HOMEOWNERSHIP
A COMPARATIVE STUDY OF
THE CANADIAN AND AMERICAN
HOUSING MODELS

by

Jared Cummer

A thesis submitted to the Faculty of the University of Delaware in partial fulfillment of the requirements for the degree of Master of Public Administration

Spring 2011

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Jared Cummer

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Thank you to my thesis chair Dr. Peuquet for his help throughout the process, as well as the other members of the committee that provided valuable insight. A special thanks to all those that were gracious enough to give their time to me and answer the numerous questions I had regarding housing in Canada and the United States.
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ABSTRACT

The relationship enjoyed between Canada and the United States has been rooted in economic and cultural similarities. However, there are instances throughout the past that have shown the distinct differences between our two great nations. One such difference has been the way in which the recent financial crisis has impacted the national economy of each country.

Canada and the United States since the end of World War II have promoted homeownership as their unofficial housing policy. Through direct and indirect actions homeowners have enjoyed many benefits, which those who do not own their own home cannot enjoy. As a result Canada and the United States have reached historic levels of homeownership over the last decade. However, they have done so in unique ways, resulting in different impacts.

This research is based on the close relationship and similarities between the two countries, and the ability to draw comparisons that can benefit and help strengthen the policies of both governments. This paper will examine the differences and similarities in the housing models of Canada and the United States in an effort to determine any lessons that can be shared from each country’s unique experiences.
Chapter 1

INTRODUCTION

RESEARCH QUESTIONS AND METHODS

The economic and financial ties between Canada and the United States (U.S.) have long been closely aligned. However, the relationship has been more economically significant for Canada. Access to U.S. markets and American foreign investment has been fundamental to expanding the national economy. Canadian Prime Minister Pierre Elliott Trudeau characterized the relationship as:

“Living next to you is in some ways like sleeping with an elephant. No matter how friendly and even-tempered is the beast, if I can call it that, one is effected by every twitch and grunt.”

With a history of close economic ties, it would be expected that the recent crisis in the housing market in North America would be similar in character in both countries; this has not been the case. Canadian homeowners have largely avoided the recent housing collapse faced by Americans and as a nation Canada has avoided the broader systemic failures experienced in the U.S.
Through comparing the homeownership models of Canada and the United States this paper will demonstrate that the Canadian model has produced greater stability and security for homeowners and the economy, while attaining comparable ownership rates to the United States. The Canadian housing model is largely based on strong government regulation and conservative lending practices, while in comparison the U.S. model favors free market principles through relaxed regulation. The different policy approaches to homeownership and the resulting strengths and weaknesses will be examined through five key research questions. The strengths and weaknesses identified by answering the research questions will provide the basis for offering policy recommendations that focus on addressing the weak points in the Canadian homeownership model. In addition, broad policy recommendations to strengthen the American model will be provided.

*What is homeownership, and what forms of homeownership exist in Canada and the United States?* Addressing the question of what homeownership is and how it is defined establishes the basis for comparison between the two countries. While homeownership is the predominate form of tenure in both Canada and the U.S., this thesis will explore the most common forms of homeownership that have evolved in the two countries since the 1950s. Homeownership, often referred to as the
“Canadian or American dream,” has long been viewed as the ideal form of tenure. The drive for households to purchase their own home dates back to the period following World War II (WWII), when policy was created in both countries to extend homeownership outside of the traditional norm. As a result, a greater variety of homeownership options were created to address the growing demand.

What factors contributed to the emergence of these new forms of homeownership in Canada and the United States? Illustrating the timeline of events that resulted in the development of new forms of homeownership in Canada and the United States will reveal the variety of factors that led to their creation. Prior to World War II homeownership consisted of a single form. The escalating costs experienced in both countries prompted the innovation of new forms of ownership to reduce the purchase price of homes. These rising costs can be directly linked to changes in the residential construction industry, and population growth in Canada and the United States. Rising costs created affordability concerns and easing these concerns was important in order to allow a greater range of income classes to attain homeownership (Hulchanski J. D., 1988). While many of the factors that led to the emergence of new forms of homeownership no longer exist today, challenges related to housing affordability still remain a concern for both countries.
What have been the recent trends in homeownership affordability, and what factors have affected these trends in Canada and the United States?

Homeownership has become immensely important to the economic growth and stability of households (Kemeny, 1980), which is illustrated by the fact that it is the principle form of savings and intergenerational wealth for the majority of middle class Americans and Canadians (Shlay A. B., 1995). Thus, ensuring affordability is important for both countries and a cause for further examination. To compare housing affordability between Canada and the United States, the first step is to identify how affordability is measured. The two countries have both developed basic affordability ratios that guide what portion of income should be reasonably expended on housing. After the measurement standards have been defined and are found to be comparable, the variations in affordability between Canadian and American homeowners will be explored. This will begin with a comparison of affordability trends, illustrating any similarities and differences. These trends will help identify the factors affecting housing affordability in Canada and the United States and provide insight towards possible solutions.

How does the housing finance system in Canada and the United States compare, and what have been their effects? Changes over time to the mortgage and lending practices in Canada and the United States resulted in the record growth of both
countries homeownership rate. Through tailoring tax policies and increasing access to mortgage financing, both countries provided the incentive to purchase a home and created the possibility to build wealth (Hulchanski J. D., 2007). This resulted in the housing finance system becoming a key component to homeownership in Canada and the United States. The comparison of the housing finance systems will focus on three important areas; (1) mortgage lending practices, (2) mortgage insurance, and (3) tax expenditure policies. The research will highlight the unique development of policies in the three key housing finance areas in Canada and the United States (Schwartz, 2006). The early successes of these policies created the notion that the Canadian and American homeownership models were functioning effectively. However, failures along with some successes emerged in the systems of both countries. The differences in these successes and failures will be highlighted to determine the reasons behind the various effects felt in Canada and the U.S.

What were the implications of the housing crisis for Canada and the United States and what policy recommendations can be drawn from these experiences? This research question will begin by summarizing the impacts of aggressively pursuing homeownership for an increased number of households in Canada and the U.S. The American policy was based on free market principals, while the Canadian policy approach was more conservative and based on tight regulation.
The individually unique role of government in the housing sector between the two countries requires an individually tailored response to the weaknesses in their models. By comparison of the two housing models valuable insight can be drawn from the different experiences of Canada and the U.S. The comparison will be used to develop broad policy recommendations, which will focus on ways to improve the Canadian model based on the experiences of both countries.

This paper’s methodology consists of using primary and secondary research sources. The primary research is in the form of interviews with key individuals with direct, firsthand experience and knowledge of the various aspects of housing policy in Canada and the United States. Through their involvement and experience it will be possible to gain a more complete understanding of the housing issues facing each country. The interviews also provide the opportunity to discuss secondary sources available in the field and to get a sense of the practicality and validity of the information available. Recommendations for secondary sources were received from interviewed officials. The interviews were not used in a direct sense in the paper through citations and quotes, but rather as a method of supporting the secondary research with information from individuals with valuable insight on housing issues.
Secondary research was conducted through the literature review of relevant material in the field combined with statistical analysis. The literature review consisted of examining publications from government agencies in both countries involved in housing. The Canada Mortgage and Housing Corporation (CMHC) and the Department of Housing and Urban Development (HUD) are the primary government agencies in the housing sector in Canada and the United States respectively. As well, literature from respected publications in the field of housing was used to gain multiple perspectives on the issues facing each country. Literature that compares the systems of Canada and the U.S. was gathered from international organizations such as the International Monetary Fund (IMF) and the World Bank. Statistical information used for data analysis was gathered primarily from Statistics Canada and the U.S. Census Bureau, both of which are the statistical agencies of record in their respective countries. Further data was collected from CMHC and HUD, as well as academic reports from reputable institutions such as Harvard University and the Simon Fraser Institute. The statistical data was used to illustrate the variations in housing related trends between Canada and the United States.
Chapter 2

HOMEOWNERSHIP AND IT’S VARIOUS FORMS

Statistics Canada and the U.S. Census Bureau, the data collecting government agencies of record for Canada and the U.S. respectively, define housing tenure as either owner-occupancy or renter-occupancy of a dwelling unit by a household (Statistics Canada, 2009) (U.S. Census Bureau, 2010A). Since the end of World War II owner-occupancy, or homeownership, was the prevailing tenure choice in both countries. However from the 1940’s until the end of the 1960’s forms of housing tenure were basic, with ownership or rental of a dwelling unit consisting of a single-family home on an individual plot of land (Hulchanski J. D., 1988). This was a result of the governments of Canada and the U.S. intervening into housing policy and encouraging single-family homeownership1. As new forms of homeownership emerged and housing policies began to increasingly influence choice of tenure ownership rates began to change.

1 The specific policies are discussed in detail in Chapter 4 beginning on p.48
### Table 2.1  Canadian and American Homeownership Rates

<table>
<thead>
<tr>
<th>Year</th>
<th>Rate</th>
<th>Year</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1946</td>
<td>61.5%</td>
<td>1940</td>
<td>43.6%</td>
</tr>
<tr>
<td>1951</td>
<td>65.5%</td>
<td>1950</td>
<td>55.0%</td>
</tr>
<tr>
<td>1956</td>
<td>66.0%</td>
<td>1960</td>
<td>61.9%</td>
</tr>
<tr>
<td>1961</td>
<td>66.5%</td>
<td>1970</td>
<td>62.9%</td>
</tr>
<tr>
<td>1966</td>
<td>63.8%</td>
<td>1980</td>
<td>64.4%</td>
</tr>
<tr>
<td>1971</td>
<td>60.3%</td>
<td>1986</td>
<td>63.8%</td>
</tr>
<tr>
<td>1976</td>
<td>61.8%</td>
<td>1991</td>
<td>64.1%</td>
</tr>
<tr>
<td>1981</td>
<td>62.1%</td>
<td>1996</td>
<td>65.4%</td>
</tr>
<tr>
<td>1986</td>
<td>62.1%</td>
<td>2001</td>
<td>67.8%</td>
</tr>
<tr>
<td>1991</td>
<td>62.6%</td>
<td><em>2004</em></td>
<td>69.0%</td>
</tr>
<tr>
<td>1996</td>
<td>63.6%</td>
<td>2006</td>
<td>68.8%</td>
</tr>
<tr>
<td>2001</td>
<td>65.8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>2006</em></td>
<td>68.4%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Peak homeownership rate


The homeownership rate in Canada and the United States is defined through calculating the percentage of owner-occupied dwellings from total occupied households. This rate between 1946 and 1961 in Canada increased by 5 percent, reaching a peak of 66.5 percent. While the Canadian homeownership rate reached a peak in 1961, but by 1971 it had retreated to 60.3 percent, a full percentage point lower than in 1946\(^2\). This was a result of the shifting Canadian government policy that placed greater emphasis on housing low and moderate-income households in the country. During a similar time period in the U.S. homeownership increased by 18.3

---

\(^2\) For source details refer to Table 2.1
percent, reaching a high of 61.9 percent between 1940 and 1960. This was partly due to U.S. homeownership rates being at a much lower level in 1940 as compared to Canada. However in comparison the U.S. homeownership rate would later stabilize, realizing only a modest 1 percent increase, which did not recede until the mid 1980s. Table 2.1 describes these changes over time to the homeownership rates in Canada and the United States. The table shows that by 1970 homeownership had become the dominant form of tenure as over 60 percent of Canadians and Americans owned their home.

**Factors Affecting Forms of Homeownership**

Through the last part of the 19th century until the end of the 1930’s building regulation in Canada was a patchwork of locally created building ordinances. Some codes were progressive, many were based on bad science and several were designed to support local business through excluding outside competition (Archer, 2003). As a result there were significant failures in quality due to the lack of consistent and definable building regulations. All across Canada housing was in need of repair. From 1921 to 1945, 27.3 percent of the total housing stock in the country needed minor repair or maintenance and by the end of 1946, 3.9 percent of the housing stock in Canada required major repairs. These minor repairs are defined as less

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3 Refer to Table 2.2 and 2.3 on page 13 for more detailed figures and sources
serious deficiencies to the mechanical, electrical and plumbing systems of the
dwelling unit, while major repairs are serious deficiencies to the same systems, but
also include structural aspects of the dwelling unit (Statistics Canada, 2009).

The housing conditions in Canada were becoming a serious issue.
Politicians took note and the federal government recognized the need to take action.
The result was the development of a National Building Code (NBC) in 1941 by the
National Research Council, setting basic guidelines for construction based on expert
advice and detailed research (Archer, 2003). However, enforcement proved to be
difficult. The constitutional power for building codes was a provincial responsibility
not federal, which made country-wide adoption a slow process.

Between 1946 and 1960 there was an increase in the percentage of total
housing stock requiring repair or maintenance by approximately 11 percent and a half
percent increase in homes requiring major repairs\(^4\). During this period total housing
stock in Canada grew substantially by 163.6 percent\(^5\), which should have resulted in a
much larger increase to the number of housing units requiring repair and maintenance.

\(^4\) Refer to Table 2.3 and 2.3 for source of figures
\(^5\) Calculated using the data found on Table 2.2 for period 1921 to 1945 and 1946 to 1960
This was seen as an early success for the national building coded as the increased level of scrutiny new and existing housing received had resulted in conditions only slightly worsening during a time of extreme growth. The current state of housing conditions in Canada was now properly defined and quantified through the creation of a defined set of guidelines for the industry.

