the skills of their existing workforce. Enhancing the links between our educational and training facilities and employers will be critical to ensure workforce needs can be met (London Economic Development Corporation, 2007, p.9).

Post-secondary institutions also promote effective knowledge and technology transfer which are essential for fostering innovation and producing skilled labour that

meets the needs of the community (Greater Sudbury Development Corporation, 2009; Niagara Region, 2009; The University of Waterloo, 2007 & Trent University, 2010).

Another common strategy is employment opportunities. Based on the findings from the content analysis, seven economic development institutions examined, either directly stated or implied, the link between employment opportunities and human capital attraction and retention. Although, none of the post-secondary institutions discussed that link, several universities and colleges indicated the importance of ensuring graduates are well prepared to meet the demands of employment and equipped with the skills and knowledge necessary to achieve their employment goals (Fanshawe College, 2011; University of Guelph, 2011). Most post-secondary institutions endorse the employment rates of their graduates as a means of measuring their success, yet they do not favour a particular location of employment.

As indicated by the Windsor-Essex Development Corporation (2011), one of the key reasons for the strong out-migration of youth is the lack of employment opportunities. "There has been population out-migration in recent years - particularly among a younger demographic. Some of this challenge is the lack of alignment between education system output and career opportunities. Many young people leave to find work" (Windsor-Essex Economic Development Corporation, 2011, p.48). If these outward migration trends continue, some medium-sized city-regions will soon be faced with labour shortages in some industries (The City of Waterloo, 2008; Thorn et al., 2009). In order to retain these youth, the selected city-regions must not only provide graduates and their spouses with a range of employment opportunities, but also build awareness of the local opportunities through various marketing strategies, as most youth are simply unaware of the local jobs available (City of Hamilton, 2010; City of Waterloo, 2008; Kingston Economic Development Corporation, 2008; Windsor-Essex Economic Development Corporation, 2011). The City of Hamilton (2010) indicated that: "Stakeholders in all clusters commented on the necessity of retaining students in Hamilton. This can be achieved by informing students about local opportunities, providing linkages to business and working with select media to deliver key messages" (p. 411).

The City of Hamilton has established a Post Secondary Program with the goal of retaining university and college graduates:

> The purpose of the Post Secondary Program is to enable the City of Hamilton to keep graduates in Hamilton. The program will enable outreach to students to promote information dissemination about local jobs, inform students about local programs and encourage start-ups while fostering relations with the institutions themselves (City of Hamilton, 2010, p.412)

The economic development institutions have used various marketing strategies to promote their local jobs to youth, such as: 1) advertising through school agendas, student newspapers and social media, 2) posting flyers in schools, 3) running local radio ads, 4) holding job fairs and information sessions to inform students about programs, services and local opportunities, 5) marketing small business centers and research parks, and 6) encouraging career services to provide information on local opportunities (City of Hamilton, 2010; Kingston Economic Development, 2008; Windsor-Essex Economic Development Corporation). In addition, the City of Hamilton (2010) plans on developing a website that provides links to local job postings, business start-up information and resources, mentor program information, contact information, discussion groups, internship and co-op opportunities. In order for these marketing strategies to be effective, they require strong partnerships among all community partners involved (City of Hamilton, 2010).

Local economic development institutions indicated the need to connect students with local employers through job fairs, on-campus recruitment opportunities, and student-employer matching programs (Kingston Economic Development Corporation, 2008).

> Develop labour market strategies to support and assist local employers connect with potential employees, retain graduates from our institutions (Queen's University, Royal Military College of Canada, St. Lawrence College), grow and retain skilled trades, and attract qualified employees to our city (Kingston Economic Development Corporation, 2011, p.1).

Connections can also be built through summer employment opportunities, co-op placements and post-grad internship opportunities. These positions are great ways to inform students of opportunities available in the community, help them network with

local employers and in turn encourage them to stay (City of Hamilton, 2010; Kingston Economic Development Corporation, 2008; Windsor-Essex Economic Development Corporation, 2011). As indicated by the Kingston Economic Development Corporation (2008), students who find employment in the region during the summer are more likely to have a favourable view of the city and remain upon graduation.

In some cases the employment shortages result from the lack of businesses; therefore, some economic development institutions have geared their employment strategies towards attracting businesses and large corporations to the area with the hopes that it will stimulate job creation and help keep young professionals in the area (City of Hamilton, 2010; Kingston Economic Development Corporation, 2008).

Another strategy targets education and training. The strong presence of education and training in the literature indicated the importance of post-secondary institutions in the spatial distribution of human capital. Educational institutions play a large role in fostering innovation and advancing economic development by providing the skilled workforce necessary to attract investment (City of Hamilton, 2010). Universities and colleges provide medium-sized cities with a constant stream of graduates from a large range of degree and diploma programs (London Economic Development Corporation, 2007).

Education's Role in Innovation

> Education is indispensable to economic development. No economic development is possible without good education. A balanced education system promotes not only economic development, but productivity, and generates individual income per capita. In this "New Economy", there is a new paradigm emerging known as a "knowledge first" - where higher education is taking a leading role in areas like; *Innovation* (developing new technologies, new processes, new products, new ideas); *Helping employers* (worker training, management counselling, help for start-ups, and other initiatives); *Community development* (colleges and universities developing and managing property in a variety of roles – such as housing, businesses that serve the college and others, culture and recreation roles) ; and *Educated Population* (the most fundamental contribution to economic development lies in its traditional role: creating an educated population in the community) (City of Hamilton, 2010, p. 8).

For medium-sized cities having an educated population is the key to success in the knowledge-based economy.

> A community that is undergoing significant economic and demographic transition will have the greatest chance of success if its people have access to the education and life-long learning opportunities that will underpin emerging economic opportunities and the quality of life (The University of Windsor, 2010, p.19).

Nine economic development institutions discussed, either directly stated or implied, the provision of continuing education and ongoing training to maintain and attract a strong workforce.

> The Windsor-Essex region has numerous distinct competitive advantages that can be leveraged to attract, retain, and grow both the industries and the talent needed to drive the regional economy forward including: ...Strong and vibrant post-secondary educational institutions in the University of Windsor and St. Clair College. They have been very successful in attracting international talent to the region and function as catalysts for advanced research and development activities (Windsor-Essex Economic Development Corporation, 2011, p. 7).

Many of the selected economic development institutions are encouraging local businesses to foster a learning culture by developing workforce training programs and promoting lifelong learning (Niagara Region, 2009). There are numerous benefits to providing continuing education and workforce training, they help: maximize labour force participation, increase retention of skilled employees and improve the region's overall educational attainment levels (City of Hamilton, 2010; London Economic Development Corporation, 2007; Niagara Region, 2009). Strong partnerships between post-secondary institutions and local employers helps ensure that the current workforce can keep up with the industry's changing trends and evolving technology, and ensure that the education and training curriculum aligns with current industry needs (City of Guelph, 2010; City of Hamilton, 2010; London Economic Development Corporation, 2007; Niagara Region, 2009; Windsor-Essex Economic Development Corporation, 2011).

As for the post-secondary institutions, very few of the universities or colleges seek to attract and retain youth to their respective city-regions; most are simply striving to

meet their primary mission which is to educate (Clemens, 2012). However, many post-secondary institutions recognize their role in the growth and development of its region's workforce.

> Our region and province look to the post-secondary sector as a key resource to advance and support its economic future. ...Niagara College graduates are a critical resource, providing support for the transitioning economy. Niagara College has a key role in ensuring that the programs we offer provide the knowledge, skills, and experiences that allow our graduates to hit the ground running, and make an immediate, positive impact in the workplace (Niagara College, 2009, p. 6).

The selected medium-sized cities have a competitive advantage over other smaller city-regions, simply because they have the post-secondary education institutions needed to develop a skilled workforce. These regions must take advantage of the large volume of youth that these post-secondary education institutions attract and find ways to retain these bright minds within the community (Niagara Region, 2009; Windsor-Essex Economic Development Corporation, 2011).

Youth engagement was not specified in the literature as a factor influencing graduate's locational decisions and yet both the City of Hamilton (2010) and the Kingston Economic Development Corporation (2008) indicated the importance of engaging youth in the community in order to show them what the community has to offer. The City of Hamilton (2010) believes that youth empowerment within the community is crucial for youth retention and boosting the region's socio-economic development. "The more a student may feel engaged by the community, and included in it, the more respect and responsibility they will, in turn, treat it with. More importantly, the more likely they may consider settling there beyond their studies" (City of Hamilton, 2010, p. 217). The City of Hamilton also states:

> ...the engagement of students off-campus is of primary concern, both those from the given municipality and those from outside. Nevertheless, this still relates heavily to the principles of attraction and retention, as the more that a city may engage its institution's youth, the more it shows them what it has to offer, giving them reasons for precisely why they should stay (City of Hamilton, 2010, p. 230).

Student engagement within the community is especially important to remove the student 'bubble', which occurs when students live close to campus and rarely venture out in the community. Many students want to get involved in the community yet they are simply unaware of the opportunities available (City of Hamilton, 2010). This requires advertising and marketing to university and college students, on the behalf of local municipalities, to raise awareness of local associations, events and volunteer opportunities (KEDCO, 2008).

It is also important to eliminate negative stereotypes framing students as trouble makers and wild partiers (City of Hamilton, 2010). The community's perceived negative attitude towards university and college students polarises the distinction between students and citizens, rather than recognizing students as members of the community (City of Hamilton, 2010; KEDCO, 2008). Students are more likely to consider the region as home when they develop respect and affection for the area and feel welcome within the community (City of Hamilton, 2010).

Municipalities and local businesses must not only support decisions that recognise students as members of the community and cater to their needs during and following their studies, but also include them in the municipal process (City of Hamilton, 2010). By allowing students to be engaged as members and partners in local associations, it allows them to see what the organisations have to offer and gives them a reason to stay (City of Hamilton, 2010).

Some strategies target foreign talent. Houston et al. (2008) recommended recruiting human capital from the pool of foreign graduates by encouraging them to stay upon graduation. Walton-Roberts (2011) highlights the importance of targeting foreign graduates, but also emphasized the need to remove regulatory and language barriers. Florida (2002c) notes that immigration is the single most important factor driving growth in small and medium-sized cit-regions and therefore recommends that smaller city-regions market themselves to immigrants. Yet, as indicated by Clemens (2012), not all small and medium-sized city-regions in Canada have the resources to receive a large volume of immigrants. However, some medium-sized city-regions have had so much

difficulty attracting and retaining skilled human capital that they are now faced with workforce shortages, and therefore, have implemented strategies geared towards retaining foreign talent (The City of Waterloo, 2008). Every year thousands of international students graduate from universities and colleges across Ontario, yet once they graduate, they return home for various reasons. The Windsor-Essex Economic Development Corporation (2011) indicated that these international students represent "a significant economic opportunity as well as a pipeline for future workers" (p. 18).

Five medium-sized city-regions, including Windsor, Peterborough, Guelph, Waterloo and Niagara, have decided to capitalize on the fact that their post-secondary institutions have been successful in attracting international students, and represent a significant economic opportunity as future workers, and have therefore provided them with incentives to encourage them to build their careers locally. As indicated by the Windsor-Essex Economic Development Corporation (2011), the strategies are most effective when they target international students early on in their post-secondary education by promoting the benefits of developing a career locally.

As for marketing, all eleven economic development institutions plan on attracting and retaining youth through some form of marketing strategy. Most of these marketing strategies overlap the other twelve key strategies, for instance marketing employment and entrepreneurial opportunities. Marketing strategies take various forms, including: 1) advertising in school agendas, student newspapers and social media, 2) posting flyers in schools, 3) running local radio ads, 4) holding job fairs and information sessions to inform students about programs, services and local opportunities (City of Hamilton, 2010; Kingston Economic Development, 2008; Windsor-Essex Economic Development Corporation).

> To maximize our opportunities for talent attraction, retention and development, we aim to: a) Reach out to regional post-secondary institutions to promote community advantages for our area in an effort to retain more graduates, or motivate them to return to the area after gaining valuable global experience... d) Market our community externally through online, multimedia and networking events that target segments of diverse talent required in the community (City of Kitchener, 2011, p.18).

Several economic development institutions expressed the need to implement a city brand strategy to position themselves as a magnet for human capital and investment (The City of Kitchener, 2011).

The following pages examine the second category of strategies which focuses specifically on components of the built environment. These strategies include: business incubators and research parks, arts and cultural amenities, quality of life, infrastructure and transportation, housing, and city size and location.

Research parks and business incubators were the second most commonly discussed strategy, behind partnerships, to attract and retain youth. All eleven economic development institutions indicated, whether directly stated or implied, the importance of providing facilities, funding and support services that foster the development and growth of new businesses as a means to attract and retain young entrepreneurs.

City-regions must provide the tools necessary to foster entrepreneurship, as it is said to foster innovation and attract human capital, which in turn drives local economic growth (City of Hamilton, 2010; The City of St. Catharine's, 2011).

> The City must recognize the role of student entrepreneurship in driving and shaping Waterloo's future economy. This will require not only nurturing entrepreneurial talent, but developing tools to assist in student retention upon graduation. Economic development staff should work with local post-secondary institutions and entrepreneurship support structures to develop more student-specific programming (The City of Waterloo, 2008, p.91).

The provision of facilities, funding and support services make the region more attractive to young entrepreneurs by allowing them to reach their full potential locally rather than having to move to large metropolitan regions to achieve their entrepreneurial goals.

> ...The key to building a new creative-based economy in St. Catharines is establishing a community that will be attractive to the talented men & women who will be employed in this economy. This in turn starts with the next generation of employees: the students from Brock University & Niagara College who are at the forefront in the new interactive media technologies. ED will strive to foster business incubation facilities for these students, allowing them the opportunity to

> explore new skills & define their place in St. Catharines. ED will work to ensure they have the financial capacity, knowledge & contacts to achieve their entrepreneurial goals within the city (The City of St. Catharine's, 2011, p.20).

The City of Kitchener (2011) has implemented numerous strategies to become a magnet for talent, by marketing itself as a 'start-up city'. Through partnerships with various local organisations, they provided entrepreneurs with all of the supports necessary to develop successful businesses (The City of Kitchener, 2011).

The economic development institutions have established various programs and services to promote the start-up and growth of new businesses, including: consultation services, mentor services, seminars, market research assistance, business planning assistance, skills development workshops, networking events, affordable workspaces and financial resources (City of Hamilton, 2010; The City of Kitchener, 2011; The City of St. Catharine's, 2011; Windsor-Essex Economic Development Corporation, 2011). These programs and services allow current students and recent graduates the opportunity to develop their entrepreneurial skills locally.

One of the key components in starting a successful business is developing strong connections with key community partners. The success of these research parks and business incubators depends greatly on strong partnerships between post-secondary institutions, public and private corporations, and municipal governments (City of Hamilton, 2010).

> Even more important than "bricks and mortar" buildings and specialized business parks are the people-to-people commercialization programs. Building links between universities and local industry clusters, promoting internships for students and faculty, and creating other linkage programs are also very important actions. Review of related literature suggests that the development of a cluster strategy that has a substantial social networking component, especially promoting contacts among people active in the industry and encouraging the formation of industry associations is very effective in supporting innovation (City of Hamilton, 2010, p. 41).

For instance, the City of Hamilton (2010) referred to the Jobs Prosperity Collaborative which established "Innovation Cafes" to promote interactive relationships between researchers, venture capitalists and aspiring entrepreneurs.

In many cases, the economic development institutions discussed the benefits of the post-secondary institutions in talent attraction and retention through the provision of entrepreneurial opportunities and access to research park facilities and services, yet the universities and colleges did not make that association. Despite not making that link to graduate retention, universities and colleges are a vital source of innovation and essential for fostering entrepreneurship. Many universities house a research park that assists faculty and researchers in developing spin-off companies by providing facilities, mentoring, support services, funding, networking opportunities and access to university resources (City of Hamilton, 2010; London Economic Development Corporation, 2007).

As for art and cultural amenities, despite being highly regarded in the literature as a magnet for talent, the policy document analysis revealed that they were rarely discussed in the policy documents, as only five economic development institutions and one post-secondary institution referred to the importance of cultural resources in attracting the creative class.

Western University was the only post-secondary institution to refer to themselves as an important cultural resource drawing intellectual talent to the London region.

> The report (2005 report of the Creative City Task Force) recognized the University as a tremendous cultural resource for London and this region, a magnet for educated, creative and innovative people, and a significant influence in promoting community diversity. As a medium-sized city with a major international university, London is ideally positioned to fulfill its dream to be a "creative city" (University of Western Ontario, 2007, p. 35).

As for the economic development institutions, several designed their attraction and retention strategies around the concepts of Richard Florida in order to market themselves to the 'creative class'. As indicated by Florida, members of the creative class are drawn to regions that foster a vibrant arts and culture and entertainment scene (City of Guelph, 2010; City of Hamilton, 2010; The City of Waterloo, 2008). This has driven municipalities to promote diverse and creative environments in which the creative class feels comfortable and inspired (City of Guelph, 2010, p. 28; Greater Sudbury Development Corporation, 2009). Several economic development institutions recognize

that art and cultural amenities are "a key component of the community's attractiveness to the creative class" and essential to the region's economic growth (The City of Waterloo, 2007, p.91).

> The creative class values the artistic and creative occupations and the presence of a strong arts & culture sector will influence the decision by many to stay in our community... The cultural side of a city is an attractor for the younger cohort that will be the next to lead the way in innovation. The experience of other cities that have been successful in creating economically prosperous regions underlines the importance of quality of place, especially for the "creative class". Richard Florida's seminal work on this topic identifies the importance of recreation, arts and culture for attracting and retaining the intellectual talent that will build the economic prosperity of a region (Greater Sudbury Development Corporation, 2009, p.15).

The City of Guelph (2010) highlights how arts and cultural amenities are not only important to attract and retain intellectual talent but these skilled individuals are essential to support the growth and development of new businesses and technology-intensive industries.

Art and cultural amenities can include a variety of built environment features including: theaters, concert venues, art galleries, ethnic restaurants, heritage buildings and more.

> St. Catharines will also work to attract the creative class, those increasingly involved in the arts & knowledge-based economies... To do this, the city will reflect the big-city culture: small concert & theatre venues, ethnic restaurants, specialty boutiques, bookstores & art galleries, while showcasing its heritage buildings & natural features (The City of St. Catharine's, 2011, p.8).

Arts and cultural amenities are also commonly listed as a component of quality of life.

> Greater Sudbury's arts & culture community has made tremendous gains in the past decade and is now acknowledged as a true growth engine in our revised strategic plan. Not only does a growing arts & culture sector provide jobs and increase tourism receipts, it adds to quality of life and attracts talent to those occupations that will nurture all the growth engines (Greater Sudbury Development Corporation, 2009, p. 25).

> Quality of place is the #1 factor in attracting and keeping talent

> Natural, cultural and lifestyle amenities all count in creating a critical mass of talent in specialized areas. A city-region with a social environment that is open to creativity and diversity of all kinds has a distinct advantage in the marketplace. It can more assuredly generate innovation, develop technology-intensive industries and power economic growth because of the talent it attracts and retains (Greater Sudbury Development Corporation, 2009, p. 10).

> The rise of knowledge-based industries and a new creative class of workers has altered the calculus of economic development by accentuating the importance of quality of life and depth of culture to local economies. To attract – or even retain – the vital workforce that will drive future economic development opportunities, Waterloo must focus on the creation of vibrant, creative and engaging community amenities (The City of Waterloo, 2007, p. 8).

The impact of quality of life on individual's mobility will be viewed in greater detail in the following section of this chapter.

'Quality of life' was highly regarded in the literature and was equally discussed by the economic development institutions. Eight of the eleven economic development institutions stated quality of life as a factor in the locational choices of the creative class. Although none of the universities or colleges refer to quality of life from a youth attraction and retention perspective, some academic institutions still strive to improve the quality of life of their respective city-region (University of Western Ontario, 2007).

As the literature suggests, there is no single accepted definition for 'quality of life'. As stated by the Windsor Essex Economic Development Corporation (2011), "Measuring quality of life is a complicated task because it means different things to different people" (p. 26).

Various definitions were used to define 'quality of life' in the policy documents. The City of Hamilton listed multiple definitions of 'quality of life' in their strategic plan. The first is from the Invest in Hamilton website, which breaks down quality of life into ten categories: "1) Communities and Neighbourhoods, 2) Housing, 3) Education, 4) Healthcare, 5) Nature and Environment, 6) Arts, Culture & Entertainment, 7) Dining, 8) Shopping, 9) Sports and Recreation, and 10) Transportation/Public Transit" (City of Hamilton, 2010, p. 91). The City of Hamilton also referred to the Federation of Canadian Municipalities' quality of life indicators which are used to monitor the quality of life in

23 Canadian city-regions. They also classify quality of life into ten categories: "1) Affordable, Appropriate Housing, 2) Civic Engagement, 3) Community and Social Infrastructure, 4) Education, 5) Employment, 6) Local Economy, 7) Natural Environment, 8) Personal & Community Health, 9) Personal Financial Security, 10) Personal Safety" (City of Hamilton, 2010, p. 96).

The Windsor Essex Economic Development Corporation (2011) considers the following to be attributes of quality of life: cost of living relative to income, climate, access to education, crime rates, recreation and entertainment opportunities. The Greater Peterborough Area defines quality of life as:

> The degree of enjoyment and satisfaction experienced in everyday life as measured by access to wholesome food, clean air and water, enjoyment of unfettered open spaces and bodies of water, access to education and life-long learning, access to quality healthcare, access to cultural activities, availability of appropriate and affordable housing, security from crime, and protection of diversity (Greater Peterborough Area, 2010, p.7).

The term 'quality of life' is often used interchangeably with 'quality of place' and 'amenities. The Greater Sudbury Development Corporation (2009) defined 'quality of place' as: natural, cultural and lifestyle amenities.

As indicated in the definitions above, the term 'quality of life' encompasses various elements of the built environment, such as housing, transportation infrastructure, recreational facilities, entertainment facilities and more. Although most institutions do not specifically refer to the use of built environment to attract and retain graduates, various components used to define quality of life are essentially aspects of the built environment.

Many economic development institutions acknowledged the need to foster a strong quality of life in order to remain competitive in the knowledge-based economy and build a strong workforce (City of Hamilton, 2010; Greater Sudbury Development Corporation, 2009; London Economic Development Corporation, 2007; Windsor-Essex Economic Development Corporation, 2011)

> It is very important for stakeholders in the Windsor-Essex region to be cultivating and promoting its quality of life. The battle for workforce talent will be won by jurisdictions that can offer both high quality career opportunities and an excellent quality of life. The linkage between quality of life and economic development will be even more important in the years to come (Windsor-Essex Economic Development Corporation, 2011, p. 26).

> Quality of place is the #1 factor in attracting and keeping talent
> Natural, cultural and lifestyle amenities all count in creating a critical mass of talent in specialized areas. A city-region with a social environment that is open to creativity and diversity of all kinds has a distinct advantage in the marketplace. It can more assuredly generate innovation, develop technology-intensive industries and power economic growth because of the talent it attracts and retains (Greater Sudbury Development Corporation, 2009, p. 10).

Quality of life is not only important for winning the battle for human capital but it also drives economic growth (Greater Sudbury Development Corporation, 2009).

> There is no doubt that quality of life and economic prosperity go hand-in-hand in communities. Each feeds the other. Strong economic performance is a fundamental engine for the factors that make up quality of life; similarly, quality of life is a magnet for business investment, workforce and families. People are attracted to communities that are good places to live, work, learn and play (City of Hamilton, 2010, p.88).

Three economic development institutions touched upon access to quality healthcare as an important determinant of quality of life and identified the shortage of family physicians as a challenge in talent retention (Greater Peterborough Area, 2010; Greater Sudbury Development Corporation, 2009; The City of Waterloo, 2008). The City of Waterloo (2008) recognises that "access to a family doctor will be an issue for members of the creative class considering relocation to Waterloo. As a result, the current shortage of physicians will be a deterrent to future economic growth and must be addressed" (p. 93). These regions have tried to alleviate the shortage of physicians through aggressive physician recruitment efforts (Greater Sudbury Development Corporation, 2009; The City of Waterloo, 2008). Specifically, the Greater Peterborough Area (2010) planned on attracting physicians by building new facilities.

In terms of infrastructure and transportation, the policy document analysis revealed that nine of the eleven economic development institutions discussed, either directly stated or implied, the link between transportation and related infrastructure, and talent attraction and retention, typically referring to the mobility of the workforce. Although, none of the post-secondary institutions made that connection, several universities and colleges indicated the importance of infrastructure upgrades for the institution's growth.

The Economic Development institutions discussed the need for investment in transportation and related infrastructure upgrades to accommodate future employment and population growth (City of Guelph, 2009; Niagara Region, 2009; Windsor-Essex Economic Development Corporation, 2011). The City of Hamilton (2010) indicated that "economic growth is driven by the creation of innovative products and services. This innovation needs to be supported not just by an entrepreneurial climate but also by physical infrastructure" (p.5). The City of Guelph also stated the importance of infrastructure investments for economic growth:

> Investment in such infrastructure is considered important to economic development for several reasons: It creates investment streams that can help support new product and expertise development and business growth; It creates assets which improve quality of life, sustainability and community attractiveness to new talent... (City of Guelph, 2010, p.48).

This population growth is highly dependent on the region's ability to attract and retain human capital. As indicated by the Kingston Economic Development Corporation (2008), poorly maintained infrastructure can have a lasting effect on students, making it difficult to retain students once they graduate. Simple improvements in the infrastructure and transportation networks in student residential areas and across the city improves walkability and decreases commute times, which can greatly impact students' perception of the area and in turn impact their decision to remain in the area upon graduation (City of Hamilton, 2010).

Although medium-sized cities are striving to reduce the number of commuters, transportation infrastructure investments in multi-modal transportation networks can

reduce commute times and provide long-term economic, social and environmental benefits to the community (City of Hamilton, 2010; The City of Kitchener, 2011). Several economic development institutions indicated the need for a quick and efficient transportation network to accommodate the diversified needs of the highly mobile workforce, and ease the mobility of goods within and between city-regions, which in turn would make local businesses more competitive (City of Guelph, 2010; City of Hamilton, 2010; The City of Kitchener, 2011; The City of Waterloo, 2008).

City-regions must also ensure that transportation and related infrastructure meet local business needs now and into the future (Kingston Economic Development Corporation, 2011). Not only do businesses require efficient transportation infrastructure to transport workers and goods quickly, but they also need access to telecommunication infrastructure to compete globally (City of Hamilton, 2010). Telecommunications infrastructure helps minimize any geographic challenges associated with a city's location; allowing medium-sized cities to compete globally despite their geographic location and size (Great Sudbury Economic Development Corporation, 2009).

As for the post-secondary institutions, several universities and colleges addressed the provision of infrastructure and supports to promote the growth of the institutions, both in terms of student population and research opportunities (Conestoga College, 2010; Mohawk College, 2012; Queen's University, 2006; The University of Waterloo, 2007; The University of Western Ontario, 2007). Western University indicated in their strategic plan the role of the City of London in providing the infrastructure necessary for the institution's growth.

The majority of the post-secondary institutions listed infrastructure upgrades in their capital budget, as a critical support for learning, teaching, research and overall student success (Fanshawe College, 2011; McMaster University, 2011; Mohawk College, 2012; Queen's University, 2006; St. Laurence College, 2010; The University of Western Ontario, 2007; Wilfred Laurier University, 2005). This includes ensuring that physical infrastructure, such as facilities, classroom, laboratory spaces and walkways are safe, accessible and user-friendly (Queen's University, 2006; University of Guelph, 2011). In

terms of transportation, the University of Guelph (2011) noted the importance of an efficient transportation network within and between cities, allowing a greater volume of students to commute, to and from the university, whether by car, foot, bike or public transit. Although some post-secondary institutions support infrastructure upkeep and revitalization, these strategies are aimed at improving the provision of services to current students and are not stated as a method for retaining students once they graduate.

In order to stimulate growth in the knowledge economy, city-regions must develop the infrastructure needed to attract human capital and promote growth. Such strategies require the implementation of the necessary infrastructure to accommodate a diversified and mobile labour market and meet the needs of local businesses.

Another strategy targets housing and cost of living. Five economic development institutions, the City of Kitchener, City of Waterloo, City of Hamilton, Windsor-Essex Economic Development Corporation and the Greater Sudbury Development Corporation indicated, whether directly stated or implied, the need for housing strategies geared towards attracting and retaining a strong labour pool, which in turn draw businesses to the area. The economic development institutions indicated the need to provide attractive residential environments that are safe, affordable, good quality and meet the diversified needs of the labour pool.

One way in which the City of Kitchener plans on becoming a talent magnet is by promoting its "better income-to-cost of living ratio compared to most other high-tech cities" (The City of Kitchener, 2011, p. 18). The City of Waterloo plans on developing a strategy to improve their housing stock. They are concerned that the number of people commuting to the city for work, suggesting problems with the current housing supply and costs, or transit infrastructure (The City of Waterloo, 2008). They indicated the importance of providing an appropriate and affordable housing stock to retain a strong workforce.

> The presence of affordable and appropriate housing is also a key element in building social inclusion. Simply put, if people cannot find adequate, appropriate and affordable housing, they will not remain in the community over the long-term, eroding the community's labour force and competitiveness. Waterloo must

> develop and adopt a strategy for improving the range of housing stock in order to facilitate a more diverse cross-section of needs, and work with the local real estate community to catalogue and promote what options are available (The City of Waterloo, 2008, p. 90).

The City of Hamilton markets their housing stock to the youth demographic in their youth retention and attraction strategy (City of Hamilton, 2010). They noted that recent graduates are particularly interested in settling in a region that offers quality affordable housing and therefore, plan on further promoting the benefits of locating in their medium-sized city with affordable housing and conveniently located near the Greater Toronto Area. The Windsor-Essex Economic Development Corporation (2011) promotes their housing stock as one of the elements making up their excellent quality of life. The Windsor-Essex region markets its competitive housing costs, specifically in terms of its affordable new home values and overall cost of living, as a prime motivator for locating in the region (Windsor-Essex Economic Development Corporation, 2011). The Greater Sudbury region referred to housing as necessary to promote growth, yet it is implied that growth refers to population and business growth, which requires attracting and retaining a skilled workforce (Greater Sudbury Development Corporation, 2009).

A few universities and colleges mentioned housing, yet they refer to the provision of safe and accessible residence and off-campus housing for current students and faculty (Queen's University, 2006; Trent University, 2010; University of Guelph, 2011; Western University, 2007). As indicated by the University of Guelph (2011), "They consider an investment in residential space as one of the means of attracting and retaining students", yet they do not regard housing as a means of retaining students once they graduate.

Seven institutions associated the city's size and location, relative to provincial, national and international networks, with their ability to attract and retain talent. The six economic development institutions that addressed this in their strategic plan, whether directly stated or implied, approached it from a marketing perspective. In order to compete with large metropolitan regions for talent, these medium-sized city-regions must leverage their strengths to prevent the brain drain. They do so by marketing the benefits of living in a medium-sized city, such as: inexpensive housing, lower crime rates, limited

traffic congestion, proximity to large metropolitan areas, strong social cohesion and sense of community (City of Hamilton, 2010). The economic development institutions highlight the fact that in addition to their small town feel, they still provide access to many of the amenities found in large urban centers, such as: professional sports, recreational opportunities, cultural activities and festivals (KEDCO, 2008; Windsor-Essex Economic Development Corporation, 2011). The City of Kitchener (2011) took a different approach by promoting its location to businesses and marketing itself as an ideal location to start a business thanks to all the local leading engineering and computer software industries.

Some post-secondary institutions discussed the size and location of the city with regards to the institution's ability to attract students, its impact on enrolment and general class sizes, as well as its proximity to other major city-centers (Brock University, 2010). Although indirectly implied, Western University was the only post secondary institution to address the city's size relative to its ability to build and develop the creative class: "As a medium-sized city with a major international university, London is ideally positioned to fulfill its dream to be a 'creative city' " (Western University, 2007, p. 36).

4.5 Conclusion

This chapter presented the findings from the policy document analysis of the nine selected city-regions based on indicators developed in this study. The indicators were developed to determine what policies are in place to counteract the loss of knowledge resources and whether these policies discuss the role of infrastructure, design and the built environment in talent attraction and retention. The results varied by city-region and institution in terms of both content and detail. The qualitative content analysis revealed that the primary strategies used by economic development institutions and post-secondary institutions to attract and retain talent are, in order of most commonly discussed: partnerships, research parks and business incubators, marketing, education and training, infrastructure and transportation, quality of life, employment opportunities, city size and

location, parks, recreation and cultural amenities, housing and costs of living, foreign talent and youth engagement in the community.

Many of these strategies incorporate various aspects of the built environment. In order to attract and retain talent, the economic development institutions indicated the need to: provide attractive residential environments that are safe, affordable, good quality and meet the diversified needs of the labour pool; invest in transportation and related infrastructure upgrades to reduce commute times and accommodate future employment and population growth; foster a strong quality of life in order to remain competitive in the knowledge-based economy and build a strong workforce; establish various programs and services to promote the start-up and growth of new businesses; and market the benefits of living in a smaller city-region by promoting the city's sense of community, affordable housing, limited traffic congestion and proximity to large metropolitan areas.

These findings are further investigated and complemented in the following chapter, with a case study of London, Ontario, which consisted of semi-structured in-depth interviews with Western alumni. These recent graduates provided insight into the factors that influence their locational decisions in order to determine whether their built environment needs are being met through the policies currently implemented by the various institutions and identify any changes needed to address shortcomings in the current strategies.

CHAPTER 5: INTERVIEW WITH RECENT UNIVERSITY GRADUATES

5.1 Introduction

This chapter presents the findings from the critical case study of London, Ontario. The case study complements and further investigates the results from the policy document analysis presented in Chapter 4. The case study consisted of semi-structured in-depth interviews with sixteen alumni from Western University[1]. The interviews examined graduates' locational trends and provided detailed insight into the city-region's ability to attract and retain post-secondary graduates. London was selected as a case study for the interviews as it has both a university (Western University) and a college (Fanshawe College), suffers from a negative net migration rate of the 25 to 29 age cohort (Statistics Canada, 2006) and is representative of the other cities selected in terms of its population characteristics.

The interviews were designed to answer the overarching research question: to what extent and in what ways do policies of key institutions seek to attract and retain post-secondary graduates in medium-sized city-regions in Ontario? Does the built environment play a role in these policies? The interviews provide insight into the factors that influence post-secondary graduates' locational decisions and outlines their design and built environment needs.

As indicated by Richard Florida (2002b) "Talent does not simply show up in a region; rather, certain regional factors appear to play a role in creating an environment or habitat that can attract and retain talent or human capital" (p.754). Medium-sized city-regions must critically assess the factors that influence youth's mobility and understand their needs, as they are all in the race for talent and only those with attractive environments will be successful in attracting skilled human capital. In today's knowledge-based economy, city-regions that are able to develop, attract and retain

[1] The participants' names were changed to protect their confidentiality.

valuable human capital have a distinct advantage that is crucial for economic growth and prosperity (Gertler et al., 2002).

The chapter was subdivided into eight sections based on the themes derived from the questions and associated responses generated from the interview guide (See Appendix I). These findings will be further evaluated and compared with the results of the policy document analysis in Chapter 6, Discussion and Conclusion.

5.2 Initial Attraction to London, Ontario

In general, when asked about their decision to move to London, most graduates referred to the university, few specifically referred to the city itself. Post-secondary institutions play a large role in attracting students to medium-sized city-regions. Fourteen of the sixteen graduates indicated that it was the university that initially brought them to London. Several graduates had never even been to London prior to attending university. For instance, Marquise stated: "I had never been to London before I moved into residence; so the city itself, had no influence whatsoever on my decision" (Marquise).

The graduates indicated various reasons for choosing to pursue their post-secondary education in London, Ontario, whether due to: the reputation of the university, programs offered, proximity to family and friends, student opportunities, financial reasons or simply the campus itself.

Western University's good reputation as one of the top universities in Canada draws many students to pursue their post-secondary education in London (Ben). Western offers numerous unique programs that attract students from across the world to learn from and work alongside leading researchers. Western provides more than simply quality education; the university also attracts students for its various social opportunities and athletic programs (Erik, Ben, Chris). Ben decided to attend Western University because: "Western has a pretty good reputation in terms of being one of the top 10 in Canada plus it seems to have a good social scene" (Ben).

The university's location relative to other major city-regions is important as many graduates indicated the need to be within close proximity to family and friends. In many cases, students wanted to be close enough to home, that they could easily go home, yet far enough away that they felt like they were getting away for that college experience and were independent. On the contrary, a couple graduates selected Western simply because they wanted to live at home in order to save money. Proximity to friends also comes into play; some graduates indicated that they followed their friends to Western, whereas others indicated the desire to be unique and go off to school on their own.

For a few graduates it was Western's campus and great campus tour that influenced their decision to attend Western; "I came and saw the campus and fell in love… looks like university from the movies and I got a very personalised tour from my program and it just made everything inviting" (Kate). Another graduate stated: "I came to campus and I think the campus, like the actual visit made a good impression on me" (Sarah).

As indicated by these graduates, campus tours are very important in making a good first impression. These graduates had visited several other universities and were left with a negative first impression due to the concrete and cold feel of the campuses, yet Western's beautiful campus sold the deal and brought them to London. Another graduate stated the importance of the size of the university, as she considered Western to be an ideal size and provided as examples the University of Toronto as being too large and Trent University being too small (Marquise).

5.3 Reasons for Staying in or Leaving London, Ontario

Of the sixteen graduates interviewed, four were living in London, eight had moved to other parts of Ontario, three were in other provinces and one was in another country. Despite the original participant selection criteria requiring graduates to be Canadian residents due to policy variations between countries, one participant living outside Canada was still included in the study due to the low response rates as he still provided valuable insight into the research topic.