The National Research Council now fully recognized the importance of a consistent and current set of building regulations for new construction and existing housing quality in Canada. The Associate Committee on the National Building Code (ACNBC) was established in 1948 and was tasked with updating the code every five years (Archer, 2003). The success of this association was realized by the early 1960’s when municipalities all across Canada accepted and adopted the code, while at the same time provincial involvement in building regulation increased (Archer, 2003). The country-wide adoption had a significant impact on the quality of dwellings in the country. Tables 2.2 and 2.3 illustrate these improvements to housing quality in Canada from 1920 to 2006. The percentage of dwellings needing repair or maintenance dropped by 20 percent from 1970 to 2006 and dwellings needing major repair were almost eliminated. Figures 2.1 and 2.2 further graphically illustrate the substantial effects to housing conditions in Canada as a result of the country-wide adoption of a standard set of building codes.
Table 2.2  Total Dwellings Needing Repair or Maintenance in Canada

<table>
<thead>
<tr>
<th>Period of Construction</th>
<th>Total Housing Stock</th>
<th>Total Needing Repair or Maintenance</th>
<th>Percentage Needing Repair or Maintenance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1920 or before</td>
<td>1,777,800</td>
<td>775,905</td>
<td>43.64%</td>
</tr>
<tr>
<td>1921 to 1945</td>
<td>2,998,018</td>
<td>819,415</td>
<td>27.33%</td>
</tr>
<tr>
<td>1946 to 1960</td>
<td>4,686,112</td>
<td>1,812,525</td>
<td>38.68%</td>
</tr>
<tr>
<td>1961 to 1970</td>
<td>6,175,500</td>
<td>1,753,170</td>
<td>28.39%</td>
</tr>
<tr>
<td>1971 to 1980</td>
<td>8,355,747</td>
<td>2,421,395</td>
<td>28.98%</td>
</tr>
<tr>
<td>1981 to 1985</td>
<td>9,167,257</td>
<td>1,028,180</td>
<td>11.22%</td>
</tr>
<tr>
<td>1986 to 1990</td>
<td>10,280,902</td>
<td>1,055,955</td>
<td>10.27%</td>
</tr>
<tr>
<td>1991 to 1995</td>
<td>11,226,462</td>
<td>894,860</td>
<td>7.97%</td>
</tr>
<tr>
<td>1996 to 2000</td>
<td>11,908,049</td>
<td>820,365</td>
<td>6.89%</td>
</tr>
<tr>
<td>2001 to 2006</td>
<td>12,437,470</td>
<td>1,055,690</td>
<td>8.49%</td>
</tr>
</tbody>
</table>

Source: Statistics Canada - 2006 Census. Catalogue Number 97-554-XCB2006022 and Table 030-0001 CANSIM

Table 2.3  Total Dwellings Needing Major Repair in Canada

<table>
<thead>
<tr>
<th>Period of Construction</th>
<th>Total Housing Stock</th>
<th>Total Needing Major Repair</th>
<th>Percentage Needing Major Repair</th>
</tr>
</thead>
<tbody>
<tr>
<td>1920 or before</td>
<td>1,777,800</td>
<td>133,755</td>
<td>7.52%</td>
</tr>
<tr>
<td>1921 to 1945</td>
<td>2,998,018</td>
<td>117,610</td>
<td>3.92%</td>
</tr>
<tr>
<td>1946 to 1960</td>
<td>4,686,112</td>
<td>193,020</td>
<td>4.12%</td>
</tr>
<tr>
<td>1961 to 1970</td>
<td>6,175,500</td>
<td>161,480</td>
<td>2.65%</td>
</tr>
<tr>
<td>1971 to 1980</td>
<td>8,355,747</td>
<td>174,140</td>
<td>2.08%</td>
</tr>
<tr>
<td>1981 to 1985</td>
<td>9,167,257</td>
<td>57,690</td>
<td>0.63%</td>
</tr>
<tr>
<td>1986 to 1990</td>
<td>10,280,902</td>
<td>47,055</td>
<td>0.46%</td>
</tr>
<tr>
<td>1991 to 1995</td>
<td>11,226,462</td>
<td>29,775</td>
<td>0.27%</td>
</tr>
<tr>
<td>1996 to 2000</td>
<td>11,908,049</td>
<td>15,085</td>
<td>0.13%</td>
</tr>
<tr>
<td>2001 to 2006</td>
<td>12,437,470</td>
<td>9,405</td>
<td>0.08%</td>
</tr>
</tbody>
</table>

Source: Statistics Canada - 2006 Census. Catalogue Number 97-554-XCB2006022 and Table 030-0001 CANSIM
Figure 2.1  Dwellings in Canada Needing Major Repair

Source: Statistics Canada - 2006 Census. Catalogue Number 97-554-XCB2006022 and Table 030-0001

Figure 2.2  Dwellings in Canada Needing Repair or Maintenance

Source: Statistics Canada - 2006 Census. Catalogue Number 97-554-XCB2006022 and Table 030-0001
By the 1970s the quality of housing in Canada was no longer viewed as an issue the government needed to address. The National Building Code was successful in making Canadian households safer through standardizing building practices. This was evident as the substantial growth experienced by the housing industry up to the 1970s resulted in a reduction of quality issues across the country. Today the National Building Code has four objectives centered on updating and enforcing safety, health, accessibility and fire and structural protection (Surprenant, 2010). While the advances in quality were needed and eventually well received, they required greater investment by builders, developers and municipal governments leading to an increase in cost that was passed on to the consumer. These increases led to issues of affordability and a new policy focus for government.

From 1947 to 1970 the residential construction sector in Canada expanded at a rapid rate. During this time the housing sector grew from an annual 1.088 billion to 3.735 billion dollars (CDN) (Statistics Canada, 2008B). This was the result of a doubling in annual dwelling starts in Canada from 90,509 to 190,528 units between 1949 and 1970 (Statistics Canada, 2008C). These changes to the housing sector resulted in additional increases, specifically in the average square foot cost of construction and the average value of a home in Canada. From 1952 to 1971, as illustrated by table 2.4, the average square foot cost of construction for a single
detached home increased by 68.1 percent (Constant CDN) (Statistics Canada, 2008D). In addition from 1956 to 1971 the average value of a Multiple Listing Service (MLS) sale increased by 71 percent from $17,528 to $24,581 (CDN)⁶ (Statistics Canada, 2008E). The increases to housing costs were not limited to Canada as the U.S. also experienced an increase during a similar time period. From 1950 to 1970 the median home value in the U.S. rose by 46.4 percent from $44,600 to $65,000 USD (U.S. Census Bureau, 2004)⁷.

Table 2.4  Average Cost per Square Foot of a Single-Family Home in Canada

<table>
<thead>
<tr>
<th>Year</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1976</td>
<td>180.6</td>
</tr>
<tr>
<td>1975</td>
<td>167.1</td>
</tr>
<tr>
<td>1974</td>
<td>149.5</td>
</tr>
<tr>
<td>1973</td>
<td>122.2</td>
</tr>
<tr>
<td>1972</td>
<td>106.7</td>
</tr>
<tr>
<td>1971</td>
<td>100.0</td>
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<tr>
<td>1970</td>
<td>97.4</td>
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<tr>
<td>1965</td>
<td>74.7</td>
</tr>
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<td>1960</td>
<td>69.4</td>
</tr>
<tr>
<td>1955</td>
<td>64.0</td>
</tr>
<tr>
<td>1952</td>
<td>59.5</td>
</tr>
</tbody>
</table>

Table is in 1971 constant CDN
Source: Statistics Canada Table S167: www.statcan.gc.ca/pub/11-516-x/sections/4057757-eng.htm

⁶ Values are adjusted to 1971 constant Canadian dollars using the Canadian Consumer Price Index and Statistics Canada methodology.

⁷ The values are adjusted by the US Census Bureau into constant USD for 2000 and there is no calculation being made to account for currency exchange.
A surge in population growth, especially in urban centers, increased demand for housing and further added to housing costs in Canada and the United States. The total population of Canada grew by 57 percent from 14,009,429 to 21,962032 between 1951 and 1971 (Statistics Canada, 2008A). While at the same the urban population of Canada almost doubled, growing from 7,941,222 to 14,114,970 people, resulting in almost twice as many people residing in urban centers as opposed to rural areas (Statistics Canada, 2008A). The U.S. faced similar growth patterns, as the urban population between 1950 and 1970 grew from 96,846,817 to 149,646,617 people, an increase of 54.5 percent (US Census Bureau, 1993). This increase in population experienced by both countries, especially in urban centers, coupled with the rising cost of housing, placed new demands on the industry. Moving into the 1970’s Canada and the United States witnessed other forms of homeownership, outside of the traditional single-family detached home, increase in popularity as a result of the new demands.

**Forms of Ownership Tenure**

“Fee simple” is the dominant form of homeownership in Canada and the United States. Derived from British Common Law, fee simple is the strongest form of tenure known to the law. “Fee” is used to describe an estate of inheritance and “simple” is used to indicate that there are no restrictions with respect to the inheritable characteristics of the estate (Burby, 1965). Fee simple ownership can include
dwellings such as single detached homes, single attached homes, row houses and
townhouses. New forms of homeownership outside of fee simple have evolved since
the 1940s, which include condominium and co-operative ownership. This section will
examine in detail the three dominant forms of homeownership in Canada and the
United States; fee simple, condominium, co-operative and compare the trends of each
over the last ten years. As well, other emerging forms of ownership will be briefly
examined.

**Fee Simple Single Family**

Fee simple ownership in Canada and the United States is primarily
comprised of single detached and attached dwellings. Statistics Canada defines a
single detached dwelling unit as, one dwelling unit completely separated by open
space on all sides from any other structure and a single attached dwelling, as a semi-
detached unit, row or terrace unit (Statistics Canada, 2009). The U.S. Census Bureau
defines a single detached unit as, a separate building that has open spaces on all four
sides and a single attached unit as, a building separated from other structures by
dividing walls that extend from the ground to the roof such as row houses or double
houses (U.S. Census Bureau, 2010A). Based on these definitions, fee simple
ownership in both countries is comparable and this paper will refer to single detached
dwelling units as single-family homes.
Table 2.5  Single-Family Homes in Canada

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Homes</th>
<th>Total Single Family Homes</th>
<th>% Single Family Homes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>6,877,780</td>
<td>5,488,620</td>
<td>79.80%</td>
</tr>
<tr>
<td>2001</td>
<td>7,610,390</td>
<td>5,972,985</td>
<td>78.48%</td>
</tr>
<tr>
<td>2006</td>
<td>8,509,780</td>
<td>6,329,200</td>
<td>74.38%</td>
</tr>
</tbody>
</table>

Source: Canadian Housing Observer 2010, Canada Housing and Mortgage Corporation

Table 2.6  Single-Family Homes in the United States

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Homes</th>
<th>Total Single Family Homes</th>
<th>% Single Family Homes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>68,796,000</td>
<td>56,471,000</td>
<td>82.08%</td>
</tr>
<tr>
<td>2001</td>
<td>71,708,000</td>
<td>58,744,000</td>
<td>81.92%</td>
</tr>
<tr>
<td>2003</td>
<td>72,238,000</td>
<td>59,642,000</td>
<td>82.56%</td>
</tr>
<tr>
<td>2005</td>
<td>74,931,000</td>
<td>61,699,000</td>
<td>82.34%</td>
</tr>
<tr>
<td>2007</td>
<td>75,647,000</td>
<td>62,512,000</td>
<td>82.64%</td>
</tr>
<tr>
<td>2009</td>
<td>76,428,000</td>
<td>63,324,000</td>
<td>82.85%</td>
</tr>
</tbody>
</table>

Source: American Housing Survey Table 3-1 Introductory Characteristics - Owner Occupied Units

The most recent data available from Canada shows single-family homes as the primary form of homeownership in the country. However, the data does reveal a slight decrease of 5.4 percent from 1996 to 2006, leading to the conclusion that other forms of tenure are gaining in popularity. Like Canada, single-family homes in the United States have remained the dominant form of homeownership. However, growth
has remained essentially flat at 82 percent of total owner-occupied units since 1999. The data, illustrated in tables 2.5 and 2.6, indicate a difference in homeownership choice. Comparing the year 2006 single-family homes in the United States accounted for 8.5 percent more of owner-occupied dwellings than in Canada.

Condominiums

Condominiums are a growing form of homeownership in Canada and the United States. This form of ownership was derived from a concept that dates back to Roman times, dividing ownership rights into two parts; (1) fee simple ownership over a dwelling unit and (2) common ownership over other areas such as lobbies in a building or exterior walls (Arbuckle & Bartel, 1988). Condominiums began in Canada when the province of British Columbia enacted the Strata Titles Act, and the province of Alberta passed the Condominium Property Act in 1966 (Risk, 1968). Condominiums were introduced earlier in the United States through Section 234(c) of the 1961 National Housing Act. The act extended Federal Housing Administration (FHA) insurance to mortgages placed on condominiums for Puerto Rican residents (Clurman & Hebard, 1970). The main achievement of the FHA amendment was the development of condominium law that served as a model for State law, facilitating the expansion of condominium ownership to the U.S. mainland (Clurman & Hebard, 1970).
Condominium ownership in the United States accounts for 5 percent of owner-occupied housing stock, and has remained constant over the past decade as shown in table 2.7. In Canada condominiums account for 10.9 percent of the owner-occupied housing market as of 2006 as shown in table 2.8. The findings are similar when new condominium housing starts are examined. Table 2.10 shows that new condominium construction starts between 1999 and 2009 in the U.S. increased by only 3.5 percent and peaked at 8.1 percent in 2007. During the same time period Canada’s condominium market experienced a 6 percent growth rate. In addition, condominiums accounted for 30.1 percent of new construction starts in 2009 and had peaked a year earlier at 43.5 percent. The growth of new condominium construction starts is shown in figure 2.3. The chart illustrates the increase in starts as a percentage of total housing starts up to 2009. The sharp decline illustrated between 2008 and 2009 was a result of the housing recession experienced in Canada. A similar decrease in condominium housing starts occurred in the U.S., however the trend is less severe due to the smaller share condominiums have of the overall housing market. These are important findings as they illustrate the greater preference of condominiums as a form of ownership in Canada as opposed to the United States. The reasons behind the popularity of condominium ownership in Canada is outside the scope of this paper but it can be attributed to greater population density and higher housing costs in the country.
Figure 2.3  Condominiums in Canada as a Percentage of Total Housing Starts

Source: Canada Mortgage and Housing Corporation, 2010 Canadian Housing Observer: Table 1 appendix 5
### Table 2.7 Condominium Homeownership in the United States

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage of Total Owner Occupied Dwellings</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>5.76%</td>
</tr>
<tr>
<td>2007</td>
<td>5.65%</td>
</tr>
<tr>
<td>2005</td>
<td>5.00%</td>
</tr>
<tr>
<td>2003</td>
<td>4.73%</td>
</tr>
<tr>
<td>2001</td>
<td>4.72%</td>
</tr>
<tr>
<td>1999</td>
<td>4.40%</td>
</tr>
</tbody>
</table>

Source: 1999-2009 American Housing Survey Table 3-1 Introductory Characteristics - Owner Occupied Units

### Table 2.8 Condominium Homeownership in Canada

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage of Total Owner Occupied Dwellings</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>10.90%</td>
</tr>
<tr>
<td>2001</td>
<td>9.00%</td>
</tr>
<tr>
<td>1996</td>
<td>7.70%</td>
</tr>
<tr>
<td>1991</td>
<td>6.10%</td>
</tr>
<tr>
<td>1986</td>
<td>4.30%</td>
</tr>
<tr>
<td>1981</td>
<td>3.50%</td>
</tr>
</tbody>
</table>

Source: Statistics Canada. 2006 Census: Analysis Series, Figure 4 percentage of owner households living in a condominium, Canada, 1981 to 2006
Table 2.9  Canadian Housing Starts by Form of Ownership

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Starts</th>
<th>Fee Simple</th>
<th>Condominium</th>
<th>Co-op</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>117,827</td>
<td>75.7%</td>
<td>24.1%</td>
<td>0.17%</td>
</tr>
<tr>
<td>2000</td>
<td>120,897</td>
<td>76.3%</td>
<td>23.4%</td>
<td>0.24%</td>
</tr>
<tr>
<td>2001</td>
<td>127,599</td>
<td>74.5%</td>
<td>25.1%</td>
<td>0.38%</td>
</tr>
<tr>
<td>2002</td>
<td>160,283</td>
<td>76.8%</td>
<td>23.0%</td>
<td>0.24%</td>
</tr>
<tr>
<td>2003</td>
<td>171,972</td>
<td>70.9%</td>
<td>28.6%</td>
<td>0.61%</td>
</tr>
<tr>
<td>2004</td>
<td>184,046</td>
<td>67.7%</td>
<td>32.0%</td>
<td>0.28%</td>
</tr>
<tr>
<td>2005</td>
<td>176,261</td>
<td>64.7%</td>
<td>34.2%</td>
<td>1.14%</td>
</tr>
<tr>
<td>2006</td>
<td>176,506</td>
<td>64.4%</td>
<td>35.0%</td>
<td>0.54%</td>
</tr>
<tr>
<td>2007</td>
<td>175,139</td>
<td>64.4%</td>
<td>35.2%</td>
<td>0.46%</td>
</tr>
<tr>
<td>2008</td>
<td>169,103</td>
<td>56.1%</td>
<td>43.5%</td>
<td>0.39%</td>
</tr>
<tr>
<td>2009</td>
<td>114,132</td>
<td>68.9%</td>
<td>30.1%</td>
<td>0.99%</td>
</tr>
</tbody>
</table>

Source: Canada Mortgage and Housing Corporation (CMHC). 2010 Canadian Housing Observer. Figures are only for municipalities with a population greater than 10,000 (Data was calculated using the information provided in table 1 appendix - 5)

Table 2.10  American Housing Starts by Form of Ownership

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Starts</th>
<th>Single-Family</th>
<th>Condominium</th>
<th>Co-op</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>4,825,000</td>
<td>67.6%</td>
<td>4.4%</td>
<td>0.12%</td>
</tr>
<tr>
<td>2001</td>
<td>4,689,000</td>
<td>71.2%</td>
<td>6.2%</td>
<td>0.13%</td>
</tr>
<tr>
<td>2003</td>
<td>4,673,000</td>
<td>78.0%</td>
<td>6.7%</td>
<td>0.13%</td>
</tr>
<tr>
<td>2005</td>
<td>4,919,000</td>
<td>81.7%</td>
<td>7.6%</td>
<td>0.10%</td>
</tr>
<tr>
<td>2007</td>
<td>4,710,000</td>
<td>82.7%</td>
<td>8.1%</td>
<td>0.21%</td>
</tr>
<tr>
<td>2009</td>
<td>3,830,000</td>
<td>80.1%</td>
<td>7.9%</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

Source: American Housing Survey 1999 to 2009, Table 3-1. Note that the data here contains a four-year period for housing starts. Thus the date range runs from 2009 to 1995 as each year represents a cumulative total of the year displayed and the previous three years.
**Co-operatives**

Co-operatives are a form of fee simple tenure that incorporates shared ownership rights. Co-ops can be organized in two ways, “equity” and “non-equity” or as they are defined in the United States, “conventional” and “publicly assisted” (Clurman & Hebard, 1970). Conventional or equity co-operatives establish a single corporation, which owns the building and land, then issues shares to the “co-operators.” These “co-operators” are shareholders in the corporation and are provided with proprietary leases to designated units in the complex (Arbuckle & Bartel, 1988). Under the proprietary lease the shareholder has tenancy status, which carries rights and obligations to their unit and the commonly used spaces (Clurman & Hebard, 1970). The significant difference between equity co-operatives and condominiums is that the shareholder is not responsible for the debt of their individual unit (Arbuckle & Bartel, 1988). Instead all shareholders are responsible jointly for the liability of the entire co-operative, spreading the risk amongst all owners. When a unit is sold the shareholder is entitled to the maximum dollar value they can obtain in the market place for their share without restriction and are permitted to keep any profit made (Canada Mortgage and Housing Corporation, 2007B).

Non-equity or publicly assisted co-operatives have a similar legal structure as equity co-ops. The significant difference is that they allow for limited, and in many cases, no profit to be gained through the sale of a share (Clurman & Hebard, 1970).
Non-equity co-ops are generally established as non-profit corporations that receive public funds to assist with the development, renovation or organization of the project. Assistance from government comes in the form of below market direct financing, mortgage insurance, tax abatement, direct subsidy to cover construction costs, carrying costs, and down payment funds (Clurman & Hebard, 1970). This form of ownership has been used by non-profit organizations to assist low-income individuals attain homeownership through the assistance of various government programs.

Co-operatives form a small portion of the Canadian and American homeownership market. At one point co-ops were the most popular form of community housing in the United States, but with the emerging popularity of condominiums in the 1970’s new construction was curtailed (Clurman & Hebard, 1970). As of 2009 there were 429,000 equity and non-equity co-operative units in the United States and from 2001 to 2009 only 6,000 co-operatives units were constructed (US Census Bureau, 2009). The history of non-equity co-operatives in Canada is similar to the U.S., however equity co-ops have only existed since the late 1980’s (Canada Mortgage and Housing Corporation, 2007B). As a result by 2007 only 18 equity co-ops had been established in the country and only ten of the original 18

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8 2009 and 2005 American Housing Surveys were used to calculate the statistics; new construction of co-operatives does not include any buildings that may have been converted to co-operatives over the same period.
continue to function as co-ops (Canada Mortgage and Housing Corporation, 2007B). Many equity co-operatives in Canada are not true to the definition as provinces grant strata titles, a form of condominium ownership, to co-operative owners allowing for individual financing to be arranged (Canada Mortgage and Housing Corporation, 2007B, p. 3). Like the U.S., co-operative ownership is a small portion of the housing market in Canada accounting for only 8,101 total units built between 2000 and 2009 (Canada Mortgage and Housing Corporation, 2010B).

**Emerging Forms of Ownership**

Life Leases have emerged as a growing form of ownership in Canada. However, through examining the literature, no comparable form was found in the U.S. housing market. Life Leases were first developed in Canada during the late 1980’s through government programs in Saskatchewan and Manitoba (Canada Mortgage and Housing Corporation, 2007B). In 2003, Lumina Services, a firm contracted by the Canada Mortgage and Housing Corporation to conduct a case study on life lease developments in the country, found that there were approximately 200 (Canada Mortgage and Housing Corporation, 2007B).

By definition Life Leases are legal agreements that permit the purchaser to occupy a dwelling unit for life, in exchange for a lump sum payment and a monthly fee (Canada Mortgage and Housing Corporation, 2007B). These legal arrangements
provide some options that can be considered a form of ownership. Currently there are five variations of Life Leases in Canada, but only three of them have ownership characteristics; (1) No gain, requires a lump sum pre-payment to the sponsor\(^9\) and upon departure or death the lease is reverted back to the sponsor and the resident retains the entire pre-paid amount without appreciation, (2) Price index, requires a lump sum pre-payment, but the redemption value appreciates at a pre-determined rate\(^10\), and (3) Market value, requires a lump sum pre-payment but the lease is redeemed at a market rate that is comparable to the sale price of a condominium unit (Canada Mortgage and Housing Corporation, 2007B).

Life Leases in Canada are primarily built by community-based nonprofit organizations and have been limited exclusively to residents 55 years and older (Canada Mortgage and Housing Corporation, 2007B). Life Leases remain a legal form of rental in most Canadian provinces. Residents in these developments are subject to the provincial landlord tenancy act, but there are some provinces that do not apply the act (Canada Mortgage and Housing Corporation, 2007B). In all cases leases

\(^9\) Sponsor is a term used to describe the non-profit or private organization responsible for developing, administering and maintaining the life lease development.

\(^10\) Appreciation in most cases is with the rate of inflation as measured by the Canadian Consumer Price Index
must be redeemed by the sponsor, however the ability to retain or gain appreciation can be characterized as a form of homeownership.

Residential leaseholds or land trusts have emerged as an affordable alternative of ownership in Canada and the United States. This form involves the construction of a dwelling on the leased land for a specified period of time. Ownership is retained over the dwelling and when the lease ends the property and improvements made to the property revert back to the landowner. This tends to result in the housing being less expensive, thus enhancing affordability (Canada Mortgage and Housing Corporation, 2007B). Community Land Trusts are a common form, which have had varying degrees of success in Canada and the United States (Canada Mortgage and Housing Corporation, 2009). These organizations are normally nonprofit associations created to acquire and hold land for the benefit of the community. Community Land Trusts have a long-standing tradition in the United States, but are less established in Canada with only a handful operating across the country (Canada Mortgage and Housing Corporation, 2009).

Collaborative housing or cohousing is a form of homeownership that has existed in Canada and the United States since 1988 (Canadian Cohousing Network, 2004). Residents own an individual unit surrounding a common house, forming a
neighborhood or community (Canadian Cohousing Network, 2004). The common house contains a kitchen, living room, laundry facilities, bathrooms and some have offices, all the amenities a traditional house would have. Housing units are simply attached or detached single-family homes (The Cohousing Association of the United States, 2010). There have been 127 cohousing communities developed in North America since 1991 and another approximate 118 are in various stages of development (Canadian Cohousing Network, 2004). Cohousing is more about fostering community relationships than homeownership.
Chapter 3

HOUSING AFFORDABILITY

Housing costs in Canada and the United States represent a sizable portion of a household monthly budget (Shlay A. B., 1995; Luffman, 2006). As a result the amount of income remaining to provide for other necessary expenses such as food, clothing, health care, childcare and transportation is dependent on housing costs. There are a growing number of individuals that are facing a difficult choice every month between housing and food (Hartman, 1998). Housing is important to an individual’s well-being. Housing shapes an individual’s state of health, access to public facilities, services, educational and employment opportunities (Miron, 1989). For these reasons housing affordability is a crucial aspect of any society.

More than two thirds of Canadians and Americans own their homes, closely tying the residential construction industry to many aspects of the economy and communities. For these reasons homeownership is a vital part of housing policies in Canada and the United States (Shlay A. B., 2006; Hulchanski, 2007). However, homeownership is still a choice and owners are free to decide what portion of their
income they are willing to spend on housing. That being said, homeowners may not always make the right choice and changes in circumstances may affect housing affordability. This has made affordability trends important not only for homeowners, but for policy makers.

**Affordability Defined**

Before addressing trends in affordability, it is important to first define “affordability.” Traditionally, affordability is based on a ratio of housing cost to income. Thirty percent of income is the standard accepted by government and lending institutions in Canada and the U.S. (Stone, 2006; Luffman, 2006). However, Michael Stone argues that using this ratio implies (1) the lower the income of a household, the lower the amount it requires for non-shelter needs, with no minimum or (2) that the normative ratio must reduce with income, all the way to zero if needed (Stone, 2006). In addition to Stone’s first point, the standard ratio implies that lower incomes have lower housing costs. Local and regional variations in housing prices throughout a country make applying a standard ratio difficult, as incomes do not always fluctuate accordingly. There are also variations in housing costs between households, and in the cost of other necessities. These variations bring concern to the application of a standard ratio.
Generally housing costs make the first claim on disposable income, making discretionary spending on non-housing items difficult for households with lower incomes (Stone, 2006). This has resulted in some scholars advocating for the use of a different approach. Michael Stone has developed a “residual income approach” which takes into account the claim housing costs have on disposable income. The approach determines affordability based on a household’s ability to meet their other essential expenses after deducting their housing costs (Stone, 2006). This approach takes into account variations in all costs and determines a household’s ability to meet housing needs specific to their area. This method accounts for all essential spending a household faces and appreciates that some households may not have the capacity to reduce their monthly housing expense (Luffman, 2006).