When asked why they left London, most graduates referred to the lack of employment opportunities in their field. As indicated by a few graduates, there is no shortage of part-time minimum wage positions in London (Marquise); however, it is nearly impossible to find a career job, meaning specialised full-time employment in their field of study (Ashley). Many graduates ended up having to settle for part-time positions that were not in their field, simply because they could not find full-time employment and needed to earn enough money to make ends meet. In time, these graduates were successful in finding full-time employment yet most of these positions were outside the London area.

A few graduates indicated that they would have liked to stay in London had they found employment (Ashley, Jordan, Michelle). "I'm sure I would have enjoyed being in London but scarcity of jobs didn't really make it a viable option at the time" (Jordan).

Half of the graduates who left, moved back home for financial reasons since they could not find a job locally.

> I moved back home because at that time I didn't have a job opportunity in London, so it wouldn't have made sense financially for me to stay in London without having anything in my field to do, so I moved back home. …I would only have stayed in London if I was employed because being away from family and friends would have kind of left me kind of no reason to stay in London at the time (Tyler).

> And the reason why I moved home was to save up some money, there wasn't a true career option for eight months that I would be able to do, so I went home to save up a little bit more cash before I left again (Sebastian).

Some returned home to the job they held every summer, as they knew that opportunity was still available (Sebastian, Ashley). As students, some had never considered staying in London to work over the summer (Jessica) and therefore had never considered staying once they had completed their degree (John).

In many fields, there are simply more firms and more job opportunities available in large metropolitan areas, such as the Greater Toronto Area. Not only does the Toronto area have more jobs available, but there are also has more things to do outside of work (Erik).

> London has a few good things to do but obviously relative to a bigger city like Toronto, a lot more to do, by that I mean recreational, anything from like sporting things, sporting events, stuff like that to going out, the night life, eating at a lot of different types of restaurants. London doesn't really have the selection as Toronto does obviously. From the employment perspective, obviously more opportunities because it is a bigger city, you have more competition for certain jobs, but the rewards are better. Obviously people have to pay you more if they want you in a bigger city (Erik).

Fourteen of the sixteen graduates pursued graduate studies or continuing education, or are planning on returning to school, of which nine left to further their education in another city.

Only four of the sixteen graduates interviewed are still living in London, which represents a higher proportion than the general alumni population, with 15% of the university's alumni currently living in the London area. Of these four graduates, three had done a co-op or internship in London (Kate, Sarah, Ben). Ben received a full-time position with the company through which he had done the internship. He noted that if it had not been for the internship he would not have known that the company existed and likely would not have stayed in London (Ben).

> I didn't think that there was any of those types of companies in London or any of the smaller cities, I thought that I had to go to one of the bigger you know, Toronto or Vancouver, one of the bigger cities to get that kind of experience (Ben).

Ben felt like it was too much effort to start over new when he had already built connections with the company, he knew the city and could just come back. The other two graduates who had previously done internship or co-op in the London area, each found a job with another local company. Kate did her Masters at Western before starting her job. The primary reason why she wanted to stay in London was to be with her boyfriend who had a position in London (Kate). Sarah had moved back home for a year prior to finding employment in London. She had planned on moving to Toronto, yet she was offered a position in London with a great salary and benefits package she could not pass up. She decided to make the best of it and now she enjoys living in London. The forth graduate who stayed in London, was hired full-time for the company with which he

had been working part-time with during his undergraduate degree (Connor). These graduates illustrate the importance of internships, co-ops, part-time employment and summer jobs for developing awareness of local opportunities and building connections with local employers. This point will be discussed in greater detail later in this chapter.

5.4 Important Job Characteristics

Since the majority of the graduates listed employment opportunities as a key factor influencing their locational decisions, they were asked what job characteristics are most important. Three quarters of the graduates interviewed indicated salary and benefits as a key requirement when looking for a job. Many indicated the need to find a job that covers fixed costs in order to support themselves financially. Two graduates stated that they would be willing to take a pay cut if they were to find a job in London as cost of living is cheaper than large metropolitans areas, such as Toronto (Erik, Ashley). Most graduates also stated job satisfaction, as they want to do a job that meets their interests, and that they are passionate about. Graduates strive to find employment in their field, in order to take advantage of the skills that they have learnt throughout their education (Rachel, Michelle). Ideally, jobs must allow graduates to reach their potential and fulfill their long term goals.

> In terms of a job, I guess I would also take into consideration what my long term goals are, how that job will help me get there and just you know, how it would look on a cv, and just the king of experiences I will get out of that, you know new skills and things that will help me develop as the hireable employee kind of thing. …if it's either giving you the skills so that you can move on to another job later or show the potential for like moving up in management later… (Marquise).

In many cases, in order to fulfill their long term goals, there typically needs to be the possibility of advancement. When graduates select a job, they typically want to know that there is potential to move up in the company (Marquise) or the job will provide them with the skills necessary to advance in their chosen profession (Justin). Having the opportunity for career progression (Erik, Tyler) is not necessarily important at this early stage in their profession; however, it certainly becomes more important into the future (Connor). Graduates are looking for: "What organisation offers the best opportunity to

develop experience and progress throughout the ... industry" (Tyler). Location of employment was also commonly stated, typically with reference to proximity to family and friends (Ashley, Marquise, Erik).

5.5 Impact of the Built Environment on Graduates' Mobility

All the graduates stated that the built environment is either important or very important in their decision to locate somewhere. When asked whether they consider the built environment when they locate somewhere, most graduates referred to accessibility, proximity to amenities, and the ability to get around the city whether by car, public transit or simply ability to be within walking distance to amenities.

Although these graduates consider the built environment to be important, it is not the primary deciding factor (Ashley, Tyler). "I guess it is important but not most important… (the built environment) wasn't the reason why I moved or why I would stay somewhere" (Ashley). Sebastian believes that the built environment wouldn't necessarily determine which city you live in but it would certainly determine where you live within a city. David indicated that the built environment is not as important as the location of the job or school, when deciding where to locate; however, it does factor in to a certain extent. Tyler left London for employment reasons yet states the importance of the built environment: "It was simply the job, if anything I would say that those factors would have resulted in me staying longer in London had I had the choice" (Tyler).

5.5.1 Housing

All but three graduates consider housing when locating somewhere, whether it's cost of living, quality, location or style of housing. Eleven graduates indicated that they look at housing prices and cost of living. As young professionals, these interviewees simply do not have the means to afford anything expensive; therefore, the lower the price, the better (John). Several graduates compared the cost of living in London relative to Toronto and Vancouver, and pointed out how the housing is far more affordable in

London (Sarah, Ben). Some graduates simply could not afford to live somewhere like Toronto if they wanted to maintain their current standard of living and their salary were to remain the same (Kate). Others are willing to spend more on housing even if it means less disposable income, just in order to have the convenience of living downtown Toronto, within walking distance to all amenities and within close proximity to public transportation (Erik, Justin). Some graduates ended up staying in a smaller city (Michelle) or moving to the suburbs (Sebastian) simply in order to find affordable housing (Michelle). Those that are looking to purchase a home are looking at property taxes and incentives for first time home buyers (Sarah). Many graduates look for quality housing that is clean and safe. "Obviously you want to live in a decent place, a place where you can call home" (Erik). In terms of safety, some graduates indicated that they are more inclined to look for a good neighbourhood than the housing (Marquise).

A couple graduates noted that their housing preferences changed once they graduated from university (Erik, Chris). They wanted to get out of run down student housing and live in nicer housing.

> You kind of move away from the university, the lifestyle a little bit, so like right now we live in a pretty nice place, clean, like it's not like a student house anymore, it was fun in college living with 5 or 6 guys whatever it was. ... So I mean, you kind of change your preferences when you get out of school, you kind of live a little nicer obviously (Erik).

A graduate, who works in London, indicated a shortage of housing stock for recent graduates in the downtown core. There is a need for housing downtown geared towards young professionals and not students (Sarah), as recent graduates want to get out of run down student housing (Chris). She indicated that a lot of people her age are purchasing a home yet they have to settle for something in the suburbs as most of the homes near the downtown core are being snatched up by investors seeking earn a profit in the student housing market. In general, the graduates did not specify a preference for a specific housing style as most are currently renting, yet indicated that this will likely change in the future when they have kids and want a house with a backyard (Connor).

Several graduates look at location with regards to accessibility and proximity to amenities, such as: grocery store, shopping, school, work, gym and park, as most graduates interviewed to not own a car and therefore have to rely on public transit or walking to school and work.

Of the three graduates that indicated that they do not consider housing in their decision to locate somewhere, one graduate stated: "No matter where you go, you can find somewhere to live right, so it would have to be something that stood out, if it were to play a major role" (David).

5.5.2 Research Parks and Business Start-ups

Although none of the graduates interviewed are entrepreneurs, four graduates indicated that they consider the availability of research parks and business start-ups when locating somewhere. Some noted that it is nice to know that those opportunities exist, yet it is not something that they have seriously considered (Erik). Two graduates interviewed, who are both lawyers, understood the importance of research parks and business start-ups. Chris does business law, and considers it to be very important in talent retention.

> I do business law so I'm pretty connected to this stuff. Ya it's really important. If you can make it attractive for people to start businesses than ya you'll retain a lot of people. ...So I don't know, London if you I don't know, give tax credits or something to start a business, ya for sure people would stay there, you've got to give them an incentive right, you can tax them at a high rate, no one's going to come (Chris).

Jessica and Jordan appreciate an entrepreneurial culture and track the technological and research developments occurring locally, out of interest (Jessica) and to socialise with such entrepreneurs (Jordan).

John is currently working as a city councillor and he is currently looking at implementing strategies to create a business hub.

> To me as a recent graduate, not really important, to me as a councillor, where we're working on putting some in and I think those are extremely important for economic development as a municipality. But for somebody who is just leaving university, I'm not sure that's what they're looking for, I think most people are looking for jobs, a lot of them aren't looking for entrepreneurial opportunities (John).

John believes that most recent graduates are looking for jobs and not wanting to start their own business. His point was illustrated within the group of graduates interviewed as none of the graduates had considered entrepreneurial work themselves; however, some graduates did recognize its importance for the local economy (Justin).

5.5.3 City Size and Location

Most graduates look at the size and location of the city. Although it may not be the primary factor influencing graduates' locational decision, it still remains important (Kate). There are mixed views regarding the ideal city size. Some graduates prefer to live in large metropolitan areas, such as Toronto or Vancouver, where there are always more activities and lots to do, which is great if you like people and you enjoy socializing (Erik, Chris). The size of the city has an impact on where you decide to live within the city. Justin and Erik, who both live in Toronto, selected their neighbourhood based on its geographic location within the larger city. Erik pointed out that living in a big city is a lot easier when all the amenities are within walking distance, as it makes the city seem smaller. He would move to a smaller city if he had to commute one to two hours in traffic every day.

Others prefer smaller cities that are just big enough to offer everything (Marquise). These graduates consider big cities to be nice to visit yet would not want to live there. For instance, Marquise is doing everything possible in order to avoid moving to a large metropolitan area like Toronto due to the congestion and long daily commutes.

> I am desperately trying to avoid Toronto. My supervisor is actually moving to Toronto so we are supposed to be moving there in September, ya and I'm not so keen on it because I really really don't want to live in Toronto,... it's just not an environment that I thrive in, so I'm likely going to be living in Hamilton and

> commuting into Toronto instead. That is how much I do not want to live in Toronto (Marquise).

Justin never wanted to live in Toronto, yet now he finds himself living there due to employment.

> I prefer the size of London over Toronto. I just find that Toronto is too big, so like it's too big in terms of one there's just too many people with too many interests going on so in terms of city politics it becomes a little bit much. So in terms of getting around, I just find it sometimes, like it's quite a trek... (Justin).

When discussing the ideal city size, many said that they looked for a city that was comparable in size to London (Tyler, Justin, Sebastian).

> If I could find something comparable to London I would be happy, something with an infrastructure and an environment, built environment smaller than London, well then I would probably be making a, you know, decision and thinking about it a little bit more (Tyler).

Graduates' point of view reflects where they grew up. In general, those from large metropolitan areas tend to migrate to large urban centers upon completion of their studies. These graduates noted that London was a perfect size for school, a great university town, yet the city simply does not offer the variety of amenities found back home. On the other hand, those from smaller communities were more inclined to stay as they were more satisfied with the services provided in London and considered London to be a good step up from their hometown.

> And I guess in terms of my university decision at the time, I applied to some bigger cities but what I like about London was that it was bigger than were I was from but it wasn't so big that I felt I would be overwhelmed. ...I felt like London a good middle ground (Jessica).

Kate considered London to be a good step up from her hometown of Whitby. London is big enough to meet her needs, as it has more of a downtown, more cultural amenities and simply more going on at any given point (Kate).

As indicated by Connor and Erik, size preferences may change as you get older and have kids. "While I'm younger definitely a bigger city, but once I get older and have

kids I could see myself more in a place like London or even smaller like Stratford or something like that" (Connor).

Some graduates do not consider the size per se but rather look at the congestion and how easy it is to get around the city (Jordan), or in other cases, look for that small town feel and whether there is a sense of community (Jessica, Connor, John).

In terms of location, many graduates referred to proximity and access to major Canadian city centers (Connor) and proximity to the United States (Jessica, Justin). Several graduates mentioned access to the 401 (Ashley, Michelle, Justin) as well as other modes of transportation, such as proximity to an airport, bus or train station, allowing them to travel anywhere. "In terms of location, I would like it to be like on a major route of some sort so either a highway route or a major train track, something that's easily accessible by different modes of transportation" (Justin). Another graduate noted the benefit of living in London: "I like that London you can hop on the highway get to the states, get to Toronto, get up North within a couple hours" (Kate).

Although some graduates look for a small town feel and do not want to live in Toronto, they still want to be close enough to visit (John). Most small and medium-sized cities are close enough to major city centers, such as Toronto, Montreal and Ottawa, that most graduates are just an hour or two away from most major events in Canada (Marquise).

> Now, living so close to Toronto and my ability to get down there for any big cultural activity facility and far enough away that I am still far enough away from the hustle and bustle I really enjoy but having all of those amenities close by is something I really do value (John).

Others mentioned the importance of proximity to family and friends (Tyler, Ben). Tyler indicated that if he had the option between two comparable jobs, he would take the one that is closest to home. Ben noted that most of his friends left after graduating and he is one of the few that found a job in London; therefore, he finds himself going home every weekend due to this lack of social network and support.

5.5.4 Presence of Post-secondary Institutions

There were mixed views with regards to the presence of post-secondary institutions. Some viewed it as a benefit to the community as it attracts an educated population, brings funding to the community and provides the opportunity for continuing education (Kate). Others have a negative perception of students and view post-secondary institutions as a deterrent.

Fourteen of the sixteen graduates indicated the importance of post-secondary institutions in their decision to locate somewhere as they were pursuing graduate studies or continuing education, or were planning on returning to school to take some courses for their own general interest.

One benefit of post-secondary institutions is the presence of an educated population. A couple graduates indicated the different between communities that have one or more post-secondary institutions and those that do not (Marquise, Connor). Those without a university or college tend to have a larger proportion of people at or below minimum wage, which creates a different atmosphere and culture.

> I think it's that the educated population bring about it a more educated, you know they raise educated children, usually I think you would probably find that it's safer, I don't actually know that but it feels like you know you get educated people and you get less poverty, you get less unemployment and what not, so it is important to me for sure (Connor).

Some graduates view post-secondary institutions as asset because it attracts a younger population, which means that there are people with which to socialise that are around the same age and have similar interests (Erik, Ben, John). Young professionals have a better chance of progressing their career if they have other smart like minded individuals around (John). Jessica values having the opportunity to attend presentations and participate in discussions held at the university. For instance, in Ottawa she attends public presentations given by international speakers at the universities (Jessica).

Others have a negative perception of students and view post-secondary institutions as a deterrent for attracting and retaining young professionals. Despite the fact that all the graduates interviewed were recently students themselves, some do not want students around, as so many places downtown get crowded with students, including public transit (Jessica, Sarah). Those that have stayed in London enjoy when students leave for the summer (Sarah, Kate). A few graduates believe that the student population acts as a deterrent, especially since the student population in London has a bad reputation for being loud and rowdy (Ashley, Justin).

> I guess that the other thing too with London, there's a lot of students, they're very visible in certain areas, cause a lot of trouble... . I don't know if that would deter me from having to live in London but it would definitely limit where I would want to live in the city ...I don't know if that deters people from wanting to live in London (Ashley).

Ashley would not want to live anywhere near a university or a college, or any form of student housing.

5.5.5 Good Public Schools and Child Care

Despite the fact that only one of the graduates has a child, eleven ranked public schools and child care as important in their locational decisions if they had children. Michelle, who has a child, indicated the importance of public schools as she and her husband are currently looking to move because "the area that we're living in right now, the school system isn't as ideal, and we're also looking to remain fairly close so that (their son) could walk to school" (Michelle). On the other hand, a couple of graduates pointed out that it is expected that all children across Canada have access to good schools and child care (Jordan), and technically all schools should offer the same quality education (Connor). Affordable childcare is also very important (Jessica, Michelle). Michelle wants to remain within close proximity to her family as they assist with child care. Justin noted that despite the fact that the City of London is known as a university town, the city itself tends to be very family oriented with good schools, family geared housing and lots of recreational opportunities for children. Two interviewees are school

teachers and indicated the importance of good public schools in terms of employment (Sebastian, Connor).

5.5.6 Arts and cultural amenities

Most graduates find arts and cultural amenities important and consider it in their decision to locate somewhere as they want to be nearby, yet it is typically not the primary motivation to move. Sebastian ranked parks and recreational opportunities as most important: "That would be number one for me. So I love to do outdoor activities, that would be at the top of the list. If there's mountains or beaches or oceans that would definitely put one location over another for me" (Sebastian).

London offers a variety of outdoor recreational opportunities. Several graduates mentioned that they use the parks and trails in Victoria Park and Springbank Park for walking, running, jogging, rollerblading and biking. Graduates also listed other recreational facilities such as the gym, sport complexes, pool, squash courts, hockey rink, basket ball courts and tennis courts. London is missing a few outdoor recreational opportunities that are simply not feasible due to its geography, for instance: rock climbing, skiing, snowboarding and various water sports such as swimming in a lake, fishing and boating.

A few graduates indicated that they appreciate the diversity and culture in London. Several graduates referred to the various cultural amenities available in London, including: the art gallery, Grand Theater, concerts at Budweiser Gardens (formerly known as the John Labatt Center), performing arts, plays, shows. London has all these cultural amenities; however, they are on a much smaller scale than Toronto and Ottawa, which attract a large volume of big concerts and well known festivals (Erik, Jessica, Justin). Several graduates attend the festivals that are held every weekend in London throughout the summer at both Victoria Park and Harris Park (Connor, Kate). The large variety of things to do helps make the city more fun (Chris). As Connor said: "If you have nothing to do I think you get bored quickly of a place" (Connor). Despite the

numerous social and recreational opportunities, Sarah indicated the lack of thing to do in London for young professionals, specifically the 25-35 age cohort.

> Activities, more stuff for us to do. I love the nightlife scene in London for younger people but it's really hard to grow out of it and to replace it, there really isn't a lot of options I guess for that age bracket, like if you look at 25 to 35, there is not a lot apart from restaurants and that's good but (Sarah).

A couple of graduates also indicated that there is a lack of social and cultural activities and festivals during the winter (Connor, Sarah).