There are practical issues associated with this approach, however it does provide a possible alternative for determining the level of debt a homeowner can bear. The typical current ratio used by lending institutions requires that 30 percent of a household’s monthly income must cover principle, interest, a monthly tax payment and a nominal utility fee in order to qualify for mortgage financing. Stone’s approach argues that a homeowner’s debt to income ratio should not be based on whether they can barely meet non-housing needs given anticipated housing costs, but whether they
have the flexibility to meet their other essential expenses in the event of income fluctuation (Stone, 2006).

Homeownership and the amount a household spends on housing is a choice. However banks, lending institutions and the government agencies that regulate them use the standard 30 percent ratio to determine the eligibility of an applicant for a mortgage. Therefore, there are limitations to choice and relaxed limitations can have a negative result. This has increased the importance of properly defining and measuring affordability for the housing industry. That being said, affordability has been economically driven and has not fully taken into account the effects that enabling a greater number of households to enter into homeownership has on the market. This narrow view of affordability must be changed. Affordability should be more than an enabling tool, it must also help to regulate homeownership. Properly defining affordability can reduce risk and limit the number of homeowners making a choice between housing and food.

**Affordability Trends**

Income and homes values are the primary factors affecting affordability. The basic concept is (1) the more income you have the more you can spend on housing, and (2) a lower cost of housing reduces the burden on income. The recent trends in income and home values in Canada and the United States will illustrate the
direct impact these variables have on affordability. The rapid growth of the housing market in both countries during the early part of the last decade resulted in escalating prices. Figures 3.1 and 3.2 illustrate the trends in mean home prices for Canada and the U.S. from 2000 to 2010. The Canadian housing market has experienced considerable growth in the average real mean price of housing, increasing by 107 percent from 2000 to 2010 (Canadian Real Estate Association, 2010). While growth in the United States housing market has been more moderate in comparison, as the average real mean housing price increased by only 28.5 percent during the same time period (National Association of Realtors, 2010A). With the exception of a small retreat in 2008, the Canadian market has experienced year over year increases in housing prices. While in comparison the U.S. housing market peaked in 2006 at an average value of $268,200 USD and has since pulled back by 18 percent (National Association of Realtors, 2010A). However, the large variation in home values between the two countries and the nature of the “arithmetic mean” as a measure of average does present some concern.

11 Median would provide a much more stable depiction of home prices in Canada and the United States, however Canada currently does not collect median home prices on the national level.

12 For more detailed information on average sale price of homes for Canada and the U.S. as well as the source for the below graphs consult table A.1 in the appendix.
Figure 3.1  Average Home Price in Canada (Real CDN)

Figure 3.2  Average Home Price in the United States (Real USD)
A housing price index (HPI) provides a more stable, timely and accurate measure of housing price trends. Statistics Canada and the Federal Housing and Finance Agency have developed comparable indexes, using similar sample sizes and methodology that provide a stronger measure for comparing the housing costs of Canada and the U.S. (Federal Housing Finance Agency, 2010A). The exception being Canada uses 1997 as the benchmark while the U.S. uses 1991, resulting in a higher value for the American index. This allows for a comparison of trends, but not absolute figures. Canada’s HPI illustrated in figure 3.3 reveals a 52 percent increase from 2000 to 2010 (Statistics Canada, 2010B). While in comparison, during the same time period the United States index increased by only 40 percent (Federal Housing Finance Agency, 2010B). In comparing the HPI with the mean housing price trend it is evident that they follow similar patterns, with the exception of the HPI lagging behind by a year. The trends illustrate the steady growth of housing prices in Canada and the more volatile fluctuations experienced in the U.S., leading to the conclusion that Canadian housing prices have been historically higher.
Figure 3.3  Canadian Housing Price Index

Source: Statistics Canada, 2011

Figure 3.4 American Housing Price Index

Source: Federal Housing and Finance Agency, 2011
Median income is the next crucial factor in examining affordability trends, but first the definitional meaning of the term in each country must be examined. Median household income is the definitional term used by the U.S. Census Bureau, while median family income is the Statistics Canada’s term. The methodology primarily used by Statistics Canada combines annual tax return information with the long form census completed every five years. The U.S. Census Bureau uses a survey method, the Current Population Survey, conducted every two years using a validated sample to calculate median income. Median “household” and “family” income in both countries are in constant dollars and include all economic families of two persons or more and unattached individuals. This paper will use the term median household income for both countries as the definitional meaning is the same.

Median household income in Canada and the United States have trended very differently over the past decade. Canadian median household income has been growing year after year totaling a 9.8 percent increase from 2000 to 2008 (Statistics Canada, 2010A). U.S. median household income during the same time period experienced a 2.8 percent total decrease (US Census Bureau, 2010A). Comparing the income trends between the two countries in figures 3.5 and 3.6, reveals the distinct variation. Beginning in 2000 median income in the U.S. sharply declined, eventually working it’s way back over a seven year period only to fall off again in 2008. While
in comparison Canada’s median income experienced stagnation for a two year period, but has otherwise seen stronger more positive growth during the same time period.

**Figure 3.5 Median Household Income in the United States**
Taken separately, income and home values form part of the affordability comparison. Understanding the relationship between these two variables will help complete the comparison of affordability between Canada and the U.S. While currency fluctuations and differences in benchmark years make it difficult to directly compare median household incomes and home values between the two countries, it is possible to compare the trends. To assist in comparing the trends an affordability ratio for each country was developed using median household income and the housing price index. The ratio took the median household income for Canada and the U.S. and
divided it by their respective housing price index for each year between 2000 and 2008. A trend for each country was created through determining the cumulative percentage change over a set period of time. A negative percentage increase year after year in the ratio would reveal a growing gap between median income and housing costs. If the year after year percentage change is reversed, and the negative percentage change decreased it would reflect greater affordability as median income and housing costs are coming closer to equilibrium. While it is not possible to reach a positive percentage growth or even equilibrium in this ratio, a positive affordability trend would be reflected through a year after year decrease in the negative percentage change for each country.

Figure 3.7 Canadian Affordability Ratio

Source: Calculated using data from Statistics Canada shown in table A.3
Figures 3.7 and 3.8 both show an increase in the cumulative negative percentage change for Canada and the U.S. suggesting a growing disconnect between income and housing costs over the last decade. This disconnect resulted in a negative affordability trend, as income has not kept pace with housing costs. However, the trend in the United States does reveal that affordability had been stabilizing from 2006 to 2008, while in comparison Canada’s affordability had improved. This is illustrated by the reduction in the negative cumulative percentage change over the last three years, suggesting less of a disconnect between income and housing costs in Canada. In comparing the the U.S. trend with Canada it is possible to concluded that Americans are facing a greater affordability issue. This is evident through the greater
cumulative percentage drop in the U.S. ratio year after year combined with the absence of any positive direction change in the trend. It is important to note that this ratio takes into account all occupied dwellings in Canada and the United States providing an affordability trend for housing not just homeownership.

The ratio developed to compare affordability trends only provides data up to 2008, there is a need to fill in the last two years of the decade through other means. The Royal Bank of Canada provides such a measure as they have developed a quarterly housing affordability index that can help fill in these unaccounted years. The index measures the proportion of median pre-tax household income required to service the cost of a mortgage payment, property taxes and utilities on a detached bungalow, standard two storey home and a standard condo in Canada (Hogue, 2010). A high percentage in the index would suggest that it is more difficult for Canadian households to afford a home. The results of the index in the second quarter of 2010 show a reduction in that percentage of 1.4 to 2.5 percent\(^\text{13}\), indicating a continued improvement in housing affordability for the country (Hogue, 2010).

\[^{13}\text{The range in the results of the index are due to regional differences in cost and income across Canada and depending on what region is being examined the affordability index can vary.}\]
The National Association of Realtors (NAR) has developed a similar affordability measure that can fill in the missing years in the U.S. ratio. The Housing Affordability Index measures the ability of a typical family to afford a home based on the national median household income and the national median price of an existing single-family home, using prevailing mortgage interest rates (National Association of Realtors, 2010B). An index result of 100 would suggest that a typical family’s income is at a level that would allow them to purchase a median valued home in the United States. Since the end of 2008 the index has increased by 25% suggesting that a typical American family has 25 percent more income than is required to purchase a typical home (National Association of Realtors, 2010B). Both indices show an improvement in affordability on the national level for average households, but this is not the case for low-income households. Standard affordability ratios, similar to the ones previously defined, provide a greater challenge in identifying the housing affordability for lower income households.

An individual that earns $60,000 per year and has no children could afford to spend 40 or 50 percent of their income on housing. While, a family of four that earns $35,000 per year will have difficulties providing adequate housing on 30 percent of their income. This simple comparison does not take into account the extra burden placed on a household with more members that must be provided for. In 2009 a
spending pattern report found that shelter accounted for 19.8 percent of total Canadian household expenditures (Statistics Canada, 2009A). The same report found that shelter for households in the lowest 20 percent of income, accounted for 31 percent of their household expenditures (Statistics Canada, 2009A). The US Bureau of Labor Statistics publishes a similar report that found in 2009 shelter accounted for 34.4 percent of total household expenditures (US Bureau of Labor Statistics, 2010). According to the same report shelter for households in the lowest 20 percent of income, accounted for 41.5 percent of their total expenditures (US Bureau of Labor Statistics, 2010). Shelter in both reports includes rental and owner-occupied dwellings.

The Canada Mortgage and Housing Corporation (CMHC) releases an annual report on housing and Harvard University releases a comparable report in the U.S. According to the 2010 CMHC report, 12.7 percent of homeowners were identified as “core need” households (Canada Mortgage and Housing Corporation, 2010B). Core need is identified by homeowners that spend more than 30 percent of their household income on housing, or are living in a dwelling that requires major repair (Canada Mortgage and Housing Corporation, 2010A). While the exact portion of homeowners not meeting affordability standards is unknown, a report done by Statistics Canada, cites affordability as the more common issue (Luffman, 2006).
2010 Harvard report found that from 2001 to 2008 homeowners in the bottom 20 percent quintile faced a moderate burden increase of 3.6 percent and owners in the same quintile facing a severe burden increased by 17.7 percent (Joint Center for Housing Studies of Harvard University, 2010). “Moderate burden” is defined as homeowners paying 30 to 50 percent of their income for housing and “severe burden” is owners paying more than 50 percent. The 2008 Harvard report found that 71 percent of homeowners in the lowest income quintile were either moderately or severely burdened by housing costs (Joint Center for Housing Studies of Harvard University, 2010).

Housing affordability in Canada and the United States over the past decade has been a growing issue of concern. Based on the trend analysis just presented, affordability was in decline for both countries during most of the last decade. While recent reports show that there has been some improvement in these trends, low-income households are still carrying the brunt of the affordability burden. The trends reveal that affordability is an issue facing more Americans, lower income Americans in particular, than Canadians. The question now becomes what are the reasons for these decreases in affordability within the two countries? Government homeownership policy plays a significant role in answering this question. The direct and indirect involvement of government agencies in regulation, creation and funding
of the housing industry must be examined. This is an important issue as affordability
not only affects a country’s economy, but can create or reveal deep seated social
issues.
Chapter 4
POLICY TRENDS AND THE EFFECTS

Canada and the United States both subscribe to ideals of a “liberal welfare state” on varying levels. Characterized by a relationship between government, business and the individual that emphasizes individualism, individual responsibility and a reliance on the private market (Hulchanski & Dreir, 1993). These values form the foundation of their respective housing policies. The vast majority of housing in both countries has been constructed and financed by the private sector (Hulchanski & Dreir, 1993). However, the promotion of this form of liberal welfare policy required a high degree of government involvement in both countries. Over time the government’s role has expanded and contracted with different ideologies assuming the reigns of power.

In an effort to find the proper balance of government intervention, Canada and the United States have come to focus on three key areas of influence in housing policy. The three areas of government intervention include the structure of the housing finance system, regulation of the housing industry and indirect subsidies in
the form of tax incentives. In the past, government has been involved in the direct financing of housing activities, but more recent policy has been concerned with developing the regulatory system. Indirect subsidies in the form of tax incentives and deductions for homeowners have provided incentives for households to own instead of rent. While direct subsidies aimed at potential homeowners and new homeowners have come and gone with different governments. What has remained constant is the influence of the Canadian and American federal governments in housing policy through promoting higher levels of homeownership to increase economic activity.

**Changes to Housing Policy Since WWII**

Under the British North American (BNA) Act of 1867, the Canadian Constitution gave jurisdictional powers over housing to the federal government. This was a result of housing being an unassigned power under the 1867 Constitution and according to section 91 (29) of the act all powers not assigned exclusively to the provinces are the responsibility of the Canadian federal government (Department of Justice Canada, 2011A). The federal government used this authority to construct, finance and insure housing for Canadians following World War II. However the national housing policy would deviate over the next three decades depending on the government’s ideological preferences. In 1982 Canada repatriated the constitution from Britain and instituted constitutional changes that would dramatically shift housing policy in 1993. That year the federal budget shifted responsibility for directly
subsidizing the construction and financing of public housing to the provinces (Begin, 1999). However, the regulation of the housing finance system and the indirect tax incentives remained the responsibility of the federal government. Remaining constant through this constitutional change and through successive federal governments was the policy of encouraging homeownership through the private market to provide stimulus to the country’s economy (Prince, 1995).

The Canadian government’s involvement in housing can be traced back to the Great Depression, however the National Housing Act (NHA) of 1944 was the first major step towards a housing policy that favored homeownership. The purpose of the act as described in the legislation was to promote housing affordability and choice; facilitate access to, and competition and efficiency in the provision of housing finance; to protect the availability of adequate funding for housing at low costs; and generally to contribute to the well-being of the housing sector in the national economy (Department of Justice Canada, 2011B). However, in practice the act focused on broadening mortgage assistance programs for homeowners rather than addressing low-income housing or the rapid urban expansion occurring at the time (Oberlander & Fallick, 1992).
The NHA and a national housing shortage led to the creation of the Canada Mortgage and Housing Corporation (CMHC) in 1946. The mandate of this crown corporation\textsuperscript{14} was to help ease the housing shortage in post-war Canada. Increasing homeownership became part of CMHC’s mandate. They provided loans and ensured a readily available supply of money for use in the purchase of homes (Oberlander & Fallick, 1992). Prior to the NHA, home loans were difficult to come by, as strict government regulation of the banking sector discouraged mortgage lending. In the early 1950s this began to change as private lenders and insurance companies (who provided home loans at that time) were responsible for originating and holding more than half the loans by 1956 (Oberlander & Fallick, 1992). The social implications of housing during the 1950s became an issue that the national government was also determined to address. Safe, secure housing for Canadians became a focus for CMHC and the crown corporation was thrust into areas of quality and design (Oberlander & Fallick, 1992). Through these policies the government established a large-scale housing industry in the country and successfully addressed the pent up demand for housing after World War II (Carroll & Jones, 2000).

\textsuperscript{14} Crown Corporation is a wholly owned government entity, funded and operated by the Canadian government.
By the 1960’s the government had slowly divested itself from direct lending practices and shifted focus to other areas of housing policy. In 1964 the NHA was amended to reflect more liberal sensibilities. Housing was viewed as a basic right and not a commodity subject to income constraints and the private market (Smith, 1981). The traditional role of CMHC shifted from lending and insurance to address the needs of lower and moderate income households (Oberlander & Fallick, 1992). The filter down approach of the previous two decades was abandoned and CMHC took a leading role in financing and facilitating the construction of affordable rental housing for low-income households. Housing policy in the 1970s was designed to encourage homeownership, while restricting private ownership of rental units (Smith, 1981). The redistribution of income and wealth through housing policy drove this liberal ideology in Canada.

After a decade of expanding direct government involvement in housing policy, a change occurred. The 1980s ushered in a period of fiscal restraint and reduced spending (Carroll & Jones, 2000). The federal government continued it’s support for CMHC’s role in mortgage insurance, but private lenders and the mortgage markets were viewed as the primary actors in the housing industry. Federal programs for homeownership continued, but funding for social housing programs was slowly reduced (Begin, 1999). In 1986, provincial agreements were signed reducing the
federal governments funding obligations for social housing. Then in 1993 the federal government completely shifted responsibility for social housing to the provinces. Since 1993, the focus of the federal government has been on mortgage insurance, the regulation of private sector lenders, and tax policy incentives.

The United States housing policy evolved similar to Canada. To a point that scholars believe up until the 1970s American and Canadian housing policy was a “carbon copy” of each other (Hulchanski & Dreir, 1993). The United States involvement in housing began during the Great Depression through the New Deal and the creation of the Federal Housing Administration (FHA). The 1934 National Housing Act that created the FHA, was designed to encourage investment in housing and provide employment opportunities (Fish, 1979). Similar to Canada, the United States faced a housing shortage by the end of WWII. This was a result of the country’s resources being put towards the war effort and housing not being considered a priority. The National Housing Act of 1949 would change the focus of government. The act called for a “decent home and suitable living environment” for every American family, and sought to contribute to the development of communities and the advancement of growth, wealth and security of the nation (United States Senate, 1949).
The end of WWII brought to light various housing issues facing the United States. The country looked to strike a balance between federal involvement and the encouragement of the private sector. It was determined the private market was to serve a large a part of total housing needs with the federal government acting as a facilitator (Fish, 1979). The federal government only became directly involved when the market failed to serve certain areas, to provide low cost housing, and through regulation (Fish, 1979). The FHA and the Serviceman’s Readjustment Act (GI Bill) administered by the Veterans Administration (VA) would help to facilitate the private market. These two agencies provided insurance to private lenders allowing for lower downpayments, interest rates and ultimately monthly payments. Homeownership had emerged as a federal housing policy initiative in the United States.

Similar trends between the two countries continued into the 1950s. The passage of the 1954 Housing Act in the U.S. placed greater reliance on the private sector and less on direct government intervention (Cole, 1979). The act liberalized the FHA and VA mortgage lending practices. The act rechartered the Federal National Mortgage Association (Fannie Mae), by funding the government sponsored agency\(^{15}\) (GSE) through private capital. Fannie Mae allowed for the creation of a secondary

\(^{15}\) Government sponsored agencies were organizations owned by the government and believed to have the full faith backing of the U.S. Treasury. These are discussed in more detail later in the paper.
market for mortgages to increase the lending capabilities of banks (Cole, 1979). Along with facilitating homeownership the act focused on addressing the slum conditions that existed in many major American cities (Cole, 1979). Unlike Canada, U.S. housing stock was comprised of much older buildings that required attention in order to provide adequate living conditions. The 1950s was a period of growth for homeownership and the role of the private sector in the construction and financing of residential homes in America. Like in Canada, the pent up demand for housing in the post war United States was largely met by the end of the decade (Cole, 1979).

The United States attempted a shift towards more liberal housing policies in the 1960s similar to Canada’s changes in the 1970s. The government emphasized home financing programs and concentrated on direct and indirect subsidies (Rice, 1979). These programs were evaluated by the Nixon Administration in the 1970s and deemed to be inefficient and costly (Rice, 1979). While the housing policies of the 1960s were deemed costly and inefficient, the creation of a new cabinet level agency occurred. The Department of Housing and Urban Development (HUD) was the U.S. counterpart to Canada’s CMHC. The new cabinet level agency and the failures of the experimental housing programs created a growing awareness of the housing issues facing America (Rice, 1979).
The 1970s was a period of divergence between Canadian and American housing policy. The Nixon Administration suspended all housing programs in 1973 and the United States shifted its approach from demand to supply driven policies (Weicher, 1980). Greater emphasis was placed on private sector involvement in the construction and financing of housing, a conservative policy that would continue through three administrations into the 1990s (Marcuse, 2001). The U.S. federal government began a full decade earlier than Canada in reducing its direct involvement in housing. The role of the federal government in both countries is now primarily limited to regulatory and facilitation policy through housing finance mechanisms, tax subsidies and industry regulation. Tax subsidies and housing finance continue to overwhelmingly support homeownership in Canada and the U.S.

**Housing Finance System**

The direct and indirect facilitation of the housing finance system has become the primary lever used by the national governments in Canada and the United States to obtain results in the housing sector. Through various forms of regulation and the involvement of multiple government agencies, both countries have developed unique housing finance models. The recent financial crisis has shown the results of these different approaches. While the United States has experienced a dramatic increase in mortgage defaults and has been forced to bailout major financial institutions, Canada has avoided a similar fate (MacGee, 2009; Peters & Arthur, 57
The ability of the Canadian economy and banking system to avoid the problems experienced by their American counterparts warrants a closer look.

**Mortgage Insurance**

Mortgage insurance was revolutionary to mortgage financing and made homeownership possible for a greater number of Canadians and Americans. Mortgage insurance was first introduced in the United States through the creation of the Federal Housing Administration (FHA) in 1934 (Schwartz, 2006). Canada introduced mortgage insurance later through amendments to the 1954 National Housing Act (Poapst, 1956). In the early stages government was largely responsible for implementation of mortgage insurance in both countries. However, as mortgage insurance evolved, delivery and regulatory methods changed. Mortgage insurance has remained fundamental to the housing finance models of both countries, but is delivered and regulated in very different ways.

The role of government in the facilitation of mortgage insurance is one of the major differences between Canadian and American housing policy. The Canadian government is the largest provider and the only regulator of mortgage insurance in the country (Londerville, 2010). The Canada Mortgage and Housing Corporation (CMHC), a wholly owned government corporation, held 68 percent of all mortgage insurance policies at the end of 2009, with a large majority of the remaining policies
held by Genworth Capital (Londerville, 2010). In the United States there is a much more competitive market for mortgage insurance. Federally insured programs, FHA and VA (Department of Veteran Affairs), at the end of the housing boom accounted for only 2.7 percent of all policies originated on single family homes (Mohindra, 2010). In 2009 only 13 percent of primary owner-occupied mortgages were FHA or VA insured (US Census Bureau, 2009). As of 2009 there were seven private mortgage insurance companies in operation in the United States, creating a very competitive market (Londerville, 2010).

This different approach to the federal government’s involvement in mortgage insurance has resulted in different regulatory structures between the countries. In Canada, the entire amount of the mortgage is covered by mortgage insurance (Kiff, 2009). In contrast, mortgage insurance in the United States only covers the difference between the total amount of the loan and the maximum loan to value ratio\(^\text{16}\) allowed by the lending institution (Kiff, 2009). Premiums for mortgage insurance in Canada are paid up front in full, while in the United States premiums are paid monthly, generally with the mortgage payment (Mohindra, 2010). Further, borrowers in the United States are permitted to cancel their mortgage insurance once

\(^{16}\) Maximum loan to value ratio is on average 80 percent of the total value of the property, but varies depending on state, institution and mortgage provider.
the loan to value ratio drops below the maximum ceiling, while in Canada mortgage insurance remains in place until the debt is retired (Kiff, 2009).

The Canadian government backs 100 percent of the mortgages they insure. The government also guarantees 90 percent of the total loan insured by private mortgage insurance, which are subject to government regulation, in the event of company insolvency (Londerville, 2010). As a result all insured mortgages in Canada have the full faith backing of the Canadian government. The American model is quite different, as private mortgage insurance providers do not enjoy the backing of the federal government. Only FHA and VA insured loans have the explicit backing of the U.S. Treasury, while other insured loans were thought to carry a guarantee, it was only implicit.

**Mortgage Backed Securities**

Mortgage insurance in Canada and the United States provide security that allows mortgages to be sold as investments. The secondary mortgage market created opportunities for lending institutions to pool mortgages into securities and sell them on the open market to create liquidity. Governments in both countries facilitated this process as it was seen as a way to increase the supply of private money to finance the housing industry (Poapst, 1956). The growth of the secondary mortgage market and the lack of regulatory oversight eventually led to the financial crisis in the United
States. Canada did not suffer the same fate, as the market for mortgage securities is much more controlled.

The secondary mortgage market in the U.S. was first created in 1938 through the establishment of the Federal National Mortgage Association (Later renamed Fannie Mae). In 1968 the organization became a government-sponsored enterprise (GSE) that was publicly traded, and was perceived by investors and financial markets to have the full backing of the federal government (Jaffee & Quigley, 2008). During the same period the United States established the Government National Mortgage Association (Ginnie Mae) as a GSE with the mandate to acquire federally subsidized and below-market interest rate mortgages (Jaffee & Quigley, 2008). Congress then created Freddie Mac in 1970 to ease the credit strain experienced across the country by introducing a market place for securitized mortgages issued by savings and loan companies (Green & Wachter, 2005). These three GSEs were designed to bring uniformity to the mortgage market through creating financial instruments such as mortgage back-securities and derivatives that would enhance liquidity in the housing market (Green & Wachter, 2005).

Mortgage securities were not limited to GSEs. The growth of “private label” mortgage-backed securities was substantial prior to the collapse of the U.S.
housing market in 2008. Originations of private label securities between 2001 and 2006 reached an annual growth rate of 36.3 percent and by 2007 peaked at 51 percent of all originations (Mohindra, 2010). The growth in originations from private label firms was tied to the growth in housing costs and the inability of new purchasers to meet the strict lending criteria of GSEs (Mohindra, 2010). Private label firms tended to insure higher risk mortgages made to borrowers with weaker credit scores and lower incomes. Ginnie Mae and the other two GSEs to a lesser extent, were required by their charter to invest in low-income housing. As a result GSEs began to purchase private label mortgage products to help them meet their Congressional investment obligations for low-income housing.

Mortgage securitization in Canada was established under a more conservative philosophy. The 1954 amendments to the National Housing Act allowed for insured mortgages to be sold to government approved lenders or other investors if the loan was serviced by an approved lender (Poapst, 1956). The system, to this day, has remained true to these principals. In 1987 CMHC introduced mortgage backed securities to the market. Unlike the United States where conventional mortgages are often securitized, Canada’s tight regulation has resulted in the majority of securitized mortgages being National Housing Act (NHA) insured.
NHA insured mortgages are all mortgages insured by CMHC (Canada Mortgage and Housing Corporation, 2010B).

In 2002 regulation was extended to included private mortgage insurance providers approved by CMHC (Londerville, 2004). Approved lenders are now able to pool NHA mortgages into mortgage backed securities (MBS) for sale in the financial markets. In the third quarter of 2010, 96 percent of mortgage credit outstanding was NHA insured MBS, the remaining 4 percent were other asset backed securities (Canada Mortgage and Housing Corporation, 2010C, p. 6). These securities can include, but are not limited to conventional mortgages, lines of credit, car loans, credit card debt, commercial paper, and other short term debt. All MBS instruments in Canada are guaranteed 100 percent by the federal government, the group of asset backed securities are not.