5.5.7 City's Natural Beauty

Although most graduates appreciate green space, there are mixed views in terms of its importance when selecting somewhere to live. Some alumni are conscious of it when moving as they feel it is important to live in a nice city with plenty of trees, open spaces and fresh air. Justin selected his current apartment in order to be near green space.

> I picked my current apartment not only because (it's close) to the subway but it's also close to the Don Valley, so that's like a huge stretch of green, so that I can go walking along the Don Valley trail and stuff like that so it is important to me that there is some form of green (Justin).

Others view the city's natural beauty as a luxury rather than a necessity (Connor, Kate).

Several graduates indicated how much they appreciate green space, especially in the downtown core (Marquise, Kate). "I love trees, London is awesome for that, ...I really like when cities incorporate like natural components into their downtown" (Marquise). Kate appreciates that there are natural spaces within walking distance of most places in London (Kate). A couple of graduates criticised the metal trees downtown London and feel that they should have planted real trees, as they are a mockery of nature (Marquise, Ashley). Jordan and Justin both indicated that they like being within close proximity to a body of water. London is ideally situated within a short drive to both Lake Erie and Lake Huron (Justin).

5.5.8 Infrastructure and Transportation

Several graduates do not have a car and therefore have to rely on public transit, biking or walking. "I don't have a car so things like convenience to get things like groceries, to get to work, to get to see the people I want to see, it is very important" (Kate). Many graduates who do not have a car look for walkable communities in which all amenities, such as groceries, work, school, gym and park, are within a short walking distance. Those that ride their bike everywhere want bicycle friendly streets, cycling lanes and bike racks throughout the city (Jordan). A few graduates complained that it is dangerous to bike in London (Jordan, Sarah).

There were mixed views regarding the transit system in London. Some complained of limited routes and small routes with numerous transfers (Sarah, Justin). Justin pointed out that: "If you're going to the university, buses are great, if you're trying to get anywhere else within the city it's ridiculous" (Justin). Those that expressed concerns about the London transit system were typically those without a car, who must rely on public transit and those from larger metropolitan regions, such as Toronto and Ottawa, where there are more efficient transportation networks (Jessica). Graduates from smaller towns felt that the transportation system in London is good compared to their hometown (Jordan, Marquise, Michelle). For instance, Michelle stated that: "...compared to Brantford, I found that the public transportation in London to be excellent that I could get places where I needed to go rather easily" (Michelle).

Some graduates mentioned that they selected their housing based on proximity to various transportation routes, whether train, airport, subway or bus routes (Jessica, Justin, Sebastian). Others referred to infrastructure and accessibility between cities (Michelle). Some said that they like to be near major transportation route, such as the 401 and 403, in order to access other major cities within a short commute (Sebastian).

There is a driving culture in London; the city caters to those that drive and not those that use public transit or bike (Sarah). A few graduates complained of congestion, especially during peak rush hours (Sarah). Since there is no expressway or ring road

going through the city, and the city is very spread out, it can take up to an hour to get across town (Ashley, Jessica, Sarah).

> If you work on the other end of the city, you're taking like an hour do get there in you know like rush hour or anytime of high traffic volume, it takes an hour to make 15 minute drive and I've done that many, many times (Ashley).

> Transportation is important, like the traffic in London is less than ideal and it's like really concentrated at certain times of day,... but because a lot of London does live around like 9-5 or 8-4 kind of culture, and there is no public transportation that's really viable, I know that they've been trying with the buses but it goes up every year and it doesn't justify, you know like the routes are small, you have to transfer buses a bagillion times, it's like a driving culture in London they really don't cater to people who want to use public transportation instead of vehicles. I know we're not big enough to support a subway or anything but maybe a tram system... I made it to work in 12 minutes I think is my record and I think that my longest has been 45 (Sarah).

A few graduates feel that the city is not well planned, not well laid out, specifically in terms of the train tracks running through the middle of the city which increases congestion downtown (Jordan, Sarah).

5.6 Assessment of London's Built Environment

When asked whether London offered the built environment necessary to engage in their favourite activities, five graduates responded that the city had everything they needed. "London was a very complete municipality" (John). Another graduate said: "Ya, it was perfect, I could do everything that I wanted to, I was completely content with London as a city for types of things to do after work and lifestyle outside of work" (Tyler). Michelle and Erik pointed out that everything you need as a student is available on campus.

Graduates value the following amenities in London: Victoria Park, Richmond Row, Covent Garden Market, Galleria Mall (public library, cinemas), Centennial Hall, Aeolian Hall, Orchestra London, concerts and hockey games at Budweiser Gardens (formerly known as the John Labatt Center), Thames trails and parks (walking, running, jogging, biking, rollerblading), adult fitness activities, gyms, art classes, Western Fair,

nightlife, cultural activities, festivals, great downtown, good transportation, good restaurants, various sports leagues, malls, movie theaters, clubs (Rotary/Optimist Clubs), great diversity, a vibrant civic society and family friendly neighbourhoods. In addition most of these amenities are within walking distance of downtown London (Justin).

Some criticized London's limited activities and amenities for young professionals compared to large metropolitan regions, such as Toronto, Vancouver and Ottawa (Jessica). John felt that London had everything he needed; it's simply on a smaller scale than large metropolitan areas.

> I can't think of anything I wish I had, you did have a night life, concerts, hockey games to go to, cultural activities like the fair, all of those things are in London. You are not really missing a lot, they may be on a bigger or larger scale but I don't think you are missing a lot (John).

Tyler did not view London as being any different from Toronto; he did all the same activities in London as he did back home in Toronto, even though there was more variety in Toronto.

One of the main critiques of London's built environment was the lack of outdoor recreational activities, including: fishing, outdoor basketball courts, snowboarding, skiing, hiking and mountain climbing. Many of these outdoor activities are simply not feasible due to London's geography (David). Other critiques included the need for more nightlife options for the 25-35 age cohort (Sarah). Those that attend all the festivals held during the summer, wish to have more festivals and events during the winter (Sarah, Connor). Some graduates critiqued the layout of the city; Justin and Erik feel that everything is too spread out making it impossible to walk everywhere (Erik). For instance, all the shopping malls are located near the periphery making it challenging for those without a car to access them (Justin). On the other hand, Jordan felt that everything is too concentrated downtown near Victoria Park (Jordan).

Ben pointed out that for those that have stayed in London, the city provides the environment to do their favourite activities, yet not the people with which to do those activities (Ben).

5.7 Reasons Why London has Difficulty Attracting and Retaining University and College Graduates

Graduates attributed the loss of graduates to various causes: limited employment opportunities, lack of community engagement, negative city promotion, limited awareness of local opportunities, career fairs and networking events drawing students away, competition with large metropolitan areas and graduates' social networks drift away.

The majority of graduates cited limited employment opportunities as the primary challenge in retaining graduates. There are simply not enough jobs available for the sheer number of graduates, and it becomes a numbers game (Michelle). There are plenty of part-time minimum wage positions in London, yet there are limited opportunities to start off a career (Justin). There are simply not enough full-time career positions in the specialised fields in which graduates are educated. Connor stated that: "...there is definitely a lack of jobs in their fields (engineering/science), not necessarily like if you want to get a job doing anything you can find one, but it's hard to find a job in what people have graduated in" (Connor). London simply doesn't have the variety or depth of jobs necessary to cater to most graduates (Justin). For Jessica and David, the jobs they were considering were simply not available in London: "Employment opportunities ...I was interested in pursuing weren't really in London" (Jessica), "Well it was just that I already had a very clear goal of what it was I wanted and it's not something you can do in London" (David).

John believes that graduates leave because they have outgrown the opportunities available in London. "Western prides itself in creating very bright and astute citizens" (John), who are driven to succeed and do big things, and have therefore, overgrown London.

Some graduates are simply unaware of their employment options based on the skills that they have acquired from their degree and which of these positions are available in the London area (Ashley, Marquise, Ben).

> I don't know that I was necessarily aware of the jobs that existed in London, I mean this is just overall, when I graduated I felt at a loss for what I was looking for. ...I do think that there was a bit of a, from my perspective, a lack of a understanding of all the other jobs that might encompass things that I am interested in (Michelle).

> I just didn't know about the employment opportunities here in London. So I just had this preconceived notion that the kind jobs I wanted would automatically be in bigger cities, so ...until I went through the internship program, I wasn't aware of the opportunities here (Ben).

Medium-sized cities, such as the City of London, must compete with large metropolitan areas like Toronto. The majority of large firms are located in Toronto (John), and as a result, there are certain positions that are only available there (Chris). In addition, people move to Toronto because it's bigger, there's more happening and they have family and friends there (Chris). For example, Kate said: "(My classmates) were from Toronto, they went back home because the people they knew were from Toronto, they felt that Toronto was superior because it was bigger, had better public transit, had more things to do" (Kate).

A couple of graduates pointed at that the pay disparity between comparable positions in London and Toronto, and how it acts as a deterrent for those looking for employment in London.

> Well there is a pay disparity for lawyers, I can say that people get paid more money by going to Toronto and getting jobs there and more than 50% of the lawyers in Canada actually work in Toronto so there are a lot of jobs and it is possible to get jobs there and get the big pay checks and it seems a lot of people are attracted by that and I think that holds true for people, there's a herd mentality … earn a lot of money (Jordan).

Graduates in certain fields find themselves leaving for large metropolitan areas in order to earn a higher salary, yet they forget that the cost of living is also a lot higher than London (Jordan).

> Well for retaining graduates, I think that salary has something to do with it because … the pay is going up, the cost of living's going up, well people see their pay checks and don't seem don't recognise that they are coming out the same in the end, they pay more money even though, they are earning more money.

> ...people aren't attracted to having a good lifestyle as they are to big pay checks and by staying in London, by getting jobs in London than you can have a better lifestyle but people aren't immediately attracted by that ...but people should be more interested in living in places like London and Waterloo and other sort of medium-sized cities with vibrant communities and research centers… (Jordan).

As indicated by Jordan, young professionals tend to be more attracted by the big pay checks found in large metropolitan regions than the better lifestyle found in medium-sized cities(Jordan). On the contrary, John believes that graduates move to Toronto for the great work-life balance.

> I don't think any one individual is looking for a high pay but willing to sacrifice great location as well, or, it's all aspects of the social lifestyle that lead into where people want to be. So I would argue that a lot of people are leaving London because, somewhere like Toronto, which is relatively close has all the different aspects that lead to a great work/life balance (John).

Although London's cost of living is not as high as Toronto's, it is still decently expensive (Michelle). As a result, many graduates, who did not immediately find employment in their field, found themselves returning home to live with their parents for financial reasons in order to get their feet off the ground.

> I moved back home because at that time I didn't have a job opportunity in London, so it wouldn't have made sense financially for me to stay in London without having anything in my field to do so I moved back (Tyler).

> It seems that a lot of students that come to London are from out of town. And when you graduate, people graduate with debt, maybe they don't but they want to get home right away probably. ...I wanted to move back home and start saving some money before I did something else, unless I got a career job that was paying me enough to outweigh the savings of living at home (Sebastian).

> ...my theory is what happens to the average graduate has a hard time finding a job and so what they do is they move back to their family house, ...they move back from out of town essentially, and then what would happen is they would stay home for a bit then something would come up. They would be applying for jobs within the location where their family is located, that would be Toronto in general. And then that's how they end up finding their first career job and then they end up staying essentially. ...That's number one, that's going back to employment, the main reason being employment opportunities and lack of opportunities I guess (Erik).

Since many students do not have a career job lined up, they return home to their previous summer job (Marquise, Sebastian).

> It's really easy to just go home and pick up that same summer job, that you've been doing every year and hope for something different but it takes a lot of work and time to get a job and for a lot of people you know, they get essentially get stuck in a rut (Marquise).

In some cases, graduates simply never considered staying in London (Marquise). As indicated by Jessica, "It's the university and college that attract students not necessarily the city"; and therefore, they automatically assume that once they have completed their studies they would go home (Jessica, Connor). This assumption stems back from when they were students and went home every year for the summer (Jessica).

> ...students have that automatic assumption that when school is done, I go home. So then they get the same assumption ok, when I graduate, I'm going home and therefore, they don't even think, what if I stayed here, what if I worked here, because a lot have never worked in London because they only went to school here, they never got outside of the university bubble... (Connor).

As indicated by Erik, a lot of it has to do with the fact that the vast majority of Western students come from out of town and have no roots in the area giving them little reason to stay. Once they have gone home, it is hard to get them back.

> I think about my university network, I think the thing is about London everybody comes from someplace else, and a lot of time people come from Toronto which has more amenities and more services, so I mean if you're really unhappy in Toronto I think, some people were inclined to stay but I think my friends that did stay, they were friends that came from smaller cities, everybody I knew coming from a bigger city or a comparable size city, didn't stay (Jessica).

This is true of the graduates interviewed; in general, those from smaller communities were more inclined to stay as they were more satisfied with the services provided in London. Most graduates from larger regions, such as Toronto and Vancouver, returned home upon graduation as London simply does not offer the variety of amenities found back home.

With the large portion of graduates leaving, those that were fortunate enough to find employment in London find it hard to see their social network drift away; therefore, they find themselves often going home to visit family and friends (Ben).

> Now that I've been working there for a couple years, proximity to friends and family has become more (important) as you know, not knowing as many people in the city now that everyone has left after graduation, ya it's not very fun. **...**pretty much every weekend I go home, because of again that lack of social network and support here, so I guess I'm just basically here for employment ...And I think it's just the people who do find jobs here, again it's the whole social networks kind of drifts away and so you don't really have any reason to stay here. So I think it just lacks a critical mass of people staying which would then foster more people to stay in the age group (Ben).

It's a herd mentality (Jordan), everyone leaves for cities where everything is happening and there is a lot to do (Erik).

> I think everyone kind of herds at the same time, you know you go where everything is kind of happening I guess, especially when you are young, you want to be somewhere where there is a lot to do. I think the whole amenities thing kicks in, you want a lot of different things to do, you don't want to do the same thing over and over again right (Erik).

> ...when I graduated from school all my friends, left, it was a big exit and it's hard to establish a social group again. It's hard right, it's hard to leave people, develop close connections again. You're still trying to support your relationships with people far away so I find myself leaving a lot of weekends to go down to Windsor, to go up to Toronto to visit people. You know I had a couple months were I was spending 3 out of 4 weekends in Toronto and still living here and that's kind of infuriating, like why haven't I moved already (Sarah).

Unfortunately, there is a negative perception associated with those that have stayed in London; some view it as if they haven't moved on or grown out of the university scene.

> I see and I've heard that the perception of the city, it's a university city. So what basically happens, so when people graduate and they stick around, its kind of like you haven't really gotten over the whole university scene yet. ... some people see it as negative, you're still in university. You need to grow up a little bit. It's kind of like oh, he's still in London Ontario, what he still doing there (Erik).

Many graduates made reference to the Western bubble and its impact on student's getting to know the community. The Western bubble is really strong, everything you need can be found on campus, so why would graduates leave campus.

> It's seems like, have you ever heard the expression, 'the Western bubble', it seems like the Western bubble is really strong there and while you're having that great student experience that Western prides itself on, it really seems like it is just a student experience and there isn't that networking and outreach programs through local businesses or whatever, that's kind of intertwining the two and making that branch over from student to career focused person (Sebastian).

> The Western bubble is a really big thing that people don't get out of, ...So unless you know you're volunteering, unless you're doing co-op, unless you're doing something that gets you off campus you'll never get to know the City of London and I think that that is a big factor, is you're scared, you know your home town like the back of your hand usually but you don't necessarily know London and therefore you tell yourself, well I don't even know the city, why would I stay here (Connor).

Since Western is so isolated from the community, students have little interest in the community itself as they find it challenging to get engaged in the community (Jessica). Ashley believes: "that's probably where you do lose a lot of them, like initially and if they have no invested interest in the city to begin with" (Ashley). Jessica also indicated that: "If you're not someone who's really interested being involved in your community or if you don't have close ties, I found it really difficult to get involved with organisations off campus or you know feel like you're involved in participating in the decision making" (Jessica).

Jessica believes that the poor transit system in London can be to blame for the lack of student engagement, as students have difficulty getting to certain areas of the city. "... I think that one of the key challenges for me, even taking advantage of that program (Doors Open London), was the fact that public transit it's really difficult to go to any of those things that really appeal to me..." (Jessica).

As for the career fairs and networking events, graduates feel that they are not always successful in retaining students. Although some departments, such as law and Ivey, are great for setting up networking events, the focus tends to be mostly Toronto

(Jordan, Sebastian). "When I think of an Ivey program, they're set up so well with networking, unfortunately most of the big business companies are in Toronto or another big city so that draws them away as well" (Sebastian).

In some cases, the professors do not want to promote networking events as they want to keep their students as graduate students for academic reasons (Marquise). "I think honestly the academic departments because they want the students to stay on as grad students, which a lot of them do, they don't want them leaving for business, so like there's a good chance that they're actually hindering that connection" (Marquise). As for the graduates interviewed, many left London to pursue a Masters or PhD degree, attend college or do continuing education at another post-secondary institution.

When asked whether they attended Western's career fairs, there was an equal split between those that did and those that did not attend. Those that did not attend figured there would not be anything there of interest because they were from a specialised field (Kate) or there was no point attending because they already had a specific career goal in mind (Tyler). Most graduates who attended the career fairs did not find anything of interest as there was nothing in their specialised field. The job fairs tend to feature generic careers such as teaching abroad, Canadian military, engineering and trained health care professionals. In terms of retaining graduates, Jessica noted that most of the postings that were advertised were not positions found in London (Jessica).

Graduates indicated that job fairs are only beneficial to those that know exactly what they want to do and what booths to visit (Ashley, Jessica, Ben). For instance those that are in social sciences and may not have a long term career goal, and therefore won't know which booths to stop at simply because they are not aware of how they can apply the skills they have learnt from their degree to a specific position (Ben).

> I think part of it too on the part of Western would be like, identifying what job, so for me like going to a job fair well I don't know what I would even look at. Like even the career that I'm in now, it's like I just kind of got into it not by accident but it was something that I hadn't even thought of when I was in school but it kind of combines everything that you know... that I never would have thought to apply to a career when I was in school. So like the job fairs are nice if you know what your industry is like... (Ashley).

Others complained that the job fairs were not well advertised (Sebastian, David).

Justin noted another challenge for the City of London is all the negative publicity it has received in recent years in the media, for its high unemployment rates, huge job loses with the large manufacturing plant closures, troubles at City Hall and rowdy students. This negative stigma makes people question whether they want to build a life in London (Justin). "I think it's just a fear of if you move to a city where a lot of those people who are in those industries are now unemployed what has the negative impact of them being unemployed, is there more theft, is there more crime" (Justin).

5.8 Internships and Co-ops

Graduates were asked whether they feel the implementation of internship and co-op programs at the university and college level would encourage students to remain in the area by introducing them to the local labour market and helping them build connections with local employers.

Thirteen graduates responded positively to the implementation of an internship and co-op programs, indicating that they help build awareness of the local firms and employment opportunities, promote student engagement and are a great tool for networking, therefore encouraging graduates to stay. "...it gives the opportunity for you to meet an employer and an employer to meet you and ya for you to make those connections that can then lead to you staying" (Michelle). Another graduate said: "Ya like if you went to school here and you were to get a job offer or an internship here you are probably more likely to want to stay here because you know the people, you know the environment, why ... yourself completely if you have kind of a base to work on" (Ben).

Co-ops and internships are great to build awareness of local opportunities as most students do not know what they want to do when they graduate (Marquise). This was the case for Ben who did an internship with a local employer and was hired full-time upon graduation. If it was not for his internship he would not have known that any companies in his field existed in London, he had originally thought that he would have had to move

to a large city like Toronto or Vancouver to find employment in his field. Ben was one of the three graduates who participated in the internship or co-op program at Western and all three ended up finding employment in London upon graduation (Sarah, Ben and Kate). "What happens a lot of the time, is people do their internships and then they end up getting a full time offer, so they stay" (Erik). Those that did a co-op or internship found that it helped facilitate their transition into the local workforce (Kate). "And I did do one locally so I felt like I got an idea of what the industry looked like. And I think that did help me feel more comfortable in staying" (Sarah). As for Kate: "...it did make me feel like more of a Londoner than a student and it kind of helped ease that transition for me" (Kate). Local employers can also benefit from the knowledge that students bring to the company as they are typically up to date on the latest information in their field; the only thing that they lack is experience (Connor).

In order for these internship and co-ops to be effective in retaining graduates in London, there needs to be enough jobs available for the students when they graduate (Jessica, Chris).

> I would suggest that co-op and internship program, push that hard on student, if you can provide jobs. It doesn't do you any good if there's no job after. Students would do it because it's good experience but you know if you want to retain them you have to give them a job (Chris).

> Co-op opportunities are only intended to provide students with experience to be able to go out and get jobs in the field later on and the challenge is that should it be that London decides to apply that, they need to ensure that they go in sufficient demand for the job skills such that the student once they complete that program, they can either continue on in that position or be hired back on permanently in that position or leverage those skills in another company in that area, and I'm not sure that there enough diversity in that local job market to be able to sustain even a portion of that (Jessica).

In order for the program to be successful, the University must accept an appropriate number of students to ensure that there are enough jobs available (Justin).

> I think the thing with co-ops and internships and all that sort of thing is that if the university is going to have people come into those programs, they have to be really careful about letting in an appropriate number of people, that there's jobs available for them when they're going to graduate. ...there has to be enough space to theoretically absorb, like I would say at least 75% of those people when they

> are going to graduate, otherwise you're kind of teasing them to say you can do this, like work here and see what it's like and then when they go to graduate or apply that there's no actual jobs that I think people would just get really mad really quickly (Justin).

The co-op and internship program is a lot stronger in some programs. For instance, several graduates referred to the success of the engineering and nursing placement at Western. Jordan noted that the engineering department did a good job of preparing engineering student for their professional careers and helping them find a job locally and across the country. Jordan, Ashley and Tyler all indicated the success of the engineering internship and co-op programs in retaining graduates in London. Some graduates referred to the success of other universities that have implemented co-op and internship programs, such as U Vic (Chris) and Waterloo (Erik, Marquise), and believe that those cities are more successful in retaining students.

A few graduates indicated that although these programs may be successful in some fields, they would not be possible in every department due to the nature of the studies and the limited availability of local jobs in certain fields, such as the arts and humanities, and the social sciences (Sebastian, John).

> I think so but I wouldn't say all the programs, if you're thinking MIT or something in media, I don't know how many jobs are available. So if you wanted to give them a coop it would likely be out of town, which is going to draw them away from the city anyways (Sebastian).

A few graduates questioned the effectiveness of an internship and co-op program in retaining graduates within the community due to the limited availability of jobs in some fields in London. Some students are be forced to go elsewhere for their placements, which draws students away (Sebastian, Kate).

Jessica expressed concerns that co-ops are difficult to get processed and approved, cost money and extended the length of her degree. Most students do not want to spent five years in an undergrad when they could spend four; therefore, they need to find more subtle ways to incorporate internships to make them more attractive (Marquise). In addition, students do not want to take an unpaid internship or co-op, especially when they still have to pay tuition while doing the placement (Tyler, Jessica). Tyler feels that it

would be more effective to provide work placements paid upon graduation. In order for these programs to be successful, employers must be willing to pay competitively (John). "You need employers who have big business, who pay well and who are able to challenge their employees" (John). A couple of graduates felt that there is limited awareness of the internship and co-op programs currently in place at Western as they are not well promoted (Erik, Marquise). Jessica questioned how she would have gotten to and from her placement due to the poor transportation system in London: "...I think about my own experience in London if I had worked at a job off campus, I don't really know how I would have gotten to and from" (Jessica).

Jordan believes that the implementation of co-op and internship programs at the university and college level to retain graduates "raises philosophical questions of what is the purpose of the university education. Is it to prepare somebody to enter the workforce or is it to prepare them for something else" (Jordan).

5.9 Graduates' Future Locational Plans

Of the sixteen graduates interviewed, five graduates plan on returning to London, 6 graduates might return and five had no intentions of coming back. Various factors come into play when graduates discussed their future locational decisions; most decisions depend on employment opportunities and proximity to family and friends

When asked whether they plan on staying in or returning to London, most graduates indicated that their decision is contingent on whether they could obtain employment (Erik, David, Marquise). As put by Erik and Marquise: "If I found a nice job in London, I would stay, ya for sure" (Erik); "if I had a job offer there, I would go back" (Marquise). Ben indicated that he would be likely to stay provided he has employment because of his "level of familiarity with the city, level of comfortableness with the city and work environment and I know the people and I know kind of the processes that go on at work so I don't see myself uprooting myself just for that" (Ben). Ashley had not originally wanted to leave London but had to relocate due to lack of employment opportunities in London. She plans on returning to London in the near

future even if it means taking a decrease in pay. She finds herself commuting from Waterloo to London weekly to visit her family and boyfriend.

As indicated by a few graduates, their locational preferences will evolve over time.

> And I also see it as, it's something, sort of a young mentality, 24 to under 30, everyone wants to so of live in the big city when you are young, but eventually I mean, once you sort of meet somebody and start a family, that kind of thing. Everyone kind of leaves the city and the eventually, whether it be GTA back to London, obviously contingent on career and that stuff. Live while you are young kind of thing. That's sort of the popular mentality (Erik).

Although most graduates have left, some consider returning to London many years down the road in some cases to raise a family, once again contingent on suitable career opportunities (Erik, Sarah, Kate).

> ...obviously contingent on where the career lies. If there an opportunity to continue that in London ...But as you get older your preferences kind of change. So like right now it's big city, the bigger the better, all my friends are here, but once you get older, you know, everyone kind of separates. You get more serious, you leave, you start thinking about your kids. If I want my kids to grow up in a safe, nice city, safe and with a good university, I would definitely come back to London (Erik).

> I see myself living in a city that is London or a similar size to London. I guess in 10 years from now, I picture myself possibly married with young kids. So I think I will probably still be here (Kate).

For some, proximity to family and friends is important, meaning that they want to eventually work their way back to their hometown (Jessica, Ben).

> I do intend to return to the area of Southern Ontario, Toronto, London, Hamilton, in the long run, that is kind of like my ultimate goal and ambition and that's so that I can be closer to friends, my girlfriend and family (Tyler).

Ben and Marquise indicated how their priorities have changed and proximity to family and friends has become more important.

> I mean my priorities honestly in the last few years have really changed ...I used to be like really open to going to like different places and I have done a lot of travelling and stuff and then after being away for so long, ...closeness to family

> and just being able to come home for the holidays became really important (Marquise).

Michelle indicated how challenging it is to relocate once you have become established in a city, as she now also has to consider the implications of a move on her husband and son.

> ...once you start to settle in, that it's harder to leave a city or go back and I've realised that I, so my husband is a teacher here and that means that he's got a job here and now we have a son and as soon as he was in school, all those things, I think, start to play a role, so once you start becoming established in a city, I think it's harder to go back is all (Michelle).

There are some graduates that simply have no intention of returning to London, but rather see themselves living in large metropolitan areas, near family and friends. For some, it is simply a case that they are happy with their career and have no intentions of returning to London (Chris, John). Although many graduates have left London and do not plan on returning, it is important to note that most graduates loved London (Ashley, Marquise, Jordan). "I really enjoyed London. If I had a reason to stay there I would have, I think it's a great city. If I was offered a job there I would happily go" (Marquise). Graduates suggested that the City of London needs to capitalise on the fact that students love London by developing strategies to retain them.

5.10 Conclusion

This chapter presented the results from the case study of London, Ontario. The interviews examined graduates' locational trends and provided detailed insight into the city-region's ability to attract and retain post-secondary graduates.

This study revealed that young professionals are primarily attracted to city-regions on the basis of employment opportunities, continuing education or graduate school, and proximity to family and friends. Elements of the built environment, including cost of living, city size and location, quality of life, arts and cultural amenities, infrastructure and transportation, are important in terms of overall attractiveness of the

city, yet they are not significant factors guiding the mobility of the highly educated. For some graduates, the built environment would not determine which city they live in but rather where they live within a city.

Nevertheless, the graduates interviewed recommended general strategies and specific improvements to the built environment with the premise that it would aid the city in its talent recruitment efforts, allowing medium-sized city-regions to compete with large metropolitan areas. These strategies include: increasing the number and variety of employment opportunities; attracting small and large businesses; running department specific networking events and career fairs; promoting student engagement in the community; increasing city promotion and marketing targeted towards youth and young professional; providing incentives to stay; and making changes to the built environment. Specifically, these changes to the built environment include: providing more affordable housing downtown London geared towards young professionals; upgrading the transportation networks within the city and between major cities; creating more walkable communities; building more bicycle friendly streets; and providing additional extracurricular options for the 25-35 age cohort, particularly during the winter months. Although some graduates would like to see changes to the built environment, it would not influence their decision to stay or leave; the quality of the city's built environment must go hand in hand with also having jobs. Rather than making changes to the built environment, some graduates indicated that the city's built environment simply needs to be better marketed to promote its competitive advantages. Although, London does not offer all of the amenities available in large metropolitan areas, the city does however provide great alternatives which can be marketed to young professionals. These recommendations and interview findings will be further assessed and discussed in greater detail in the following chapter, Discussion and Conclusion.

CHAPTER 6: DISCUSSION AND CONCLUSION

6.1 Conclusions

This study set out to address the out-migration of highly skilled individuals from medium-sized city-regions in Ontario. In today's knowledge-based economy, city-regions that are able to attract, develop and retain valuable human capital have a distinct advantage that is crucial to economic growth and prosperity (Gertler et al., 2002). However, this sought-after talent is not dispersed evenly across countries. Rather, these highly mobile individuals tend to cluster in large urban-centers (Gertler et al., 2002). Therefore, due to the out-migration of university and college graduates from medium-sized city-regions and the importance of such talented individuals in economic growth, it is important to gain a better understanding of the factors that influence the migration of human capital. City-regions are all in the race for talent and only those with attractive environments will be successful in attracting skilled human capital. Since quality of life, which includes various components of the built environment, is highly regarded throughout the literature as a magnet for talent, it is important to understand the infrastructure, design and built environment needs of the highly skilled and determine whether their needs are being met through the policies implemented by the local municipalities, economic development institutions and post-secondary institutions in medium-sized city-regions in Ontario.

This research topic was addressed using mixed qualitative methods, which involved a content analysis of each region's most recent institutional policy documents published by the municipalities, economic development institutions and post-secondary institutions in the nine selected medium-sized city-regions across Ontario, as well as a case study of London, Ontario using semi-structured in-depth interviews with Western University alumni. Ontario was selected as the study region as it is home to a large portion of the Canada's medium-sized city-regions. The strategic policy document analysis was conducted to determine what economic development policies have been implemented by the selected institutions to counteract the loss of knowledge resources and whether these policies discuss the role of infrastructure, design and the built environment in fostering investment and development. As for the interviews, sixteen

recent graduates provided insight into the factors that influence their locational decisions in order to determine whether their built environment needs are being met through the policies currently implemented by the various institutions and identify any changes needed to address shortcomings in the current strategies. Specifically, the study was designed to answer four primary research objectives:

1) Document and analyse the economic development policies implemented by local municipalities, economic development institutions and post-secondary institutions to counteract the loss of human capital.
2) Analyse whether and to what extent these policies discuss the role of infrastructure, design and the built environment in fostering investment and development.
3) Analyse and interpret what factors influence post-secondary graduates' location decisions and determine their design and built environment needs.
4) Analyse and interpret how infrastructure, design and the built environment may be used to attract and retain university and college graduates, and highlight policy options that grow out of the literature, policy documents and interview research.

This chapter discusses the key issues that emerged from the findings, the study limitations and contributions, along with recommendations for future research and policy directives.

The following discussion assesses whether graduates' built environment needs are being met through the policies implemented by the local economic development institutions and post-secondary institutions, or whether changes must be made to meet their needs. This section also links the findings with the relevant literature, discussed in Chapter 2.

6.2 Discussion

There were large variations in the content and detail of the policy documents, both geographically and institutionally variable. In terms of geographic variations, certain

regions had more strategies geared towards attracting and retaining youth; however, these variations were relatively small. On the other hand, there were large institutional variations between the content of the post-secondary institutions and the economic development institutions. Post-secondary institutions generally did not indicate any interest in keeping their graduates within their respective city regions (Clemens, 2012), whereas, local municipalities strive to retain a large proportion of graduates within the region in order to seek future benefit from their large earnings and thus large tax revenue (Gottlieb & Joseph, 2006; Huffman & Quigley, 2002). These variations are not surprising considering their differing strategic priorities (Clemens, 2012).

The interviews analysis confirmed Murphy & Redmond's (2009) findings that "the decision making process is highly complex and variable and depends on a whole host of socioeconomic and personal circumstances" (p. 81). As found by Darchen & Tremblay (2010), due to the large array of factors that come into play, it is difficult to assess the influence of specific factors on the mobility of human capital. The following paragraphs look at the reasons why medium-sized city-regions are having difficulty attracting and retaining human capital along with their associated policies targeting these issues.

In general, when asked about their decision to move to London, most graduates referred to the university, few specifically referred to the city itself. The graduates indicated various reasons for choosing to pursue their post-secondary education in London, Ontario, whether due to: the reputation of the university, programs offered, proximity to family and friends, student opportunities, financial reasons or simply the campus itself. Upon graduation, most students returned home for financial reasons as they could not find a job locally. As found by Franco et al. (2010), students' provenance is an important factor driving migration, as students' social networks are to a certain extent locked into particular places. This study also confirmed the results found in Hansen et al. (2003) and Murphy & Redmond (2009), stating that proximity to family and friends are very important in graduates' mobility, and therefore, since few graduates have roots in the area, many graduates end up leaving when they complete their studies. With the sheer mass of students leaving, those that have stayed find themselves often

going home to visit family and friends, due to the lack of local social networks and supports.

The graduates interviewed provided their thoughts on why London has so much difficulty attracting and retaining post-secondary graduates. They attribute the loss of graduates to: limited of employment opportunities, lack of community engagement, negative city promotion, limited awareness of local opportunities, career fairs and networking events drawing students away, competition with large metropolitan areas and graduates' social networks drifting away.

The economic development institutions have adopted various strategies to attract and retain youth. These strategies include, in order of prevalence: 1) partnerships, 2) research parks and business incubators, 3) marketing, 4) education and training, 5) infrastructure and transportation, 6) quality of life, 7) employment opportunities, 8) city size and location, 9) arts and cultural amenities, 10) housing and costs of living, 11) foreign talent, and 12) youth engagement in the community.

Partnerships were the most commonly stated strategy to attract and retain youth. Partnerships help key community stakeholders combine resources, share knowledge, skills and experiences, which in turn help strengthen the region's economy and promote innovation in the knowledge economy. As found by Clemens (2012), despite the numerous partnerships between post-secondary institutions and their respective city-region, there appears to be limited institutional collaboration and a lack of policy coordination with regards to human capital attraction and retention. Universities and colleges are a significantly underutilized resource in the race for developing a strong workforce (Clemens, 2012). Post-secondary institutions seek to attract the brightest students regardless of their future locational plans and prepare them for their professional careers, on the local, provincial, national and international stage. In other words, universities and colleges are not encouraging their graduates to remain in the area in which they completed their studies. On the other hand, local economic development institutions have identified the need to develop and implement strategies to reverse the

brain drain in order to prevent future workforce shortages, yet there appears to be limited action to address this issue.

The selected medium-sized cities have a competitive advantage over other smaller city-regions due to the presence of post-secondary education institutions needed to attract and develop a skilled workforce. Post-secondary institutions are a key component of the knowledge economy, as they play a major role in the spatial distribution of human capital and are the primary source of highly skilled individuals (Darchen & Tremblay, 2010). Medium-sized city-regions should better utilize post-secondary institutions as a critical source of skilled human capital by taking advantage of the large volume of youth that these post-secondary education institutions attract and finding ways to retain these bright minds within the community. Yet, this raises questions about the role of the university, is it to educate students and prepare them for their future careers or attract future professionals to the region?

The second most common strategies include the provision of research parks and business start-ups. All eleven economic development institutions stated the importance of providing facilities, funding and support services that foster the development and growth of new businesses as a means to attract and retain young entrepreneurs. Entrepreneurism is an important driving force in today's knowledge economy, yet as many graduates indicated, these services only benefit a small fraction of graduates who intend on starting their own business. None of the graduates interviewed are entrepreneurs and therefore, few appreciated its role in fostering economic growth.

As opposed to fostering research parks and business start-ups, the graduates interviewed proposed various strategies to attract and retain university and college graduates in London. The graduates recommended the following changes: increase the number and variety of employment opportunities; attract small and large businesses; run department specific networking events and career fairs; promote student engagement in the community; increase city promotion and marketing targeted towards youth and young professional; provide incentives to stay; and make changes to the built environment.

This study confirms the results found by Grant & Kronstal (2010), Hansen et al. (2003), Murphy & Redmond (2009), Venhorst et al. (2011) as well as the Kingston Economic Development Corporation (2008), stating that employment opportunities have the greatest impact on people's decision to locate somewhere. Specifically, some scholars found that jobs are more important than amenities in shaping young professionals' locational decisions (Darchen & Tremblay, 2010; Hansen & Niedomysl, 2009; Lepawsky et al., 2010). The majority of graduates in this study cited limited employment opportunities as London's primary challenge in retaining post-secondary graduates. The City of London must offer a range of employment opportunities with competitive salaries and benefits, if it is to retain more university and college graduates.

Despite the fact that graduates are drawn to regions with more career opportunities (Venhorst et al., 2011), only seven of the eleven economic development institutions indicated that they need to provide graduates with a range of employment options. Graduates recommended strategies geared towards increasing the number and variety of employment opportunities. Graduates seek a variety of high profile positions in the field in which they were educated, that are full-time and well paying. In addition to providing jobs, the city also needs to increase awareness of local opportunities through various marketing strategies, as most youth are simply unaware of the local jobs available. In order to have enough jobs to retain youth within the City of London, some graduates believe that the region needs to attract more companies, both big and small. This can be achieved by providing incentives, such as lower tax rates, to encourage companies to locate in London, yet this may require provincial government intervention.

Although youth engagement was not specified in the literature as a factor influencing graduate's locational decisions, both the City of Hamilton (2010) and the Kingston Economic Development Corporation (2008) stressed the importance of engaging students and making them feel like members of the community. Students are more likely to consider the region as home when they develop respect and affection for the area and feel welcome within the community (City of Hamilton, 2010). Many of the graduates interviewed referred to the 'Western bubble' and how students' isolation discourages them from getting to know the community. Often, students want to get

involved in the community yet they are simply unaware of the opportunities available. This requires advertising and marketing to university and college students, on the behalf of local municipalities, to raise awareness of local associations, events and volunteer opportunities (KEDCO, 2008). Some graduates recommended getting students involved in the community through city run events, job fairs and volunteer opportunities, in order to get to know the City of London, build awareness of what the community has to offer and in turn have a reason to stay.

The graduates interviewed believe that the university needs to provide students with the tools necessary to get hired right out of university which requires better connections with local industries. Graduates would have liked more opportunities to network with local employers, in order to gain awareness of their options, as most graduates did not know exactly what they wanted to do after school. There are various networking tools that can be used to assist graduates in building connections with the local community, whether through networking events, job fairs, internships, co-ops, or community engagement events. The most commonly discussed networking strategies are internships and co-ops. Many graduates recommended implementing internship and co-op programs, as they help build awareness of the local firms and employment opportunities, expose students to the local economy and are a great networking tool, therefore encouraging graduates to remain in the city-region. Most students who participate in the co-op or internship program are fortunate enough to secure a job with the company at which they did their placement or receive a good reference for another firm.

There were mixed views regarding whether these networking tools are effective in retaining youth post-graduation. Some graduates believe that the career fairs and networking events actually draw students away as most of the positions are located out of town. In order for the program to be effective in retaining graduates in London, the university must accept an appropriate number of students to ensure that there are enough positions available locally; otherwise, students may be forced to go elsewhere for their placement, which will draw students away. However, these programs are only successful in certain fields: due to the nature of the studies and the limited availability of local jobs

in certain fields, such as the arts and humanities, and the social sciences. As for the campus wide job fairs and networking events, graduates complained that there were no positions relevant to their field of study and indicated that job fairs are only beneficial to those that know exactly what they want to do and what booths to visit. Several graduates indicated that they would have benefited from department specific career fairs, or other similar networking events, in order to learn more about the variety of positions available specifically in their field. A couple graduates pointed specifically to the need to inform students about the transferable skills they have acquired from their degree and how they can apply it to a number of relevant positions. Some graduates also recommended building program specific alumni networks, for instance through Linked In or newsletters, through which graduates can communicate, organise networking events and receive information on related employment opportunities in their field.

Some local economic development institutions identified the need to connect students with local employers through job fairs, on-campus recruitment opportunities, and student-employer matching programs. In addition, these institutions recognised the benefit of providing summer employment opportunities, co-op placements and post-grad internship opportunities in talent retention.

The graduates interviewed believe that the City of London needs be promoted more vigorously to students and young professionals. In order to effectively promote itself to young professionals, the City of London must shift its focus from manufacturing to attracting a variety of industries that are more technologically advanced, as most graduates are drawn to careers that are new, exciting and high-tech. The City must find its niche and promote its specialties, by capitalising on what they're already good at, such as university research. All eleven economic development institutions plan on or have already created some form of city brand or marketing strategy targeting youth recruitment and retention.

Five medium-sized city-regions have capitalized on the fact that their post-secondary institutions have been successful in attracting international students and represent a significant economic opportunity as future workers, and have therefore

provided them with incentives to encourage them to build their careers locally. These municipalities have established immigration attraction strategies that provide the community supports necessary to help foreign-trained professionals develop their careers locally and supplement the current workforce.

6.3 Built Environment

The role of the built environment in talent attraction and retention was critically assessed in order to determine what aspects of the built environment influence the locational choices of young professionals. This study confirms the results found in Lepawsky et al. (2010) and Murphy & Redmond (2009) that the highly skilled are primarily attracted to city-regions on the basis of employment opportunities, proximity to family and friends and birthplace. Elements of the built environment, including the cost of living, amenities, infrastructure and transportation are not significant factors influencing the mobility of the highly educated, yet they "play an important role in shaping workers attitudes towards the attractiveness of the city's living environment" (Murphy & Redmond, 2009, p. 15).

Most graduates consider the built environment to be important and consider it in their decision to locate somewhere, yet it is typically not the deciding factor. For some graduates, the built environment would not determine which city they live in but rather where they live within a city. Nevertheless, some graduates recommended specific improvements to the built environment to help attract and retain young professionals, allowing medium-sized city-regions to compete with the large metropolitan areas. Specifically, these changes to the built environment include: providing more affordable housing downtown London geared towards young professionals; upgrading the transportation networks within the city and between major cities; creating more walkable communities; building more bicycle friendly streets; and providing additional extracurricular options for the 25-35 age cohort, particularly during the winter months. Although some graduates would like to see changes to the built environment, it would not

influence their decision to stay or leave; the quality of the city's built environment must go hand in hand with also having jobs.

Rather than making changes to the built environment, some graduates indicated that the city's built environment simply needs to be better advertised. The city must demonstrate that London is a nice place to live by highlighting its competitive advantages. Although, London does not offer all the amenities available in large metropolitan areas, the city does however provide great alternatives which can be marketed to young professionals, such as: shorter commute times, less congestion, great lifestyle and lower cost of living.

The following paragraphs examine each component of the built environment by reviewing graduates' perspectives on its role in talent attraction and retention, discussing the current policies in place and outlining graduates' recommended changes.

Several economic development institutions have developed their talent attraction and retention strategies around the concepts of Richard Florida in order to market themselves to the 'creative class', who are drawn to regions that foster a vibrant arts, culture and entertainment scene. This has driven several city-regions to promote their diverse and creative environments in which the creative class feels comfortable and inspired. However, this study confirms the conclusions made by Lepawsky et al. (2010) that young professionals are more concerned about their job prospects than the region's cultural amenities. This study demonstrated that although most graduates find arts and cultural amenities important and consider it in their decision to locate somewhere, it is typically considered a luxury rather than a necessity, and therefore is not the primary factor guiding their decision to select a certain city-region over another. Nevertheless, the graduates interviewed proposed various strategies to improve London's inventory of cultural assets with the premise that it would aid the city in its talent recruitment efforts. Graduates would like additional extracurricular options for the 25-35 age cohort, particularly during the winter months. Specifically, recent graduates seek an entertainment industry targeting young professionals, allowing London to compete with large metropolitan areas.

'Quality of life' was highly regarded in the literature as a magnet for talent. Eight of the eleven economic development institutions acknowledged the need to foster a strong quality of life in order to remain competitive in the knowledge economy and build a strong workforce. Although only one graduate referred to London's 'quality of life' per se, several graduates did mention London's great lifestyle and how it would influence their decision to return to London many years down the road to raise a family, once again provided there are suitable career opportunities.

The graduates interviewed reinforced the literature stating that the city's absolute and relative size and location influence individuals' mobility (Lepawsky, et al., 2010), yet it is typically not the only deciding factor. Most graduates refer to size in terms of number and variety of amenities offered, and location relative to large urban centers or proximity to family and friends. Seven institutions associated the city's size and location, relative to provincial, national and international networks, with their ability to attract and retain talent. Most institutions approached it from a marketing perspective by promoting the benefits of living in a medium-sized city, such as: inexpensive housing, lower crime rates, limited traffic congestion, strong social cohesion, sense of community and proximity to large metropolitan areas. These city-regions are within close proximity to all the amenities found in the major city centers, such as Toronto, Montreal and Ottawa, meaning that most graduates, living in Ontario, are just an hour or two away from most major events in Canada.

Infrastructure and transportation are very important to graduates as most do not have a car and therefore have to rely on public transit, biking or walking. These graduates seek walkable communities in which all amenities, such as groceries, work, school, gym and park, are within a short walking distance. Those that commute by bike seek bicycle friendly streets. Some graduates indicated the need for improvements to the transportation network within the city and between major cities, including increased bus frequency on all routes throughout the city and better alternatives for those traveling between major cities without a car. Nine of the eleven economic development institutions discussed the link between infrastructure and transportation networks, and talent attraction and retention, typically referring to the mobility of the workforce. These

economic development institutions stated the need to invest in transportation and related infrastructure upgrades, decrease commute times and improve walkability in order to accommodate future employment and population growth.

When looking for somewhere to live, graduates look at quality, location and style of housing, and most importantly housing prices and cost of living (Grant & Kronstal, 2010; Kodrzycki, 2001; Venhorst, 2011). As young professionals, these interviewees simply do not have the means to afford anything expensive; therefore, the lower the price, the better. Graduates demonstrated how their housing preferences evolve over time. Specifically, recent alumni are looking to get out of their run down student housing and are seeking nicer housing, preferably affordable housing downtown. Their preferences will change again when they have kids; therefore, they require a range of housing options that will meet their needs throughout the various stages of their lives (Tomaney & Bradley, 2007). Graduates indicated the need for more affordable housing downtown London geared towards young professionals, yet there are no policies currently in place to address this issue. Most recent graduates are also looking to be within close proximity to amenities, as many recent graduates do not own a car. In terms of current housing strategies, five economic development institutions indicated the need to provide attractive residential environments that are safe, affordable, good quality and meet the diversified needs of the labour pool. These institutions are promoting their housing stock and good cost of living to attract and retain a strong workforce.

As for the presence of post-secondary institutions, educational institutions play a large role in fostering innovation and advancing economic development by providing the skilled workforce necessary to attract investment. Fourteen of the sixteen graduates interviewed were pursuing graduate studies, continuing education, or were planning on returning to school to take some courses for their own general interest. Despite the fact that most graduates had returned to school, they provided mixed views with regards to the presence of post-secondary institutions. Some graduates have a negative perception of students and view post-secondary institutions as a deterrent; whereas, others view it as a benefit to the community as it attracts an educated population, brings funding to the community and provides the opportunity for continuing education. A few graduates

recommended that the City of London and the local post-secondary institutions partner to capitalize on each other's strength, yet little has been done to this regard. All economic development institutions recognize that youth attraction and retention strategies can only be successful through strong partnerships with the post-secondary institutions; yet, there appears to be limited collaboration between the institutions, as only a couple post-secondary institutions seeks to retain their graduates locally.

6.4 Contributions

This study contributes to the literature within the field of geography, but more specifically the sub-discipline of human geography, through the analysis of the mobility of human capital. Previous studies focused on the traditional push and full factors influencing the migration of human capital, such as hard and soft locational factors, as well as personal characteristics (Grant & Kronstal, 2010; Hansen et al., 2003; Kodrzycki, 2001). In particular, several studies made correlations between the presence of human capital and a range of variables in order to better understand the migration of the highly skilled (Florida, 2002b; Hansen & Niedomysl, 2009). Others looked at the positive regional economic impact of post-secondary institutions in the knowledge economy (Blackwell et al., 2002; Bleaney et al., 1992; Felsenstein, 1996; Goldstein & Drucker, 2006; Goldstein & Drucker, 2007; Goldstein & Renault, 2005).

This research contributes to the literature by incorporating the role of design and the built environment in attracting and retaining post-secondary graduates. In addition, this study contributes to local public policy by examining the local economic development policies required to meet the built environment needs of these young professionals. This study specifically targets medium-sized city-regions as they are faced with the loss of knowledge resources as a result of the out-migration of human capital and must compete with large metropolitan regions in the race for talent (Beckstead et al., 2008). The findings of this research will assist municipal governments and local economic development institutions in creating environments which can be marketed to

graduates to promote economic vitality. The findings will also be useful for business professionals seeking to increase access to skilled labour.

6.5 Limitations

This study has some critical limitations. One limitation is that the study is based upon the views of a small number of university graduates from one city-region, giving a relatively limited perspective. Only 16 graduates from Western University were interviewed which is a relatively small sample considering the total number of graduates invited to take part in the study and the total number of post-secondary graduates from all the selected medium-sized city-regions. Therefore, the findings should be generalised with caution. Despite the small sample, the participants were randomly selected in order to be representative of the total university population, with both male and female, from all programs. The initial goal had been to have an equal representation of those who currently live in London and those that have moved away in order to make conclusion based on the variations in their locational preferences; however, due to the very low response rates, this was not possible. Another limitation, deals with the fact that there is a large range of publication dates for the selected strategic policy documents making it challenging to make comparisons. Some documents were published yearly, whereas others date as far back as 2003, yet these were the most recent documents available. Some institutions were in the process of updating their strategic plans; therefore, the selected documents may not reflect the most recent policy upgrades.

6.6 Areas of Future Research

Various recommendations can be made based upon the study's findings and limitations. Other empirical studies should be conducted involving a larger sample of graduates from both the universities and colleges in the other selected medium-sized city-regions. By gathering data from a larger sample of post-secondary graduates, researchers could determine whether there are any differences in migration patterns based on age,

gender, field of study or type of post-secondary institution attended, as done by Venhorst et al. (2010) and Faggian et al. (2007) within the European context. This would allow researchers to detect regional and institutional variations, and gain an in-depth understanding of graduates' locational decisions. Regional variations are particularly important for policy purposes, as there is no one-size-fits-all formula to attract and retain talent; economic development policies that are successful in some regions may not have the same impact in other regions with differing geographic, socio-economic and political situations (Hansen et al., 2003; Leibovitz, 2003). These would be some excellent areas of future research, yet could not be achieve within this study due to time constraints and limited resources.

6.7 Policy Recommendations

In recent years, cities across the world have established some form of talent attraction strategies modelled after the concepts of Richard Florida in order to market themselves to the 'creative class' (Houston et al., 2008). Yet, Murphy & Redmond (2009) indicated, policy-makers must exercise caution using Florida's urban toolkit as city-regions are faced with more complex issues that require more sophisticated policy responses. Policy-makers cannot apply a one-size-fits-all approach to talent recruitment and retention; the creative class theory is based upon empirical data from large metropolitan regions in the United States, and must therefore be adapted to accommodate for regional variations (Asheim & Hansen, 2009; Hansen et al., 2003; Hansen & Niedomysl, 2009; Lepawsky et al., 2010). Several studies concluded that Florida's theories are not suitable in smaller city-regions or areas outside the United States, due to differing economic, political and social situations (Anderson et al., 2010a and 2010b; Hansen et al., 2003; Leibovitz, 2003; Lepawsky et al., 2010; Reiner, 2010). Anderson et al. (2010a &b) recommend that smaller regions shift their focus to promoting the regions' unique characteristics rather than trying to compete directly with larger metropolitan regions. Others suggested that Florida's recommendations should not be viewed as a magic formula to boost local economic development, replacing traditional strategies, but

rather as an alternative that merits further analysis and debate (Bontje & Musterd, 2009; Donegan et al., 2008). Furthermore, the creative class is not homogeneous; location preferences vary from individual to individual based on occupation, personal relationships and life phase (Hansen et al., 2003; Hansen & Niedomysl, 2009; Kodrzycki, 2001). City-regions must determine where to direct increasingly scarce resources in order to develop strategies that will be most effective to attract and retain the valuable human capital crucial to the economic growth and prosperity of the region (Murphy & Redmond, 2009).

Therefore, what can policy-makers in do stem the brain drain from medium-sized city-regions? As indicated by Hansen et al. (2003), some factors influencing youth mobility, such as proximity to family and friends, geography and climate, cannot be addressed through policy intervention. Yet, other issues can be addressed through multi level policy coordination. There are several policy recommendations that stem from the findings and limitations of this study.

The primary recommendation put forward by the graduates interviewed were strategies aimed at increasing the number and variety of full-time employment opportunities offered with competitive salaries and benefits. In order to have enough positions, medium-sized city-regions need to attract small and large companies through the provision of incentives, such as lower tax rates, yet this may require provincial government intervention. In addition, medium-sized city-regions need to create marketing strategies geared towards promoting local jobs, volunteer positions, associations, city-run job fairs and events in order to get students involved in the community and build awareness of the local opportunities so that graduates have a reason to stay (KEDCO, 2008). These marketing campaigns should also be used to promote the region's competitive advantages. Although, London does not offer all the amenities available in large metropolitan areas, the city does however provide great alternatives which should be marketed to young professionals, such as lower cost of living, shorter commute times, less congestion and great lifestyle.

As Bradford (2005), Leibovitz (2003) and Reiner (2010) indicated, strategies aimed at human capital recruitment and retention require policy coordination between post-secondary institutions, the private sector and all levels of government.

> ...mobility of talent is shaped by a complex set of factors, crossing traditional divisions, for example, between industrial or university policy and migration legislation. Hence, policy agents have to co-ordinate policy actions implemented at different spatial scales and in different policy fields (Reiner, 2010, p.11).

In order to strengthen knowledge resources, all levels of government must collaborate to create coordinated proactive policies (Bradford, 2005), both bottom-up and top-down policies (Knight, 1995; Reiner, 2010). Bradford recommends a new approach to urban policy in Canada, which calls for a place-based public policy framework (Bradford, 2005). This boosts the competitiveness of cities and regions by establishing time and place specific policies. This proactive policy framework requires finding the right policy mix between all levels of government in order to tap into local knowledge, while recognizing the importance of local governments (Bradford, 2005).

Policy makers have the option to either focus on keeping local talent within the region or attracting human capital from elsewhere. Since many graduates return home upon completion of their post-secondary degree, it raises the question whether cities should be creating policies to attract young professionals, or whether they should be targeting high school students by encouraging them to attend the local university or college (Martin-Brelot et al., 2010). Regions can gain a relative advantage by persuading local high school students to remain in the area for their post-secondary education. Yet, as the City of Hamilton (2010) noted: "the most effective tactic is to become a part of the transition process that a graduate embarks on when shifting from being a student to being in the workforce" (p. 412).

The local institutions can partner to establish a joint committee responsible for developing a systematic strategy for attracting and retaining youth to the city-region. Many city-regions have already established a workforce development task force responsible for creating strategies that foster human capital growth. These collaborative partnerships help ensure that the current workforce is equipped with the skills necessary

to keep up with the latest technology and industry trends, and ensures that the education and training curriculums align with current industry needs. Through these partnerships post-secondary institutions can also provide more opportunities for internship and co-op placements within the city-region, as they help build awareness of the local firms and employment opportunities, expose students to the local economy and are a great networking tool, therefore encouraging graduates to remain in the region. Universities and colleges should also provide department specific networking events, as they provide more relevant and useful information than campus wide events and job fairs.

The successful implementation of economic development strategies geared towards attracting and retaining human capital has the potential to reverse the brain drain in medium-sized city-regions and promote economic growth and prosperity.

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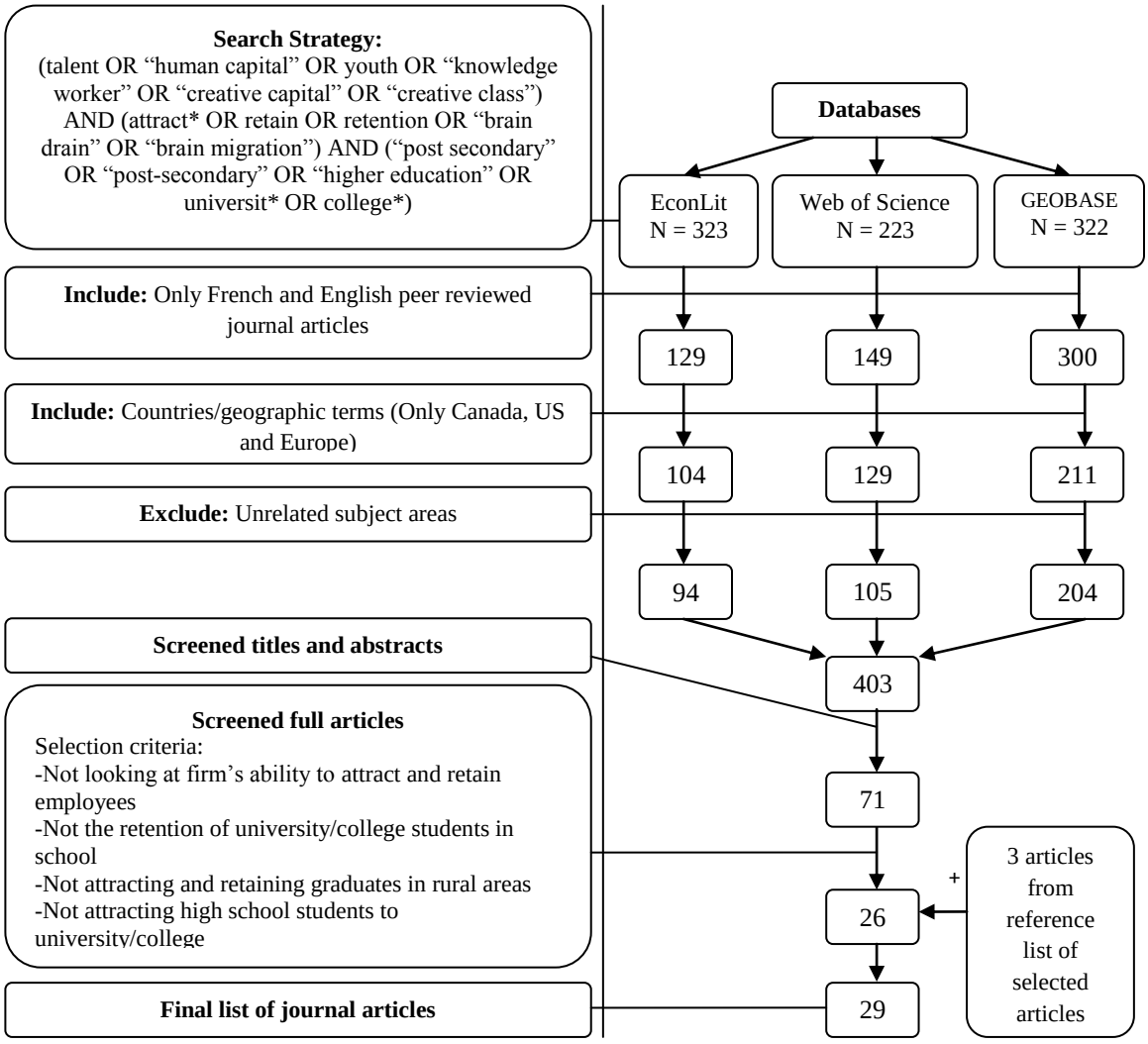
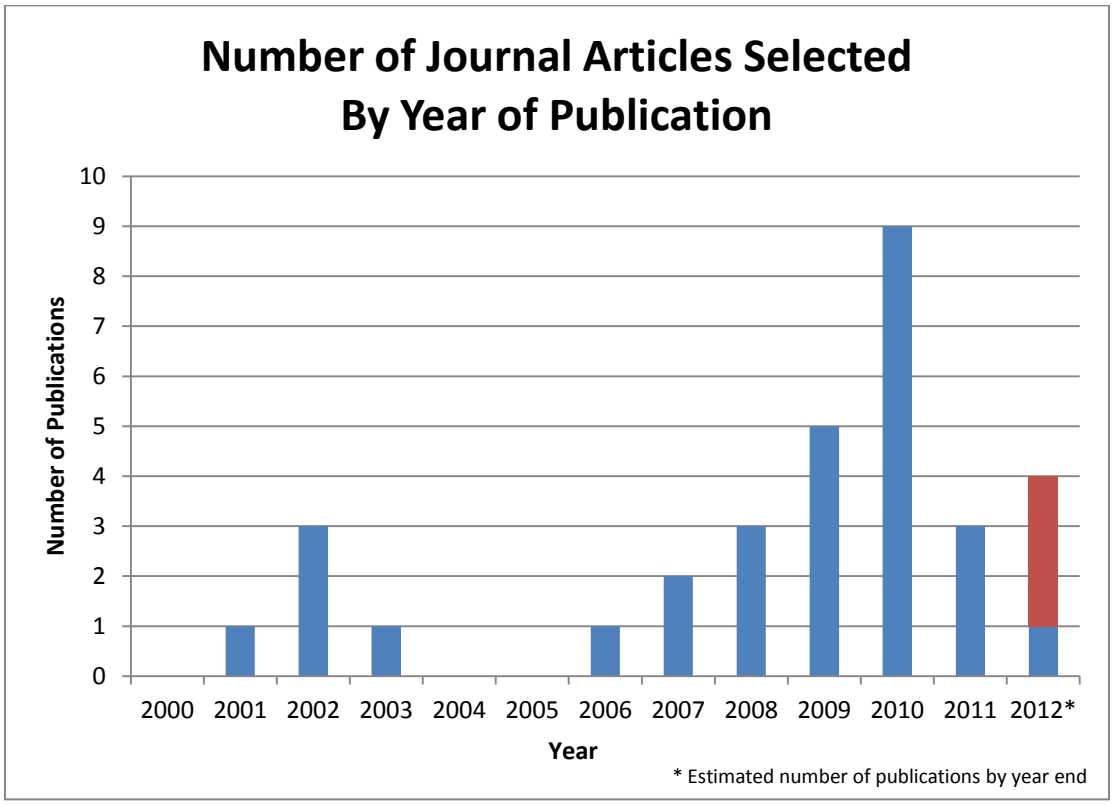
APPENDICES

Appendix A: Flow Chart of Systematic Review Process



The key words used in the search were: (talent OR "human capital" OR youth OR "knowledge worker" OR "creative capital" OR "creative class") AND (attract* OR retain OR retention OR "brain drain" OR "brain migration") AND ("post secondary" OR "post-secondary" OR "higher education" OR universit* OR college*). The initial search using these key words yielded a total of 868 articles. The search was limited to only English and French peer reviewed journal articles from United States, Canada and Europe. Both qualitative and quantitative study designs were considered for review. The resulting 403 articles were screened by title and abstract, giving 71 potentially relevant articles. These articles were further refined through a detailed review of the introduction, purpose, methodology and conclusion, which identified 26 relevant articles. The reference lists of the selected articles were reviewed to identify any additional journal articles that had been missed during the initial search, adding 3 extra articles to the review, giving a total of 29 relevant journal articles discussing the factors attracting and retaining university and college graduates to cities.

Appendix B: Year of Publication of the Selected Journal Articles



Appendix C: Summary of the Literature

Author (s)	Study Location	Methods	Factors Influencing Graduates' Locational Decisions																			
			Hard Factors						**Soft Factors**							**Personal Characteristics**						
			Employment Opportunities	City Size and Location	Good Transportation	Housing Costs/ Cost of Living	Good Public Schools/ Child Care	Post-secondary Institutions	Well Educated Population	Quality of Life	City's Natural Beauty	Loyalty to Place	Tolerance and Openness	Diversity of the Built Environment/ Culture and Leisure Facilities	Amenities*	Age	Academic Achievement (Degree/ Grades)	Previous Mobility	Gender	Nationality	Proximity to Family and Friends	Birthplace	Location of Post-secondary Institution Attended
Andersen, K. et al. (2010a)	NORDIC COUNTRIES Denmark, Finland, Norway and Sweden	DATA Interviews and focus groups ANALYSIS Condensed the text into case studies of each region	1	+		+										+						
Andersen, K. et al. (2010b)	NORDIC COUNTRIES Denmark, Finland, Norway and Sweden	DATA Census data ANALYSIS Correlation and regression analysis to test the economic performance indicators	+	+																		

Asheim, B. et al. (2009)	EUROPE Sweden	DATA Surveys, census data (occupational data) ANALYSIS Correlation analysis																						
Bontje, M. et al. (2009)	EUROPE	DATA Semi-structured interviews ANALYSIS Case studies				+		1		+														
Darchen, S. et al. (2010)	CANADA Montreal and Ottawa	DATA Surveys, interviews ANALYSIS statistical test (Wilcoxon and Mann-Whitney)	1 retain			3		1 attract		2												1		
Donegan, M. et al. (2008)	UNITED STATES	DATA Census data, Bureau of Labour statistics, Bureau of Economic Analysis ANALYSIS Correlations, multivariate regression models																						
Faggian, A. et al. (2007)	EUROPE United Kingdom	DATA Higher Education Statistics Agency (HESA) student leavers' surveys, UK Research Assessment Exercise (REA) (higher education institutions ranking) ANALYSIS Dichotomous, multinomial and conditional logit models														+	+	+	+					

Florida, R. (2002a)	UNITED STATES	DATA Interviews, focus groups ANALYSIS correlations, bivariate/ multivariate and regression analysis							+	+				+										
Florida, R. (2002b)	UNITED STATES	DATA Interviews, focus groups ANALYSIS Multivariate regressions and statistical research												+	+									
Franco, M. et al. (2010)	EUROPE Eastern Germany, Western Germany and Central Portugal	DATA Surveys ANALYSIS Regression analysis																				+	+	
Gottlieb, P. D. et al. (2006)	UNITED STATES	DATA Surveys ANALYSIS Multinomial choice migration models and regression analysis				+			+	+					-	+	+		+	+			+	
Grant, J. et al. (2010)	CANADA Halifax, Nova Scotia	DATA Interviews ANALYSIS Analysed the interview data by career sector of the respondents interviewed	+	+	+	+		+		+	+		-	+								+	+	

Hansen, H. K. et al. (2009)	EUROPE Sweden	DATA Survey, longitudinal register data ANALYSIS Data was coded and categorised to explain the migration patterns	1																					
Hansen, S. et al. (2003)	UNITED STATES Pittsburgh	DATA Census data, focus groups, surveys ANALYSIS Logistical regression analysis, multivariate analysis	1		+	+	+	1							0						1		
Houston, D. et al. (2008)	EUROPE Scotland	DATA Interviews, surveys, census data ANALYSIS Basic statistical analysis to pinpoint emerging themes	1																		+		
Huffman, D. et al. (2002)	UNITED STATES California	DATA Survey ANALYSIS Regression analysis						+									+						
Kodrzycki, Y. K. (2001)	UNITED STATES	DATA Survey (interviewed over 17 years) ANALYSIS Regression analysis	+			-		+							+	+	+	+						

Lepawsky, J. Et al. (2010)	CANADA St. John's Newfoundland	DATA In-depth interviews, cross-national investigation of Canadian city-regions (Innovation Systems Research Network, ISRN) ANALYSIS Classification of the data into categories based on the creative class thesis in order to develop common themes.	1	1								3			-						2		
Martin-Brelot, H. et al. (2010)	EUROPE	DATA Survey ANALYSIS Used the survey statistics to test Florida's theories	2	2	2			+			3		3	3							1	1	1
Murphy, E. et al. (2009)	EUROPE Dublin, Ireland	DATA Surveys ANALYSIS Breakdown of the survey results into respondents' satisfaction with hard and soft factors	1												2						1	1	
Reese, L. (2012)	UNITED STATES	DATA Surveys ANALYSIS Correlation analysis, regression analysis					+								-	+							

Reiner, C. (2010)	EUROPE	DATA Data from the Organisation for Economic Co-operation and Development (OECD) and other previous literature ANALYSIS Conceptualise a brain competition policy framework																						
Tomaney, J. et al. (2007)	EUROPE North East England	DATA Survey (phone interview) ANALYSIS Analysis of the transcripts to develop common themes	-			+				+					+	+								
Venhorst, V. et al. (2010)	EUROPE Netherlands	DATA Surveys ANALYSIS Bivariate and multivariate analysis using multinominal logit models	+					+									+		+	+				
Venhorst, V. et al. (2011)	EUROPE Netherlands	DATA Survey, census data ANALYSIS Multivariate analysis	1			2		+									+							
Waldorf, B. (2009)	UNITED STATES	DATA Survey, census data ANALYSIS Regression analysis							+								1							

Walton-Roberts, M. W. (2011)	CANADA Kitchener-Waterloo	DATA Census data, Citizenship and Immigration Canada's Landing Immigrant Data Base System, semi-structured interviews and focus groups ANALYSIS Analysis of the transcripts to develop common themes in the case study						+															
Whisler, R. L. et al. (2008)	UNITED STATES	DATA Census data ANALYSIS Binary logit models				+			+	+				+	+	+							
Winters, J. (2011)	UNITED STATES	DATA Census data ANALYSIS Migration equations	+					+															

* Amenities = leisure and recreational activities, geography, climate and cultural opportunities
+ = Factors that influence graduates' locational decisions
- = Factors that do not influence graduates' locational decisions

Some authors provided a ranking of the factors
0 = no effect
1 = Primary factor influencing graduates' mobility
2 = Secondary factor influencing graduates' mobility
3 = Tertiary factor influencing graduates' mobility

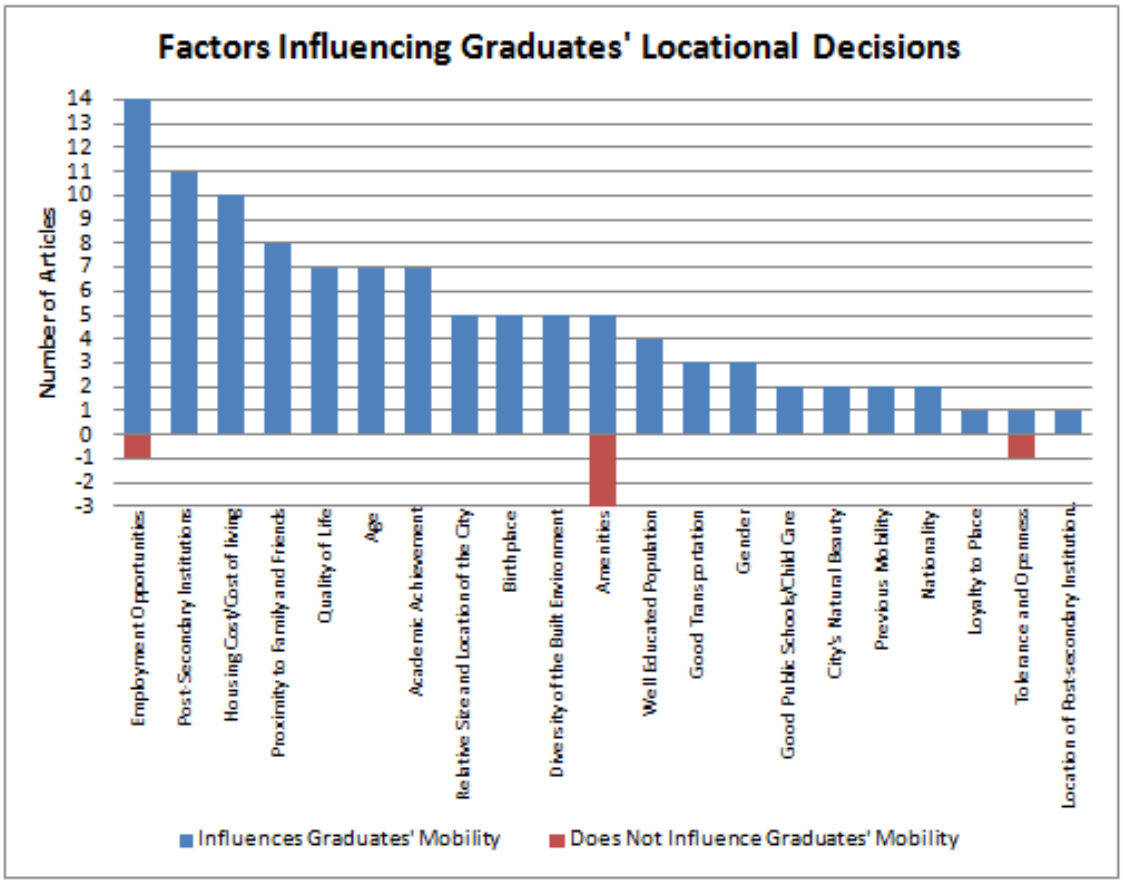
Appendix D: Quality Appraisal Questions

- Is the study sample clearly described? (age, gender, education, employment...)
- Do the author(s) explain the participant selection? (convenience, particular group, random)
- Does the study state the number of participants included?
- Is the study design (methodology) clearly described? (Data and analysis)

Appendix E: Quality Assessment

Author	**Sample Description**	**Sample/ Participant Selection**	**Stated the Number of Participants**	**Study Design Description (data and analysis)**	**Rating**
Andersen, K. et al. (2010a)	Yes	Yes	Yes (110 interviews)	Limited	3/4
Andersen, K. et al. (2010b)	Yes	Yes	Yes (Population in 4 Countries)	Yes	4/4
Asheim, B. et al. (2009)	Limited	Yes	Yes (4,909 surveys)	Yes	4/4
Bontje, M. et al. (2009)	Yes	No	Yes (86 interviews)	Limited	2/4
Darchen, S. et al. (2010)	Yes	Yes	Yes (333+529 surveys)	Yes	4/4
Donegan, M. et al. (2008)	Yes	N/A	No	Yes	2/4
Faggian, A. et al. (2007)	Yes	Yes	Yes (482,558 surveys)	Yes	4/4
Florida, R. (2002a)	No	Limited	Yes (100 interviews)	Yes	2/4
Florida, R. (2002b)	No	Limited	Yes (100 interviews)	Yes	2/4
Franco, M. et al. (2010)	Yes	Yes	Yes (992 survey)	Yes	4/4
Gottlieb, P. D. et al. (2006)	Yes	Yes	Yes (104,616 survey)	Yes	4/4
Grant, J. et al. (2010)	Yes	Limited	Yes (28 interviews)	Limited	3/4
Hansen, H. K. et al. (2009)	Yes	Yes	Yes (4,909 survey)	Limited	3/4
Hansen, S. et al. (2003)	Yes	Yes	Yes (2,131 survey)	Yes	4/4
Houston, D. et al. (2008)	Limited	Yes	Yes (1,200 households)	Limited	2/4
Huffman, D. et al. (2002)	Yes	Yes	Yes (3213 survey)	Yes	4/4
Kodrzycki, Y. K. (2001)	Yes	N/A	Yes (6,000 survey)	Yes	4/4
Lepawsky, J. Et al. (2010)	Yes	Yes	Yes (25 interviews)	Limited	3/4
Martin-Brelot, H. et al. (2010)	Yes	Yes	Yes (2,300+ surveys)	Yes	4/4
Murphy, E. et al. (2009)	Yes	Yes	Yes (180 surveys)	Limited	3/4
Reese, L. (2012)	Yes	Yes	Yes (233 cities)	Yes	4/4
Reiner, C. (2010)	N/A	N/A	N/A	Limited	0/4
Tomaney, J. et al. (2007)	Yes	Yes	Yes (76 interviews)	Limited	3/4
Venhorst, V. et al. (2010)	Yes	Limited	No	Yes	2/4
Venhorst, V. et al. (2011)	Yes	Yes	Yes (120,000 + 63,000 surveys)	Limited	3/4
Waldorf, B. (2009)	Yes	Yes	Yes (285 countries)	Yes	4/4
Walton-Roberts, M. W. (2011)	Yes	Yes	Yes (62 interviews)	Yes	4/4
Whisler, R. L.. et al. (2008)	Yes	Yes	Yes (census US population)	Yes	4/4
Winters, J. (2011)	Yes	No	Limited (2,004 Counties)	Yes	2/4

Appendix F: Factors Influencing Graduates' Locational Decisions



Appendix G: 2006 Census Migration Data for the Selected Municipalities (2001-2006)

Location	Age Group	In-Migration	Out-Migration	Net Migration	Retention (%)	Unemployment Rate 2001	Unemployment Rate 2006
Ontario	20-24	195,930	145,730	50,200	9.30%		
	25-29	260,655	199,950	60,705	11.25%		
	30-34	268,935	191,330	77,605	14.38%		
	Total	2,151,160	1,611,370	539,790	100.00%	6.1	6.4
Guelph	20-24	2,865	1,815	1,050	23.18%		
	25-29	3,470	3,800	-330	-7.28%		
	30-34	3,120	2,740	380	8.39%		
	Total	23,120	18,590	4,530	100.00%	5.1	5.1
Hamilton	20-24	7,635	5,220	2,415	11.18%		
	25-29	10,155	8,890	1,265	5.85%		
	30-34	10,655	7,900	2,755	12.75%		
	Total	82,060	60,450	21,610	100.00%	5.7	6.0
Kingston	20-24	3,635	2,605	1,030	29.39%		
	25-29	3,415	5,305	-1,890	-53.92%		
	30-34	2,605	2,510	95	2.71%		
	Total	25,235	21,730	3,505	100.00%	6.9	6.5
Kitchener-Waterloo	20-24	8,685	3,845	4,840	21.15%		
	25-29	9,060	8,650	410	1.79%		
	30-34	8,570	5,285	3,285	14.35%		
	Total	65,345	42,460	22,885	100.00%	5.5	5.6
London	20-24	8,260	4,190	4,070	27.14%		
	25-29	8,040	8,410	-370	-2.47%		
	30-34	6,350	5,670	680	4.53%		
	Total	56,580	41,585	14,995	100.00%	6.6	6.1
Peterborough	20-24	2,575	1,770	805	20.43%		
	25-29	1,845	2,355	-510	-12.94%		
	30-34	1,550	1,390	160	4.06%		
	Total	16,935	12,995	3940	100.00%	7.2	7.1
St. Catharines-Niagara	20-24	3,445	3,080	365	4.12%		
	25-29	4,180	4,480	-300	-3.39%		
	30-34	3,785	2,960	825	9.32%		
	Total	34,845	25,990	8,855	100.00%	6.0	6.2
Sudbury	20-24	2,180	1,880	300	42.25%		
	25-29	2,180	2,470	-290	-40.85%		
	30-34	1,925	1,345	580	81.69%		
	Total	15,620	14,910	710	100.00%	9.2	7.9
Windsor	20-24	3,945	1,975	1,970	18.92%		
	25-29	3,860	3,685	175	1.68%		
	30-34	3,950	2,715	1,235	11.86%		
	Total	31,165	20,755	10,410	100.00%	6.3	8.3

Source: Statistics Canada, 2001 and 2006 Censuses

Appendix H: Selected Policy Documents for Each Institution as well as their Publication Date or Period Covered.

Institution	Policy Document Title	Publication Date/Period Covered
City-region: Guelph		
City of Guelph	1) City of Guelph – Prosperity 2020, Phase 1: Economic Base Analysis Report 2) City of Guelph – Prosperity 2020, Phase 2: Strategic Directions for Economic Development and Tourism	1) 2009-2020 2) 2010-2020
University of Guelph	Integrated Plan and Preliminary MTCU Operating Budget	2011-2012
Conestoga College (Guelph Campus) *Same document as Conestoga College in Kitchener-Waterloo*	Strategic Plan	2010-2013
City-Region: Hamilton		
City of Hamilton	Hamilton Economic Development Strategy	2010-2015
McMaster University	Refining Directions: Inspiring Innovation and Discovery	2003-2007
Mohawk College	Futuready: Business Plan	2012-2013
City-region: Kingston		
Kinston Economic Development Corporation	1) Strategic Plan 2) Creative Economy Challenges: Retention of Queen's Graduates in the Greater Kingston Area	1) 2010-2015 2) 2008
Queen's University	Engaging the World: A Strategic Plan for Queens	2006
St. Laurence College	Strategic Plan	2010-2013
City-region: Kitchener-Waterloo		
The City of Waterloo	Building New Bridges: The City of Waterloo's 10-Year Economic Development Strategy	2008-2017
The City of Kitchener	Kitchener Economic Development Strategy: Kitchener's New Approach to Economic Development	2011-2015
University of Waterloo	Pursuing Global Excellence: Seizing Opportunities for Canada, Sixth Decade Plan	2007-2017
Wilfred Laurier University	1) Laurier's Century Plan 2) Academic Plan	1) 2005-2011 3) 2010-2015
Conestoga College	Strategic Plan	2010-2013

City-region: London		
London Economic Development Corporation	A Workforce Development Strategy for London	2007
Western University	1) Engaging the Future 2) Engaging the Future: Update on the Strategic Plan	1) 2007 2) 2010
Fanshawe College	Annual Report on Strategic Plan Implementation	2011-2012
City-region: Peterborough		
Greater Peterborough Area Economic Development Corporation	GPA EDC 2010-2014 Strategic Plan	2010-2014
Trent University	A Strategy for Trent University 2007-2014	2007-2014
Fleming College	Strategic Plan	2010-2015
City-region: St. Catharine's - Niagara		
The City of St. Catharine's, Economic Development & Tourism Services Department	City of St. Catharine's Economic Development Strategy	2010
Niagara Economic Development Corporation	Navigating our future: Niagara's Economic Growth Strategy	2009-2012
Brock University	1) Strategic Plan 2) Integrated Strategic Plan	1) 2010 2) 2011
Niagara College	Strategic Plan	2009-2014
City-region: Sudbury		
Greater Sudbury Development Corporation	Digging Deeper: An Economic Development Strategic Plan for Greater Sudbury 2020	2009-2020
Laurentian University	Building on Success: A Strategic Plan for Laurentian University	2008-2011
Cambrian College	Strategic Plan	2009-2014
Collège Boréal	Strategic Plan	2010-2015
City-region: Windsor		
Windsor Essex Economic Development Corporation	Windsor-Essex Regional Economic Roadmap	2011
University of Windsor	Thinking Forward... Taking Action	2010
St. Clair College	Strategic Directions	2010-2015

Appendix I: Interview Guide

INTERVIEW GUIDE FOR DISCUSSION
OF THE ROLE OF THE BUILT ENVIRONMENT IN
ATTRACTING AND RETAINING GRADUATES IN SECOND TIER CITIES

Profile of Interviewee
Name:
Age:
Gender:
Field of Study:
Year of Graduation:
Employment Status:
Hometown:
Currently living in (City):
Currently working in (City):

Introduction

Thank you for taking to the time and agreeing to be interviewed for this study.

As indicated in the letter of information, I am undertaking a study entitled 'Policies for Attracting and Retaining Graduates in Second Tier Cities: The Role of the Built Environment'. The interview consists of 13 questions. The study is aimed at hearing your thoughts on the factors that have influenced your locational decisions since you have graduated from post-secondary, in addition to the role of the built environment in shaping your mobility patterns.

The questions were created to address some of the current issues faced by smaller city-regions in Ontario.

- Many smaller city-regions across Ontario are experiencing a small or negative net migration rate of the 20 to 34 age cohort, to the point that some cities may soon be facing labour shortages. For instance, London, Ontario is performing poorly in terms of attracting and retaining youth, as they face a negative net migration of the 25 to 29 age cohort.
- Students move to second tier cities to pursue their post secondary education. Upon completion of their degree, most graduates move to large urban centres, such as Toronto, Montreal and Vancouver.
- In recent years, policy makers and planning officials have implemented economic development policies and strategies to attract and retain highly skilled youth, through the promotion of lifestyle and amenities.

I will begin the interview with a few background questions, then proceed to ask you some detail about your locational decisions.

The interview will be recorded with complete anonymity and confidentiality. The information collected will be used for research and education purposes only.

Interview Questions Guide

Background Information

1) What initially brought you to London, Ontario?
    - Birthplace/hometown
    - Proximity to family and friends
    - Location of post-secondary institution
    - Other

2) What attracted you to pursue your post-secondary education in London, Ontario?
    - Quality of the university/college
    - Programs offered at Western University or Fanshawe College
    - Proximity to family and friends
    - Other

3) What factors were most important to you when selecting a university/college?
    - Location
    - Quality of the education/school's reputation
    - Programs offered
    - Other

Reasons for Staying in/Leaving London, Ontario

4) Why did you decide to stay in London, Ontario/why did you decide to leave London, Ontario?
    - Employment opportunities
    - Housing costs/costs of living
    - City's built environment (land use patterns, buildings, physical infrastructure of roads, transportation system)
    - City's natural beauty/quality of place
    - Other

5) If due to employment, what job characteristics are most important to you?
    - Salary/benefits
    - Job satisfaction
    - Location
    - Other

6) Please tell me about your job history since graduation? (Number of jobs, field and location)

Impact of the Built Environment on Mobility

7) How important are amenities/built environment (land use patterns, buildings, physical infrastructure of roads, transportation system) in your decision to locate somewhere? Give an example.
    - Very important
    - Important
    - Not important
    - Had not considered the built environment

8) Does London offer the built environment necessary to engage in your favourite activities? Give some examples.

Your Thoughts on the Situation

9) Why do you think London has difficulty attracting and retaining university and college graduates?

10) What should London do differently to attract and retain university and college graduates?

11) Do you believe that the implementation of an internship and co-op program at the university and college level would encourage students to remain in the area by introducing them to the local labour market and helping them build connections with local employers?

Future Plans

12) Do you plan on remaining in/returning to London, Ontario in the long run?

13) Do you have any final comments regarding this topic?

Appendix J: Summary Characteristics of Interviewees

Name*	Michelle	David	Sarah	Sebastian	Jordan	Kate	Ashley	Chris
Age	27	24	28	26	31	24	28	26
Gender	F	M	F	M	M	F	F	M
Field of Study (Western)	Health Science	Biology	Engineering	Geography	Engineering (Mechanical) (BESc)/Law (LLB)	MIT and Masters of Library Science	Anthropology	Health Science
Year of Graduation	2007	2011	2008	2009	2007	2012	2007	2008
Employment Status	Graduate Student (PhD, Brock University)	Employed	Employed (General Dynamics)	Employed (Bartending at Jack Astors)	Employed (International United Nations)	Employed (London Life)	Employed (Waterloo Police Service)	Employed (Lawyer)
Hometown (City) (Province)	Brantford Ontario	Caladonia Ontario	Chatham Ontario	Ancaster Ontario	Burlington Ontario	Whitby Ontario	London Ontario	Vancouver British Columbia
Currently Living in (City) (Province/Country)	Brantford Ontario	Saskatoon Saskatchewan	London Ontario	Ancaster Ontario	Mae Sot Thailand	London Ontario	Waterloo/London Ontario	Vancouver British Columbia
Currently Working in (City) (Province/Country)	Brock Ontario	Saskatoon Saskatchewan	London Ontario	Ancaster Ontario	Mae Sot Thailand	London Ontario	Waterloo Ontario	Vancouver British Columbia

*Note: The participants' names were changed to protect their confidentiality

Appendix J (Continued): Summary Characteristics of Interviewees

Name*	Ben	Erik	Justin	Tyler	Marquise	John	Connor	Jessica
Age	24	24	29	25	25	25	24	27
Gender	M	M	M	M	F	M	M	F
Field of Study (Western)	MIT	Ivey HBA	Anthropology and History	Commercial Aviation Management	Science, Microbiology of Infection and Immunity	Honors Double Major in Political Science and Philosophy	French Linguistics and Language with a Minor in Music	MOS
Year of Graduation	2012	2011	2008	2010	2010	2012	2011	2007
Employment Status	Employed (Full-time, Digital Extremes)	Employed (Full-time, Hillsdale Investment Management)	Employed (Full-time, Canadian College of Naturopathic Medicine)	Employed (Full-time, flight instructor at Mount Royal University)	Graduate Student (Biochemistry McMaster University)	Employed (Councillor for the Town of Aurora)	Employed (Full-time, Oxford Learning)	Employed (Full-time, policy analyst for the Federal Government)
Hometown (City) (Province)	Richmond Hill Ontario	Sault Ste. Marie Ontario	Brantford Ontario	Toronto Ontario	Kingston Ontario (Calgary: mom) (Ottawa: dad)	Aurora Ontario	Kerwood Ontario	Saskatoon Saskatchewan
Currently Living in (City) (Province)	London Ontario	Toronto Ontario	Toronto Ontario	Calgary Alberta	Hamilton Ontario	Aurora Ontario	London Ontario	Ottawa Ontario
Currently Working in (City) (Province)	London Ontario	Toronto Ontario	Toronto Ontario	Calgary Alberta	Hamilton Ontario	Aurora Ontario	London Ontario	Ottawa Ontario

*Note: The participants' names were changed to protect their confidentiality

Appendix K: Policy Document Analysis Summary

	General Policies to Attract and Retain Talent			**Built Environment Policies to Attract and Retain Talent**					
Institution	**Industry/Community Partnerships**	**Employment Opportunities**	**Education and Training**	**Research Park/ Business Start-ups**	**Housing**	**Infrastructure and Transportation System (roads/sidewalks/bike paths)**	**Parks and recreation, cultural amenities**	**Quality of Life**	**City Size and Location**
London, Ont.									
London Economic Development Corporation	1	1	1	1	3	3	3	1	3
Western University	3	3	3	3	3	3	1	3	2
Fanshawe College	3	3	3	3	3	3	3	3	3
Kitchener-Waterloo									
City of Kitchener Economic Development Strategy	1	1	1	1	1	1	3	1	1
City of Waterloo Economic Development Strategy	1	1	2	1	1	1	1	1	3
University of Waterloo	3	3	3	3	3	3	3	3	3
Wilfrid Laurier University	3	3	3	3	3	3	3	3	3
Conestoga College (Cambridge, Kitchener, Waterloo, Guelph and Ingersoll)	1	3	3	3	3	3	3	3	3
Windsor									
Windsor Essex Economic Development Corporation	1	1	1	2	1	2	3	1	1
University of Windsor	3	3	3	3	3	3	3	3	3
St. Clair College	3	3	3	3	3	3	3	3	3
St. Catharines/Niagara									
City of St. Catherines Economic Development Strategy	1	3	3	1	3	3	1	3	3
Niagara Economic Development Corporation	1	2	1	2	3	2	3	3	3
Brock University	3	3	3	3	3	3	3	3	3
Niagara College	1	3	3	3	3	3	3	3	3

Kingston									
Kingston Economic Development Corporation	1	1	1	2	3	1	3	1	1
Queens University	3	3	3	3	3	3	3	3	3
St. Laurence College	3	3	3	3	3	3	3	3	3
Hamilton									
City of Hamilton Economic Development Strategy	1	1	1	1	1	2	1	1	1
McMaster University	3	3	3	3	3	3	3	3	3
Mohawk College	1	3	3	3	3	3	3	3	3
Guelph									
City of Guelph Economic Development Strategy	1	3	1	1	3	2	1	3	2
Guelph University	3	3	3	3	3	3	3	3	3
Conestoga College (main campus in Kitchener)	Same results as Conestoga College in Kitchener-Waterloo								
Sudbury									
Greater Sudbury Economic Development Strategic Plan	1	3	1	1	2	1	1	1	1
Cambrian College	3	3	3	3	3	3	3	3	3
Laurentian University	3	3	3	3	3	3	3	3	3
College Boreal	3	3	3	3	3	3	3	3	3
Peterborough									
Greater Peterborough Area Economic Development Corporation	1	3	3	1	3	2	3	1	3
Trent University	3	3	3	3	3	3	3	3	3
Fleming College	3	3	3	3	3	3	3	3	3

1 = Stated (Yes)
2 = Implied
3 = Unstated (No)

Appendix L: Ethics Approval Notice

Western Research

Research Ethics

Use of Human Participants - Ethics Approval Notice

Principal Investigator: Dr. Michael Buzzelli
File Number:102813
Review Level: Full Board
Approved Local Adult Participants: 10
Approved Local Minor Participants: 0
Protocol Title: Policies for Attracting and Retaining Graduates in Second Tier Cities: The Role of the Built Environment
Department & Institution: Social Science\Geography,Western University
Sponsor:
Ethics Approval Date: September 26, 2012 **Expiry Date:** December 31, 2013

Documents Reviewed & Approved & Documents Received for Information:

Document Name	Comments	Version Date
Western University Protocol		
Revised Letter of Information & Consent	REVISED Letter of Information and Consent Form	2012/09/21
Other	REVISED Email Script for Recruitment	2012/09/21

This is to notify you that The University of Western Ontario Research Ethics Board for Non-Medical Research Involving Human Subjects (NMREB) which is organized and operates according to the Tri-Council Policy Statement: Ethical Conduct of Research Involving Humans and the applicable laws and regulations of Ontario has granted approval to the above named research study on the approval date noted above.

This approval shall remain valid until the expiry date noted above assuming timely and acceptable responses to the NMREB's periodic requests for surveillance and monitoring information.

Members of the NMREB who are named as investigators in research studies, or declare a conflict of interest, do not participate in discussions related to, nor vote on, such studies when they are presented to the NMREB.

The Chair of the NMREB is Dr. Riley Hinson. The NMREB is registered with the U.S. Department of Health & Human Services under the IRB registration number IRB 00000941.

Signature

Ethics Officer to Contact for Further Information

Grace Kelly (grace.kelly@uwo.ca)	Janice Sutherland (jsuther@uwo.ca)

This is an official document. Please retain the original in your files.

CURRICULUM VITAE

Name:	Catherine McLean
Post-secondary Education and Degrees:	Western University London, Ontario, Canada 2006-2011, BA
Honours and Awards:	Western Graduate Research Scholarship 2011 Edward G. Pleva Fellowship 2012 Western Varsity Figure Skating Team 2006-2013 Ontario University Athletics (OUA) Champions 2007,2008, 2011, 2012 and 2013 Team MVP 2010 and 2012 Bronze W 2010 OUA Academic Achievement Award 2011 and 2012 OUA All-Star 2012
Related Work Experience:	Teaching Assistant Western University 2011-2013 Research Assistant Western University 2012 Planning Intern Middlesex County London, Ontario, Canada 2011