The use of debt securitization is a major difference between Canada and the U.S. In 2007 only 29 percent of mortgages in Canada were securitized, while in comparison the U.S. securitized 60 percent (Kiff, 2009). This rate grew only marginally in Canada by the third quarter of 2010 to 31.9 percent of mortgages, still substantially less than the United States (Canada Mortgage and Housing Corporation, 2010C). The other major difference is the regulation and origination of mortgage
backed securities. The Canadian government has created market conditions that favor CMHC backed securities as a result of extensive regulation that requires all mortgages that are securitized to be issued by an approved lender and insured by an approved insurance firm. As a result almost all mortgage backed securities in Canada are insured by the Canadian government. While in the United States, GSEs have provided an environment that encouraged the growth of “private label” securitization and mortgage securities bought by GSEs carried only an implicit U.S. Treasury guarantee. Further, GSEs are involved not only in the purchase, but also in the sale and origination of various mortgage security products.

**Banking System**

A defining difference between the banking sectors in Canada and the U.S. is the development of a Canadian “culture” towards risk aversion (Nivola & Courtney, 2009). This conservative culture can be largely attributed to the level of regulation placed on financial institutions by key Canadian government agencies. “Chartered Banks” as they are referred to, are regulated by charter legislation, more specifically the Canada Bank Act. A key regulatory difference being the inclusion of a “sunset” clause in the Canadian Bank Act that requires a periodic reassessment of the act every 5 years (Freedman, 1998). A second key difference is the regulation of the banking sector on a national level. Canadian banks have long been operating on a national level, while in comparison U.S. banks were restricted for a longer period from
operating in more than one state (Londerville, 2004). Regulation in Canada has resulted in a much more consolidated financial sector, with chartered banks holding 72.2 percent of residential mortgages in the country (Canada Mortgage and Housing Corporation, 2010C). In Canada, five chartered banks, known as the “big five”, hold more than 80 percent of total bank assets (Perry, 2010). In comparison the United States Federal Deposit Insurance Corporation had 7,760 reporting institutions in 2010, which doesn’t include some private banks and other lenders in the country (Federal Deposit Insurance Corporation, 2010).

Bank regulation in Canada has demanded more conservative lending practices. Banks are required by law to obtain mortgage insurance on all loans that exceed an 80 percent loan to value ratio (Canada Mortgage and Housing Corporation, 2010B). Traditionally in the United States a 90 percent loan to value ratio is considered conventional, but this can vary due to the lack of a national standard (Listokin, Wyly, Schmitt, & Voicu, 2001; Londerville, 2010). The restrictions placed on securitizing mortgages in Canada has led banks to insure even the conventional mortgages they issue, while in the U.S. mortgage insurance is not required to securitize debt. Interest rate terms are another key difference between the countries. In Canada interest rate terms range from six months to five years and are matched with the bank’s term deposits. This provides added security for financial institutions in the
event of interest rate fluctuations (Freedman, 1998). In comparison, lenders in the United States offer fixed rate terms that can reach up to 30 years in length. This has the potential to create liquidity issues for lending institutions in the event of extreme interest rate fluctuations.

In the wake of the financial crisis the Canadian government has taken further steps to limit the expansion of high risk lending products in the country. Now in order to qualify for a CMHC insured mortgage potential borrowers must meet the lending requirements of a five-year fixed-rate mortgage regardless of the product they are applying for (Canadian Broadcasting Corporation, 2010). Even greater steps were taken in 2011 by reducing the maximum amortization period for a CMHC insured mortgage to 30 years (Canadian Broadcasting Corporation, 2011). In comparison the United States mortgage market has a much wider range of products available and are not subject to such strict government regulations. Amortization periods on average are 30 years, but through a survey of a few financial institutions and mortgage brokers it is possible to find a 40 year amortization. Another key difference is full recourse loans. Canadian borrowers, in the event of foreclosure, are still responsible for repayment of the mortgage after the proceedings against them have concluded (Canada Mortgage and Housing Corporation, 2010B). As a result in 2010 Canadian mortgages in arrears
stood at 0.42 percent, while the United States rate was 9.13 percent (Canadian Bankers Association, 2010) (Key, 2010).

The role of mortgage brokers is another key difference between Canada and the U.S. They are much smaller players in the Canadian market accounting for only 38 percent of new mortgage originations in 2009 (Canada Mortgage and Housing Corporation, 2010B). Since Canadian financial institutions hold a larger majority of mortgages on their books they have a greater interest in the health and viability of the mortgage product. While in the United States mortgage brokers can act as intermediaries, originating the loan then selling it off in the secondary market and releasing their balance sheet of the liability. Such was the case for subprime loans, that eventually became toxic assets held by various financial institutions and government entities. In 2006 during the height of the real estate boom, subprime loans accounted for only 5 percent of mortgage originations in Canada, and only half of them were securitized in the private market (Ord & Kogut, 2007). In contrast the United States subprime market accounted for 21 percent of all originations by 2006 (Jaffée & Quigley, 2008). Subprime delinquencies in Canada stood at 3.8 percent in 2006 compared with 12 percent in the United States (Ord & Kogut, 2007). Showing that Canadian banking and lending practices have been considerably more regulated than in the United States, resulting in a healthier financial services sector.
Homeowner Tax Subsidies

One of the largest subsidies for homeowners in Canada and the United States is government tax expenditures. Tax breaks have been influential in expanding homeownership rates and building wealth, but there is no evidence to suggest they were enacted to do so (Howard, 1997). There are a few basic tax expenditures that remain constant year after year, providing homeowners with steady subsidies. However, from time to time the governments of Canada and the United States have used tax expenditures as a means to increase economic activity through the housing sector.

The only common steady subsidy offered by both governments is the exemption of a primary residence from capital gains tax. Primary residences in the United States are eligible for a $250,000 individual, or $500,000 married couple exemption from capital gains. To qualify the taxpayer must have owned and occupied the residence for at least two of the previous five years prior to the sale date (Esenwein, 2006). The subsidy is similar in Canada, but there is no restrictions on the amount exempted and during the year of sale the owner must “ordinarily inhabit” the property as defined by Revenue Canada to qualify (Canada Customs and Revenue Agency, 2003). The Office of Management and Budget (OMB) in the U.S. estimated that in 2010 this tax expenditure cost the federal government $30.46 billion USD (Office of Management and Budget, 2010). While the Minister of Finance estimated
that in 2010 the exemption cost the Canadian federal government $3.93 billion CDN (Department of Finance Canada, 2010). The capital gains exemption is not the largest tax expenditure for homeowners in the United States, but it is in Canada.

The United States offers two additional tax expenditure subsidies. The passage of the Individual Income Tax in 1913 included a provision that allowed for the deduction of mortgage interest, but was vague as to the type of property and form of mortgage (Esenwein, 2006). This provision was later interpreted and extend to primary and secondary residences. It now accounts for the largest homeowner tax expenditure in the U.S. In 2010, the OMB estimated the annual cost to the U.S. Treasury of this expenditure at $107.98 billion USD (Office of Management and Budget, 2010). Further, the 1913 act also allows for the deduction of state and local property taxes of primary residences. In 2010 this cost was estimated at $14.98 billion USD (Office of Management and Budget, 2010). The tax expenditures that have remained constant totaled $153.42 billion in the United States and $3.93 billion in Canada for 2010.

Governments from time to time have enacted other reforms to their income tax legislation to provide tax relief for consumers and homeowners in an effort to jump start the economy. In the wake of the recent financial crisis, both Canada and
the United States enacted stimulus legislation that provided such relief. Both countries provided first time homeowners with a tax credit at a cost of $280 million CDN for 2009 and 2010 to the Canadian taxpayer, while the U.S. Treasury expended $10.76 billion USD in 2008 and 2009 (Office of Management and Budget, 2010) (Department of Finance Canada, 2010). Canada also provided its citizens with a home renovation tax credit at a cost of $2.265 billion CDN in 2009 (Department of Finance Canada, 2010). Further, a program that can be considered a constant tax expenditure in Canada is the government sales tax (GST) credit given to new home purchasers. In the event of a new home purchase the owner qualifies for a 36 percent rebate of the 5 percent GST they paid on the home. In 2010 this expenditure was estimated at $655 million CDN (Department of Finance Canada, 2010).

Tax expenditures directed at homeowners provided a subsidy that is unmatched by any other housing subsidy program (Hulchanski J. D., 2007). The tax relief is only afforded to homeowners and neglects the rental sector. This constant tax expenditure program provides the incentive for households to enter into homeownership as opposed to rental. While these expenditures may have not been developed with increasing homeownership in mind, they have had a direct impact on it’s growth. However, the more recent tax expenditures were developed in a
concentrated effort to increase homeownership, provide stimulus to the housing sector and ultimately the economy.

**The Effects of Homeownership Policies**

The effects of government policy towards homeownership have had different impacts in Canada and the United States. The United States has experienced an economic downturn, the likes of which haven’t been seen since the Great Depression. While Canada experienced some turbulence, largely due to its close economic relationship with the United States, it was much milder and short lived. Historic levels of homeownership rates were achieved by both countries in the first part of the 21st century. Homeownership was extended to households with lower incomes that under previous conditions would not have been able to obtain financing. An effort was made in both countries to improve the economy, increase household net worth and raise the standard of living through homeownership. After the housing rush was over and money was lost, the government bailouts began. The pursuit of homeownership for the time has been dampened and policy makers are now scrutinizing past policies. The questions now are: Is homeownership the ideal, the “dream” that everyone should be pursuing? And was the emphasis on homeownership the key factor in the recent economic downfall?
In an effort to increase homeownership rates in the United States lending practices were compromised. Banks, insurance companies and lending institutions were pushing for relaxed lending standards and government regulators under the guise of economic growth and implementing a progressive social agenda complied. Government sponsored enterprises had charters, that included affordable housing investment minimums placed on them by Congress. They were forced to allocated a share of their lending activity to lower income borrowers resulting in their expansion into riskier mortgage markets (Jaffee & Quigley, 2008).

The passage of the Federal Housing Enterprise Financial Safety and Soundness Act of 1992 assisted this agenda. The act gave Freddie Mac and Fannie Mae the freedom to create new riskier mortgage products (Listokin, Wyly, Schmitt, & Voicu, 2001). These policies resulted in the origination of mortgages with little documentation that were highly leveraged with interest only payments. These high risk mortgages were bundled and securitized for sale on the open market. The result of this high risk model was systemic failure and the United States government was forced to step in and resolve the crisis. A crisis that in large part was created as a result of the relaxed lending practices and the purchase of risky mortgage backed securities by their own agencies. The U.S. Treasury guarantee that these securities were presumed to carry resulted in the largest single government bailout package in
the world, the Trouble Asset Relief Program (TARP) in the amount of $700 billion (Dennis, 2010).

During the same period Canada experienced some negative effects of their own. A $32 billion non-bank asset backed commercial paper crisis was a result of the federal government authorizing the securitization of asset backed securities outside of traditional mortgage backed securities guaranteed and regulated by CMHC (Peters & Arthur, 2010). These assets included credit default swaps and some U.S. subprime loans, the same assets Freddie and Fannie had purchased. While Canada’s financial turmoil was milder, the crisis did affected both sides of the border.

The social benefits of homeownership were a major driving force of American policy. The perceived social benefits resulted in the government extensively promoting affordable and low-income homeownership (Nivola & Courtney, 2009). The Secretary of the Department of Housing and Urban Development announced a federal objective of an “ownership society” for those struggling to achieve middle class status in America (Jaffee & Quigley, 2008). Canadian policy makers also looked to extend homeownership to lower income households. This desire to increase the standard of living through homeownership did succeed for a period of time. This was a positive effect of the housing policies
implemented in Canada and the U.S.. The problem was that the model used in the United States was not sustainable and some of the external effects spilled over into the Canadian market. The model depended on the continual growth and expansion of the real estate market at unsustainable rates.

The tax policy in Canada and the United States also contributed to the negative effects of the past decade. While both countries offer large subsidies to homeowners through tax expenditures, the U.S. policy is more unique. By allowing for mortgage interest and property tax to be deducted from personal income, the policy provides a disincentive to pay down debt and encourages households to borrow more against their home (Peters & Arthur, 2010). This resulted in homeowners using their homes to finance rising levels of debt, which was usually found in the secondary mortgage market and tended to be riskier and highly leveraged. Canada does not provide a similar incentive, in fact the exemption of capital gains tax on primary residences encourages households to pay down their debt as the real gains of homeownership are realized upon the sale of the property.

The results of the current housing policies are not all negative. In Canada’s case the model has proven to be a success. The ability of the Canadian financial system to withstand a worldwide financial crisis has provided a model
system, that has been regarded by the International Monetary Fund (IMF) as a paragon of international best practices (Nivola & Courtney, 2009). The Government of Canada is much clearer in their regulation and backing of the financial and mortgage insurance sector. The gains made in the homeownership rate during the housing boom have only been lost to a minor extent. The riskier subprime market has been relatively ineffective in the country, due to the inability of lenders to securitize this form of debt and get it off their balance sheets. This forces high risk loans to be held by originators along with the losses they could produce.

The pursuit of homeownership in the United States and Canada produced both positive and negative results over the past decade. Gains made in terms of homeownership rates and the efforts to extend the financial benefits of homeownership to more households has been undone for many. Many homes have been lost to foreclosure, billions in home equity evaporated and both countries are now facing a turbulent economic climate. The housing crisis has shown regulators, the private sector and households the impact housing has on a nation. Citizens in both countries are now looking to policy makers to see what steps they will take to ensure the same problems don’t repeat themselves. However, they are also looking for clarity on the government’s role in the housing sector.
Chapter 5

CONCLUSIONS AND POLICY RECOMMENDATIONS

Recent events in the housing industry has shown that the Canadian housing model’s strict government regulation and conservative lending practices can result in similar homeownership rates as a deregulated, market driven model. The evidence of which is seen through Canada and the U.S. attaining similar rates of homeownership. However recently Canada has had more success in sustaining the past growth they had achieved. Regulation may just have saved Canada from the financial crisis that rocked the majority of western countries in the world. However, regulation was not the only factor. Over time Canada has developed a more conservative lending culture that is adverse to and less reliant on highly leveraged financial products. The research has shown that Canada and the United States developed unique differences in their housing models, which produced various positive and negative results.

After World War II Canada and the United States were both facing a pent up demand for housing and were forced to finds ways to address the issue and
increasing the ability of their citizens to enter into homeownership was their solution. This required that the government address the quality and safety of existing housing and new construction, as it was becoming a rising concern in both countries. As a result of the new policies, in the first two decades following the war, government was able to address the pent up demand and quality issues facing their countries. However, out of this success came a new housing issue, affordability. In an effort to reduce costs and increase affordability condominiums and co-operatives gained in popularity. The growth of these forms of ownership was facilitated through different mechanisms and at different times in Canada and the United States. These forms of homeownership have remained essentially constant in both countries, but the market share each form of ownership has is quite different. Canada’s housing market on average consists of more condominiums and less single-family homes as compared to the United States, partially a result of a more concentrated urban population.

The desire to maintain housing affordability has continued to be a driving force in the recent housing policy of both Canada and the U.S. The irony is that this desire has resulted in the creation of greater affordability issues. Through reducing down payments, documentation, mortgage insurance requirements and regulation both Canada and the United States created more homeowners, but increased affordability issues. A report released by the OECD estimates that financial deregulation results in
an average 30 percent increase in real home values (OECD, 2011). This was the case for Canada and the U.S. as deregulation led to an increased demand for housing, resulting in higher home values and when median income was unable to keep pace with these costs, an affordability issue was created. This chain of events reveals that deregulation and easing access to credit does not provide a solution, only short-term relief. If this vicious circle has shown legislators anything, it may be that homeownership is not appropriate for everyone.

An American homeowner’s ability to deduct mortgage interest from personal income is an important policy difference. The tax benefit gained through leveraging a primary residence reduces the incentive to pay down the debt. This policy is regressive by nature, benefiting mainly middle and upper class households. Lower income households lack the earned income that would make the deduction a sizable benefit (OECD, 2011). Examining 2009 tax returns reveals that individuals with incomes greater than $75,000 received 60 percent of the tax benefit from mortgage interest deductibility, but only account for 20 percent of total tax returns (Joint Committee on Taxation, 2010). Allowing for the capital gain exemption of a primary residence provides for better policy in both countries. It encourages owners to pay down the debt on their home and realize a sizable financial benefit upon the tax-free sale of a mortgage free property. However, this policy is also regressive as it
benefits owner-occupied households, who tend to have higher incomes, over renter-occupied households.

A public policy holding homeowners accountable for their debt regardless of market conditions is fundamental to developing good housing policy. Full recourse mortgages in Canada provide this level of accountability. U.S. homeowners are not held to the same level of accountability due to relaxed liability limits. If a homeowner in the United States is in a situation where their home is worth less than they owe, they have little invested in the property and more motivation to walk away from the debt. Canadian homeowners in comparison are less likely to walk away from their financial obligations, and lower foreclosure rates attest to this (Canada Mortgage and Housing Corporation, 2010B). This type of policy may deter households that feel they are ready to enter into homeownership, but in reality do not yet possess the financial knowledge needed to enter into such an important commitment.

The securitization of debt and the regulation of mortgage markets are very different in Canada and the United States. Market driven ideology seen through reduced government intervention was the model used by the U.S. In many cases American firms were able to originate mortgages without financial obligation and any
long-term risk. These mortgages, often insured by the federal government, were sold in the secondary market relieving the originator of any obligation or liability. Canada’s tighter regulation requires that mortgage originators remain responsible for a percentage of the total amount of loans they originate and as a result the secondary market for securitized mortgage products is much smaller. The tight regulation in the Canadian housing finance sector has created a system that promotes conservative lending practices and greater corporate responsibility.

An issue that has not been raised in this paper, but should be mentioned, is the variation of the social welfare systems between Canada and the U.S. Sophisticated social welfare systems have been shown to provide relief from affordability issues and enable an easier transition into homeownership (Kemeny, 1980). The universal health care system in Canada is one of these programs and is a considerable benefit. Health care in the United States can make up a sizable share of monthly expenses and reduce disposable income available for housing. It is beyond the scope of this paper to get into a detailed comparison of the benefits, if any, Canadians receive over Americans as a result of the universal health care program offered throughout the country. However, it is an issue that warrants more research as housing has become part of the social welfare system in both Canada and the United States.
The housing sector is without a doubt a major part of the economic fabric of both Canada and the United States. National governments have used housing as an economic stimulator for decades. Public policy in Canada and the United States has encouraged the growth of homeownership in part because of the economic benefits it produces for the country and in part for the individual benefits. The Canadian model has been more successful in the recent past at avoiding the systemic failures that the U.S. has had to deal with. This has resulted in the Canadian government receiving international recognition for the stability and viability of its financial sector. However, improvements can still be made to both housing models. It is important for the Canadian government to work towards a policy that will continue to ensure stability during turbulent times. It is equally important for policy to address the close ties the country has with the United States and realize its profound impact on the country’s economy. Housing policy must continue to find ways to assist a larger portion of the population outside of homeowners. Policy makers in Canada and the United States must look to the successes and failures both have experienced in the past and develop policy that can adjust to these issues, emerging stronger in the future.

Policy Recommendations

The absence of a clear and consistent housing policy is a flaw that both Canada and the United States must address in order to begin strengthening their respective models. The lack of such a policy is surprising as housing is central to life
and is considered among the most basic of human needs (Cairney & Boyle, 2004). Housing comprises the largest monthly expenditure of most households in Canada and the U.S. and directly affects the remaining amount of income available to meet other essential needs. If safe, secure, affordable housing is not available and the other essential needs of a household are not met society as a whole suffers. Governments in both countries must develop a clear concise national housing policy that recognizes the right and need to housing for all citizens. Current housing policies in Canada and the U.S. have been developed with the intent of increasing homeownership, resulting in the creation of an “unofficial” homeownership policy. A national housing policy must account for all citizens, not just homeowners. However, it must be recognized that homeowners constitute the majority of the population and governments have a duty to respond to the will of the majority. That being said a national housing policy must recognize housing as a right of all citizens, and work towards striking a balance between the two tenure choices.

Insuring affordability will form an essential part of a national housing model’s foundation moving forward. To properly begin addressing the affordability issues facing Canada and the United States the federal governments must first redefine the term. A new policy must consider the flaws of the current ratio and explore alternative affordability definitions that provide a better understanding of a
household’s ability to afford shelter in relation to other expenditures. The current 30 percent ratio used in Canada and the U.S. does not provide an adequate understanding of housing costs in different parts of the country, showing a national standard is not feasible. That being said, a standard ratio may be appropriate if it is developed on a regional or even local level. This would account for geographical fluctuations in costs that can result in a household needing to spend 40 or 50 percent of their income towards housing in one area, but only 15 or 20 percent in another. While this approach does not account for the variation in cost of other essential items, a flaw highlighted in the current ratio used, it would be an improvement and more manageable to implement.

Redefining affordability will produce a more accurate assessment of the households in Canada and the United States currently facing housing affordability issues, while at the same time reassess household’s ability to enter into homeownership. This will help begin to shift homeownership back to a privilege and away from being thought of as a right. One major factor in leading to the housing issues faced by Canada and the United States was the lack of anyone questioning the idea that homeownership was right for everyone. It is no longer reasonable to believe that all households are potential homeowners. There are serious financial and social implications associated with purchasing a home and understanding them is
fundamental before any households enters into the life changing commitment of homeownership.

While this paper was focused on homeownership any policy recommendations would be incomplete if the needs of a third of the population were not addressed. Households that rent have lower incomes on average and are more susceptible to fluctuations in their disposable income than homeowners. This is partially a result of renters not receiving comparable direct tax benefits, as tax incentives for this form of tenure have been historically provided indirectly through developers and property owners. Cuts to these indirect benefits combined with a government focus on homeownership since WWII has resulted in the rental stock of both countries aging, with little new stock being made available to replace it (Hulchanski & Dreir, 1993). Past efforts have shown that increasing the supply of rental housing through direct government action has its challenges. An alternative would be to provide tax incentives similar to those received by homeowners. A policy that allows for a tax credit on rent paid throughout the year and the ability to make this deduction regardless of annual income would be more progressive. Creating incentives for renters would help to balance the benefits of tenure choice over the long term and help ease affordability concerns in the housing market as a whole.
The direct relationship between housing affordability and income must not be over looked. Raising household income in Canada and the United States would create more disposable income available to meet increasing housing costs and other essential expenses. Government policy has historically been focused on implementing measures to reduce the cost of housing for low and moderate-income household, but has neglected to address the stagnation of median household income over the past decade. A comprehensive housing policy must include measures that look to address the growing income gap between households in Canada and the United States. Policies that provide incentives and funding, for education, new employment opportunities and greater access to financial services will enable households to help themselves by increasing their incomes.

The governments of Canada and the United States are clearly involved at some level in the housing finance system of their respective country. Therefore the role of each government in this system must be clearly defined, as failing to do so was a flaw highlighted in past models. The U.S. model must work on principles based around a market style approach with government involvement limited to regulation. The key to the success of such as system is a firm commitment to principles that will guide the regulation and a strong mechanism for restricting change. Canada’s model is currently more government controlled and their success in the past decade has been a result of
strong regulation fostering conservative lending practices. The recent introduction of private mortgage insurance to the housing model creates some concern and it would be wise for the Canadian government to return to a stronger publicly controlled system similar to its 1995 model (Londerville, 2004). The drawback would be the risk that the taxpayer bears in the event of a financial crisis. However, the recent financial crisis has shown that government involvement is inevitable in some cases and so is taxpayer risk. These policies will reduce instances of unilateral policy change by different actors in the housing industry and promote greater policy cohesion resulting in stronger more stable housing models.

The current tax expenditures that benefit homeowners in Canada and the United States are not only regressive, they provide the wrong incentives. The U.S. tax policy of allowing homeowners to deduct their mortgage interest from personal income tax provides an incentive to continually borrow against their home. Eliminating this incentive would reduce the amount of household debt that homeowners are willing to carry and provide a more financially stable household. The majority of Americans misunderstand the regressive nature of the tax incentive, as it only benefits the wealthiest homeowners in the country. A common tax incentive shared by Canada and the United States is the exemption of a primary residence from capital gains tax. This policy is also regressive as it favors homeowners and provides
a larger tax benefit to wealthier household. However, unlike the ability to deduct mortgage interest, it does provide an incentive to reduce debt. This expenditure can help to address the rising amount of household debt homeowners are carrying, however it could be more progressive. Creating a tax schedule that allows for larger capital gains exemptions for homeowners that repay their debt faster would be more progressive and provide better incentives. A homeowner that pays their home down in 15 years instead of 20 receives a 100 percent exemption while the other homeowner receives only 80 percent, essentially incentivizing faster debt reduction. Further, homeowners would be encouraged to purchase lower priced, more affordable homes that could be paid off in a shorter period of time. Resulting in spillover effects on the way communities are developed, housing is constructed and households generate wealth.

Responsibility is the final piece involved in creating a sustainable housing model. Responsibility in banking and financial institutions is a key element. The current banking system in Canada is highly regulated and consolidated. The impact of fewer financial institutions, “the big five”, in Canada places great importance on the stability and regulation of the sector. The Canadian government must continue to closely monitor and regulate the merger of these large financial institutions, as currently they are “too big to fail”. Examples of such failures were experienced in the
United States and created a domino effect throughout the industry leading to systemic issues. Canada and the United States must create regulation that holds banks responsible for the loans they originate and the debt they issue. In addition loans held on the balance sheets of financial institutions must be properly funded, carrying a regulated amount of risk exposure in the event of fluctuations in the market. Taking these steps has proven to be successful in Canada and can create healthy financial institutions, that if merged will not result in systemic problems in the future.

Responsibility extends beyond financial institutions and government agencies. It is important to remember that homeownership is a choice and borrowing money to purchase a home comes with responsibility. A comprehensive housing policy must recognize this fact and hold homeowners accountable for their choices. The lack of responsibility was central to the failures of the U.S. system and threatens the current stability of the Canadian system. Government regulation must require homeowners to be financially invested in their purchase or create a system that holds them accountable. Full recourse mortgages in Canada are an example of a way to hold homeowners responsible without requiring a large financial investment. This Canadian policy must be protected and strengthened. A similar policy of full recourse mortgages in the United States would deter households from entering and walking away from homeownership without proper consideration being given to the
consequences. Once again households in Canada and the U.S. must realize that homeownership is a privilege not a right.

One thing is clear governments cannot choose to “sit on the fence” any longer. The financial crisis has shown the United States and Canada that a defined national housing model is needed, as it is extremely important to the economic and social fabric of everyday life. The recent crisis has shown that government will inevitably be involved in housing policy, and as such they must clearly define their role. Regulation and responsibility form the foundation of these recommendations. Implementing measures that increase responsibility through regulation can increase public awareness and provide public support for a strong policy moving forward. The current Canadian model provides guarantees for much of the housing finance system and has shown its strengths, but does have weaknesses that need to be addressed. On the other side of the border, the U.S. model has shown it’s vulnerability and must be corrected as the effects of any failures are felt far outside of their country. It is clear that the “invisible hand” cannot stay invisible forever. Canada and the United States must ensure their systems remain healthy, strong and sustainable for the benefit of each other.
**APPENDIX**

Table A.1  Average Sale Price for Homes in Canada and the U.S.

<table>
<thead>
<tr>
<th>Year</th>
<th>Average Price: Canada</th>
<th>Increase from Previous Year</th>
<th>Average Price: United States</th>
<th>Increase from Previous Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>$163,951</td>
<td></td>
<td>$178,500</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>$171,701</td>
<td>4.73%</td>
<td>$188,300</td>
<td>5.49%</td>
</tr>
<tr>
<td>2002</td>
<td>$188,841</td>
<td>9.98%</td>
<td>$206,000</td>
<td>9.40%</td>
</tr>
<tr>
<td>2003</td>
<td>$207,301</td>
<td>9.78%</td>
<td>$222,200</td>
<td>7.86%</td>
</tr>
<tr>
<td>2004</td>
<td>$226,551</td>
<td>9.29%</td>
<td>$244,400</td>
<td>9.99%</td>
</tr>
<tr>
<td>2005</td>
<td>$249,194</td>
<td>9.99%</td>
<td>$266,600</td>
<td>9.08%</td>
</tr>
<tr>
<td>2006</td>
<td>$277,211</td>
<td>11.24%</td>
<td>$268,200</td>
<td>0.60%</td>
</tr>
<tr>
<td>2007</td>
<td>$307,089</td>
<td>10.78%</td>
<td>$266,000</td>
<td>-0.82%</td>
</tr>
<tr>
<td>2008</td>
<td>$304,971</td>
<td>-0.69%</td>
<td>$242,700</td>
<td>-8.76%</td>
</tr>
<tr>
<td>2009</td>
<td>$320,367</td>
<td>5.05%</td>
<td>$216,900</td>
<td>-10.63%</td>
</tr>
<tr>
<td>2010</td>
<td>$339,030</td>
<td>5.83%</td>
<td>$219,700</td>
<td>1.29%</td>
</tr>
</tbody>
</table>

Source: Canadian Real Estate Association and National Association of Realtors
### Table A.2  American Affordability Ratio

<table>
<thead>
<tr>
<th>Year</th>
<th>Median Income</th>
<th>Housing Price Index</th>
<th>Median Income to Index Ratio</th>
<th>Mean Income</th>
<th>Mean House Price</th>
<th>Income to House Price Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>$52,301</td>
<td>136.7</td>
<td>382.6</td>
<td>$71,165</td>
<td>$178,500</td>
<td>2.5</td>
</tr>
<tr>
<td>2001</td>
<td>$51,161</td>
<td>146.3</td>
<td>349.7</td>
<td>$70,521</td>
<td>$188,300</td>
<td>2.7</td>
</tr>
<tr>
<td>2002</td>
<td>$50,563</td>
<td>155.9</td>
<td>324.3</td>
<td>$68,976</td>
<td>$206,000</td>
<td>3.0</td>
</tr>
<tr>
<td>2003</td>
<td>$50,519</td>
<td>167.8</td>
<td>301.1</td>
<td>$68,886</td>
<td>$222,200</td>
<td>3.2</td>
</tr>
<tr>
<td>2004</td>
<td>$50,343</td>
<td>181.3</td>
<td>277.7</td>
<td>$68,662</td>
<td>$244,400</td>
<td>3.6</td>
</tr>
<tr>
<td>2005</td>
<td>$50,899</td>
<td>198.1</td>
<td>256.9</td>
<td>$69,597</td>
<td>$266,600</td>
<td>3.8</td>
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<tr>
<td>2006</td>
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<td>215.3</td>
<td>238.2</td>
<td>$70,819</td>
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<td>3.8</td>
</tr>
<tr>
<td>2007</td>
<td>$51,965</td>
<td>221.1</td>
<td>235.0</td>
<td>$69,940</td>
<td>$266,000</td>
<td>3.8</td>
</tr>
<tr>
<td>2008</td>
<td>$50,112</td>
<td>212.6</td>
<td>235.7</td>
<td>$68,164</td>
<td>$242,700</td>
<td>3.6</td>
</tr>
</tbody>
</table>

Source: Median and Mean Income are from Table H-6 of the Current Population Survey and are in 2009 constant dollar. Housing Price Index is from the Federal Housing Finance Agency and is index 1991-100. Mean House Prices are from the National Association of Realtors.

### Table A.3  Canadian Affordability Ratio

<table>
<thead>
<tr>
<th>Year</th>
<th>Median Income</th>
<th>Housing Price Index</th>
<th>Median Income to Index Ratio</th>
<th>Mean Income</th>
<th>Mean House Price</th>
<th>Income to House Price Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>$49,900</td>
<td>136.7</td>
<td>365.0</td>
<td>$51,900</td>
<td>$163,951</td>
<td>3.2</td>
</tr>
<tr>
<td>2001</td>
<td>$51,000</td>
<td>146.3</td>
<td>348.6</td>
<td>$54,000</td>
<td>$171,701</td>
<td>3.2</td>
</tr>
<tr>
<td>2002</td>
<td>$50,700</td>
<td>155.9</td>
<td>325.2</td>
<td>$54,100</td>
<td>$188,841</td>
<td>3.5</td>
</tr>
<tr>
<td>2003</td>
<td>$50,700</td>
<td>167.8</td>
<td>302.1</td>
<td>$53,800</td>
<td>$207,301</td>
<td>3.9</td>
</tr>
<tr>
<td>2004</td>
<td>$51,300</td>
<td>181.3</td>
<td>283.0</td>
<td>$54,700</td>
<td>$226,551</td>
<td>4.1</td>
</tr>
<tr>
<td>2005</td>
<td>$52,000</td>
<td>198.1</td>
<td>262.5</td>
<td>$55,400</td>
<td>$249,194</td>
<td>4.5</td>
</tr>
<tr>
<td>2006</td>
<td>$53,200</td>
<td>215.3</td>
<td>247.1</td>
<td>$56,700</td>
<td>$277,211</td>
<td>4.9</td>
</tr>
<tr>
<td>2007</td>
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<td>221.1</td>
<td>246.0</td>
<td>$58,700</td>
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<td>5.2</td>
</tr>
<tr>
<td>2008</td>
<td>$54,800</td>
<td>212.6</td>
<td>257.8</td>
<td>$59,500</td>
<td>$304,971</td>
<td>5.1</td>
</tr>
</tbody>
</table>

Source: Median income is from Statistics Canada Table 202-0401. Mean income is from Statistics Canada’s Canada Year Book 2010 Table 18.3. Both income figures are in 2008 constant dollars. Housing price index is from Statistic Canada table 327-0005. Mean home value is from the Canada Real Estate Association.
Table A.4  Changes in the Affordability Ratios of Canada and the U.S.

<table>
<thead>
<tr>
<th>Year</th>
<th>Median Income to Index Ratio: Canada</th>
<th>Change From Previous Year</th>
<th>Cumulative Percentage Change</th>
<th>Median Income to Index Ratio: United States</th>
<th>Change from Previous Year</th>
<th>Cumulative Percentage Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>365.0</td>
<td></td>
<td></td>
<td>382.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>348.6</td>
<td>-16.4</td>
<td>-4.5%</td>
<td>349.7</td>
<td>-32.9</td>
<td>-8.6%</td>
</tr>
<tr>
<td>2002</td>
<td>325.2</td>
<td>-23.4</td>
<td>-10.9%</td>
<td>324.3</td>
<td>-26.4</td>
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<td>2003</td>
<td>302.1</td>
<td>-23.1</td>
<td>-17.2%</td>
<td>301.1</td>
<td>-23.2</td>
<td>-21.3%</td>
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<td>2004</td>
<td>283.0</td>
<td>-19.1</td>
<td>-22.5%</td>
<td>277.7</td>
<td>-23.4</td>
<td>-27.4%</td>
</tr>
<tr>
<td>2005</td>
<td>262.5</td>
<td>-20.5</td>
<td>-28.1%</td>
<td>256.9</td>
<td>-20.8</td>
<td>-33.9%</td>
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<td>2006</td>
<td>247.1</td>
<td>-15.4</td>
<td>-32.3%</td>
<td>238.2</td>
<td>-18.7</td>
<td>-37.7%</td>
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<tr>
<td>2007</td>
<td>246.0</td>
<td>-1.1</td>
<td>-32.6%</td>
<td>235.0</td>
<td>-3.2</td>
<td>-38.6%</td>
</tr>
<tr>
<td>2008</td>
<td>257.8</td>
<td>11.8</td>
<td>-29.4%</td>
<td>238.7</td>
<td>0.7</td>
<td>-38.4%</td>
</tr>
</tbody>
</table>

Source: Data was calculated using the findings in table A.5

Table A.5  Changes in the Housing Price Index of Canada and the U.S.

<table>
<thead>
<tr>
<th>Year</th>
<th>Housing Price Index: United States (1991=100)</th>
<th>Percentage Change from Previous Year: United States</th>
<th>Housing Price Index: Canada (1997=100)</th>
<th>Percentage Change from Previous Year: Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>136.7</td>
<td></td>
<td>104.1</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>146.3</td>
<td>6.96%</td>
<td>107.0</td>
<td>2.79%</td>
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<tr>
<td>2002</td>
<td>155.9</td>
<td>6.58%</td>
<td>111.3</td>
<td>4.02%</td>
</tr>
<tr>
<td>2003</td>
<td>167.8</td>
<td>7.67%</td>
<td>116.7</td>
<td>4.86%</td>
</tr>
<tr>
<td>2004</td>
<td>181.3</td>
<td>8.04%</td>
<td>123.2</td>
<td>5.57%</td>
</tr>
<tr>
<td>2005</td>
<td>198.1</td>
<td>9.24%</td>
<td>129.4</td>
<td>5.03%</td>
</tr>
<tr>
<td>2006</td>
<td>215.3</td>
<td>8.68%</td>
<td>142.0</td>
<td>9.74%</td>
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<tr>
<td>2007</td>
<td>221.1</td>
<td>2.69%</td>
<td>153.0</td>
<td>7.75%</td>
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<tr>
<td>2008</td>
<td>212.6</td>
<td>-3.82%</td>
<td>158.2</td>
<td>3.40%</td>
</tr>
<tr>
<td>2009</td>
<td>197.5</td>
<td>-7.11%</td>
<td>154.6</td>
<td>-2.28%</td>
</tr>
<tr>
<td>2010</td>
<td>192.7</td>
<td>-2.46%</td>
<td>157.9</td>
<td>2.13%</td>
</tr>
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</table>

Figure A.1  Human Subject Approval

DATE: May 5, 2010
TO: Jared Cummer
FROM: University of Delaware IRB
STUDY TITLE: [167287-1] MPA Thesis
IRB REFERENCE #: New Project
SUBMISSION TYPE: DETERMINATION OF EXEMPT STATUS
ACTION: May 5, 2010
DECISION DATE: Exemption category # 2
REVIEW CATEGORY:

Thank you for your submission of New Project materials for this research study. The University of Delaware IRB has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations.

We will put a copy of this correspondence on file in our office. Please remember to notify us if you make any substantial changes to the project.

If you have any questions, please contact Robin Bhaerman at (302) 831-1119 or bhaerman@udel.edu. Please include your study title and reference number in all correspondence with this office.

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CITI Collaborative Institutional Training Initiative

Course In The Protection Human Subjects Curriculum Completion Report
Printed on 4/25/2011

Learner: Jared Cummer (username: jcummer)
Institution: University of Delaware
Contact Information: Phone: 302-465-6929
Graduate Students: Email: jcummer@udel.edu

Stage 1. Basic Course Passed on 04/27/10 (Ref # 4358165)

<table>
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<tr>
<th>Required Modules</th>
<th>Date Completed</th>
<th>Score</th>
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<td>Belmont Report and CITI Course Introduction</td>
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<td>Students in Research - SBR</td>
<td>04/27/10</td>
<td>7/10 (70%)</td>
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<td>History and Ethical Principles - SBR</td>
<td>04/27/10</td>
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<td>Defining Research with Human Subjects - SBR</td>
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<td>2/5 (40%)</td>
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<td>Assessing Risk in Social and Behavioral Sciences - SBR</td>
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<td>5/5 (100%)</td>
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<td>Informed Consent - SBR</td>
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<td>Privacy and Confidentiality - SBR</td>
<td>04/27/10</td>
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<td>Research in Public Elementary and Secondary Schools - SBR</td>
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<td>Conflicts of Interest in Research Involving Human Subjects</td>
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Elective Modules

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<td>International Research - SBR</td>
<td>04/27/10</td>
<td>3/3 (100%)</td>
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</table>

For this Completion Report to be valid, the learner listed above must be affiliated with a CITI participating institution. Falsified information and unauthorized use of the CITI course site is unethical, and may be considered scientific misconduct by your institution.

Paul Braunschweiger Ph.D.
Professor, University of Miami
Director Office of Research Education
CITI Course Coordinator
REFERENCES


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111


Retrieved January 10, 2011 from US Census:
