Historical Earnings Performance of Refugees in the Canadian Labour Market

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Contents

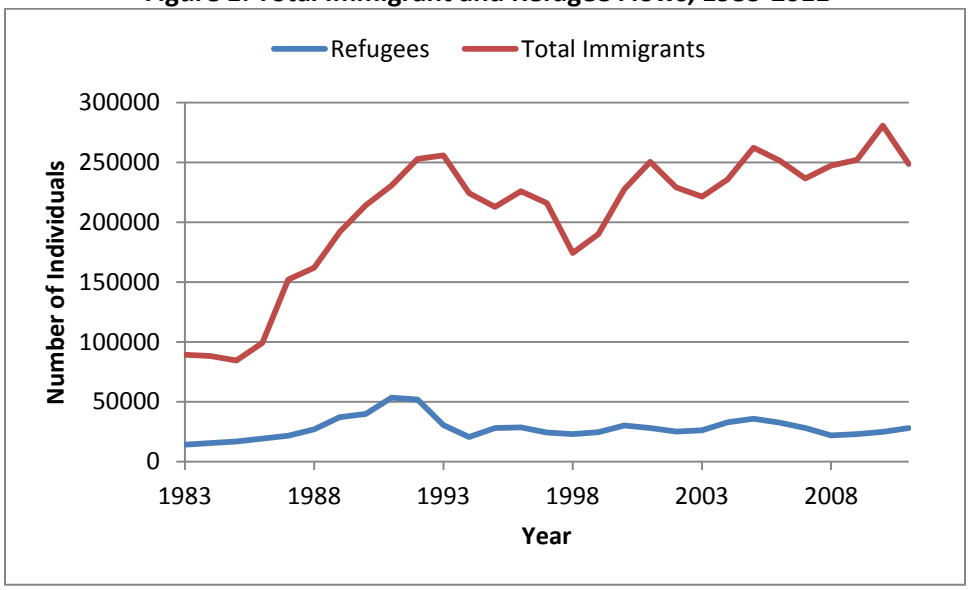
1 Introduction

In Canada's immigration system, immigrants enter under three main categories: economic immigrants (independents and investors), family class immigrants, and refugees. The focus of this paper is on the earnings outcomes of refugees. Refugees come to Canada one of several ways: sponsored directly by the Canadian government under its United Nations Refugee Convention obligation; assisted in coming to Canada by a non-governmental organization, such as a church; or by claiming asylum after entering the country. This essay has two major components. The first is the case study component, investigating the historical flow of refugees from major source countries in the years 1983 to 1996, and trying to determine the impetus for why Canada received inflows from those countries. The reason for the focus on the years 1983 to 1996 is that those were years that Citizenship and Immigration Canada publicly published annual inflows of immigrants by source country and category. The second component of this essay is an empirical study of immigrant and refugee labour market outcomes using the 1991, 1996, 2001 and 2006 Public Use Microdata Files of the Census of Population published by Statistics Canada. These Microdata files contain approximately three percent of the census population for that given census year. Because the timeframe for the case study is from 1983 to 1996, immigrants are included only if they arrived during that time period for this essay's empirical component, to better estimate the difference between refugee earnings and the earnings of non-refugee immigrants.

Refugees are an important component of Canada's immigration system, but often overlooked by economic researchers. It is often argued that refugees perform more poorly in the labour market than immigrants entering Canada under different categories. Most of the studies focusing on immigrant labour market outcomes in Canada use either Statistics Canada and Citizenship and Immigration Canada's (CIC's) Longitudinal Immigration Database (IMDB), or Statistics Canada's Longitudinal Survey of Immigrants to Canada (LSIC). Unfortunately, these datasets are restricted to a select group of vetted researchers. Much of the previous research and policy studies of the past have advocated a refocus of

Canada's immigration system to one that admits immigrants based on their potential to contribute positively to Canada's economy. Within the past twenty years since the peak in the early 1990's, refugees have been declining as a total share of annual immigrants to Canada. Figure 1 shows that although the annual number of immigrants admitted to Canada has increased since the late 1990's, the annual number of refugees admitted during that same time period has flat-lined. Table 1 shows how refugees and their dependants as a percentage of total landed immigrants to Canada has declined since the 1990's. This is in part a result of the refocusing of Canada's immigration policy away from humanitarian goals and towards one that admits immigrants based on their value to the Canadian economy. The reduction in refugees reflects in part the generally held belief that refugees earn less compared to other immigrants and are less likely to participate in the labour force.

Figure 1: Total Immigrant and Refugee Flows, 1983-2011



Source: CIC Facts and Figures and CIC Immigration Statistics

Table 1: Refugees as a Percentage of Total Immigrants, 1983-2011

Year	1983	1984	1985	1986	1987	1988	1989
Percent	15.67	17.39	19.88	19.30	14.18	16.57	19.27
Year	1990	1991	1992	1993	1994	1995	1996
Percent	18.53	23.14	20.52	11.88	9.11	13.20	12.60
Year	1997	1998	1999	2000	2001	2002	2003
Percent	11.25	13.11	12.84	13.23	11.14	10.96	11.74
Year	2004	2005	2006	2007	2008	2009	2010
Percent	13.86	13.64	12.91	11.81	8.84	9.06	8.80
			Year	2011			
			Percent	11.20			

Source: Author's Calculations from CIC Facts and Figures and Annual Immigration Statistics

The purpose of the empirical component of this essay is to investigate whether the belief that refugee earnings are lower than other types of immigrants is sound, and to assess how the wages of refugees and other types of immigrants evolve over time. If there are major differences between refugees and other types of immigrants, this essay will then attempt to provide reasons for those findings. Conversely, if over time refugee earnings do not differ substantially from non-refugee immigrant earnings, it would suggest that the reduction in the admittance of refugees is not warranted based on the popular reasons given.

2 Literature Review

There is a substantial body of literature published by economists on the labour outcomes of Canadian Immigrants; however, until very recently there has been little focus on refugee labour market outcomes in Canada. Since refugees constitute only a minority of total immigrants to Canada, most of the focus on immigrants has been on the economic categories of immigrants, because the majority of immigrants to Canada are economic immigrants, and the criteria for admittance for economic immigrants is based on their potential to perform in and contribute to Canada's economy (Green and Green, 1999). It has generally been assumed that refugees under-perform economically compared to

other immigrants, which is partly why the admittance of refugees as a percentage of total immigrants to Canada has declined over the past decade. Even with the decline in refugee admittances, there are still calls for Canada to further limit the admittance of refugees because of the supposed drain they have on Canada's welfare state relative to other classes of immigrants (Grubel and Grady, 2011). In recent years the government of Canada has placed travel visa restrictions on the citizens of countries which are major sources of refugee claimants, such as the Czech Republic, in part to reduce the number of asylum claims from those countries (CIC, 2013). The federal government has also placed more restrictions on the amount of social services that refugee claimants are able to qualify for before they receive permanent residence status (Black, 2013). However, some economic studies on immigrant earnings published more recently have found that the economic performance of refugees is not as lackluster compared to other types of immigrants as was commonly thought.

An influential paper, not only for this current essay, but for economic studies of immigration in general, is Chiswick (1978). In this paper Chiswick studied the earnings of immigrant American males, by regressing the natural log of wages on multiple variables, the most important of which was Years since Migration, or YSM. Chiswick found that initially foreign born males earned lower wages than their American-born counterparts, but the difference in earnings decreased the longer they had been settled in the country. He even found that European-born American males made more than their native born counterparts after 20 years. Extensions to Chiswick's method are frequently used to study immigrant earnings, and the "Chiswick Equation" is used for the empirical portion of the research in the current essay.

In Green and Green (1995), a study on the effectiveness of the points system, the authors argued that an increase in the inflows of refugees would reduce the number of independent immigrants admitted. This is because refugee and family class immigrants are given top priority for admittance, so years with large numbers of family and refugee class immigrants and a fixed total number of entrants,

the admission of independents and assisted relatives would have to be reduced as a result. Although the study is mainly focused on the point system and its effectiveness in meeting occupational demands in Canada's labour market, there are findings in the paper that are relevant to the current essay. The authors argued that, not only would an increase in admittance of refugees squeeze out the number of independent immigrants, the composition of those independent immigrants would change. They argued that the reduction in the inflows of economic immigrants would negatively impact the skill level of those economic immigrants. More specifically, economic immigrants admitted during years of increased non-economic inflows would result in skills being less aligned with the needs of Canada's labour market. Potentially, an increase in the inflow of refugees would adversely impact the economic goals of Canada's immigration system.

An earlier study of Canadian immigrant earnings by admittance category, De Silva (1997), tracked the earnings of immigrants who came to Canada in the early 1980's by admission class. Using the Longitudinal Immigration Database and immigrants who came from to Canada from 1982 to 1988, De Silva tracked the earnings of male immigrants by the Convention Refugee Class, the Designated Class (individuals in refugee-like situations who do not come under the strict United Nations definition of a Refugee), Assisted Relative, and Independent immigrants. De Silva's first major finding was that convention refugees, the designated class and the assisted class initially experienced a significant earnings disadvantage, but their earnings disadvantage narrowed significantly over time. De Silva also found that immigrant attributes such as knowledge of an official language, education and training only accounted for a small amount of the wage differentials between different classes of immigrants and argued that age at landing was a more important determinant. Finally, De Silva found that, with regard to designated class refugees, those who originated from Europe were the most successful while designated refugees from third world countries fared much worse.

Using the Longitudinal Survey of Immigrants to Canada from the dates October 2000 to September 2001, Aydemir (2011) found that refugee labour force participation was lower for refugees than it was for immigrants admitted under the family reunification category. He also found, however, that earnings as between refugees and family reunification immigrants were similar, and that while immigrants admitted under the skilled worker category had a slightly higher earnings advantage than other immigrants, the labour force participation rate was not that much higher for them in the short term compared to other admission classes. He also found that for economic immigrants the effect of foreign education credentials had little impact on immigrant earnings. He argued that the lackluster labour market performance of refugees was in part due to a lack of recognition of foreign education and training credentials by Canadian employers. However, these findings are limited by the data because the Longitudinal Survey of Immigrants to Canada dataset he used only tracks immigrants for the first two years following their arrival to Canada, while other studies have found that it takes a longer period of time for immigrant earnings potential to be realized fully. A study that was able to track the outcomes of immigrants for a longer period of time would have more valuable findings.

Like Aydemir (2011), Sweetman and Warman (2013) used the Longitudinal Survey of Immigrants to Canada (LSIC) to investigate the earnings performance of Canadian immigrants. Sweetman and Warman's dataset tracked immigrants arriving between October 2000 and September 2001 for four years, rather than the two years that the LSIC dataset Aydemir used for his paper. While Sweetman and Warman found similarly strong initial earnings performance by privately sponsored refugees as Aydemir had found, their results led them to argue that economic immigrants have superior earnings than immigrants entering through other categories.

Abbott and Beach (2011) using the Longitudinal Immigrant Database and, in an investigation of immigrant earnings and economic recessions, found that although refugees generally had lower earnings than other types of immigrants, refugees experienced faster earnings growth rates. The

authors examined the labour market outcomes of immigrants who arrived as permanent residents in 1982, 1988 and 1994. They argued with regard to refugees that refugees as a share of total immigrants should be increased to be in line with its share in 1980's and 1990's. Abbott and Beach argued that the convergence of refugee wages with other classes of immigrants over time could potentially be explained in part by the younger age of refugees at time of migration compared to other categories. They also argued that not adjusting immigration inflows to reflect current economic conditions of Canada adversely affects the earnings potential of immigrants. Abbott and Beach's conclusions stand somewhat in contrast to the findings of the later study by Sweetman and Warman.

Previous studies of immigrant earnings in Canada not only allow a better understanding of the factors that impact the earnings of immigrants, the previous literature also gives insight into how to proceed with the econometric approach for this current essay. The studies that investigate the effect immigration categories have on immigrant earnings use either the Longitudinal Immigrant Database or the Longitudinal Survey of Immigrants to Canada as the basis for their empirical analysis. But these datasets are not generally available to researchers outside of CIC or Statistics Canada. The present study, in contrast, uses the publicly available census microdata. Also, in contrast to the former two data sources, the census data lack a variable indicating immigrant admission class (e.g., economic or refugee class immigrant). We make up for this lack of information by examining a number of case studies of occasions where the numbers of refugees to Canada became large relative to total inflows from specific countries or source regions, and then use these case studies to create a dummy variable to indicate when and where refugee inflows became significant. Individuals on the census microdata file corresponding to these times and source countries at their time of landing were then picked out by this dummy variable. The empirical work then focuses on the effect of this "likely refugee" dummy variable in a conventional Chiswick-type earnings equation. Even though the dataset used for the empirical aspect of the current essay is not as robust for the essay's research question compared to the IMDB and

LSIC, the census files have enough information to allow one to explore this essay's research question, and to determine if similar results are obtained to the previous studies which investigated the topic.

For the current study, wage equations on datasets drawn from the 1991, 1996, 2001 and 2006 censuses are estimated to explore the impact that being a refugee has on an individual's wage. This study attempts to evaluate the outcomes of refugees who came to Canada between the years 1983 and 1996. Previous papers on immigrant labour market outcomes which used census data did not focus on immigrant categories. Unlike most papers already in the economic literature, this paper has a greater focus on the economic outcomes of refugees in the labour market. Also, unlike previous papers that estimated the labour market outcomes of refugees in the labour market, this study attempts to track a larger cohort of refugees for a longer period of time. Unlike Aydemir (2011) and Sweetman and Warman (2013), who only tracked labour market outcomes for two years and four years, respectively, this paper attempts to assess the long term labour market outcomes of refugees. Also, the time period of immigrant flows studied in this paper includes immigrant flows from the 1980's and early 1990's. As Figure 1 shows, the late 1980's and early 1990's was the period in the preceding three decades where Canada admitted the highest number of refugees in nominal terms and when refugees made up the highest share of total of immigrants to Canada. Few existing papers in the literature have explored this time frame. Furthermore, this paper explores the factors which led to people from the major refugee source countries to leave their home countries and come to Canada.

3 Historical Case Study

For the case studies, Citizenship and Immigration Canada annual reports from 1983 to 1996 were reviewed to determine which countries were major sources of refugees. Before 1983, what is now Citizenship and Immigration Canada published detailed statistics on source countries of immigrants to Canada, but they did not provide detail on what category each landed immigrant belonged to. It was

only in 1983 that data and statistics were made publicly available for landed immigrants that included both the immigration category and their country of origin. That is why each of the case studies in this essay only begins in 1983. The reason that the case studies only extend to 1996 is that after 1996 Citizenship and Immigration Canada ceased to publish the number of refugees by source country. Starting in 1997 onwards, Citizenship and Immigration published only the number of Landed Immigrants in the refugee class by major source areas, which are: Asia and Pacific; the Caribbean and South and Central America; the Middle East and Africa; Europe and the United Kingdom; and the United States. This lower level of geographic detail makes it more difficult to get meaningful results on the labour market outcomes of refugees in the census files.

El Salvador

El Salvador has been a major source country for refugees to Canada through the 1980's and into the 1990's, when refugee flows peaked in 1991 with 5646 out of 6977 permanent residents from El Salvador that year who were admitted under the refugee category. The reason for the large flows of refugees from El Salvador related to the civil war that was waged there from 1979 to 1992. The war was waged between Salvadorian government forces and affiliated militias on one end of the political spectrum, and leftist paramilitary forces of the Farabundo Martí National Liberation Front (FMLN) on the other end. The war was fought with different levels of intensity, and by 1990 over a million people of the country had been displaced due to the civil war. The reason for a spike in 1990-1992 in the number of refugees coming from El Salvador to Canada was due to the results of the election in late 1989. After its political affiliates boycotted the election, the FMLN began an armed campaign attacking Salvadorians affiliated with the government and the armed forces. In response, death-squads affiliated with the government began retaliatory killings against Salvadorians affiliated with the FMLN and other left-leaning organizations such as unions. Unlike earlier years in the civil war, where fighting was fiercest in the more rural parts of the country, the fighting in the latter part of the civil war was waged to a greater

extent in urban areas, especially San Salvador, the capital. The higher level of refugees during 1990-1992 is most likely a result of urban residents being affected by the fighting, and the fact that such urban residents who are more likely to have higher incomes than their rural counterparts, especially in a country such as El Salvador with a high level of income inequality. When urban residents were exposed to the violence in the later part of the war they were better equipped to flee the country and claim asylum in a country such as Canada. Also, more urban fighting during the later part of the war meant that more citizens were being exposed to the conflict, and thus being placed in danger. After a peace agreement was negotiated between the two sides in the conflict in 1992, the flow of refugees to Canada greatly subsided.

Sources

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Refugee and Immigration Flows from El Salvador to Canada[1]

Year	1983	1984	1985	1986	1987	1988	1989
Refugees	1758	2030	2491	2459	2368	2091	2263
Total	2551	2579	2881	3167	2526	2705	2848
Year	***1990***	***1991***	***1992***	***1993***	1994	1995	1996
Refugees	***3750***	***5646***	***4009***	***1572***	349	272	246
Total	***4290***	***6977***	***5593***	***2916***	1167	715	710

Source: CIC Annual Immigration Statistics

Guatemala

The number of refugees from Guatemala began increasing in the 1980's, peaking in 1991 and 1992. Besides being a poor and underdeveloped country, Guatemala suffered a civil war that was waged from 1960 to 1996, pitting indigenous Guatemalans and rural peasants usually affiliated with leftist organizations against government forces. The conflict was fought with various levels of severity, but the level of conflict increased by the early 1980's. Numerous political opponents of the military government disappeared during the conflict. In 1986 an election was held that installed a civilian president rather

[1] Years that are bolded and underlined indicate the key years of the upshift in refugees to Canada from that country.

than a military-controlled government. However, the political violence that was occurring in the country did not subside. During the early 1990's due to a large economic downturn, there were numerous strikes and protests against the rule of President Vinicio Cerazo, and death squads were used to remove political dissenters. The high level of poverty and economic stagnation that Guatemala was experiencing in the early 1990's was almost certainly another cause for the high level of refugees sourced from Guatemala. After elections in 1991, president Jorge Serrano Elias was elected; however, the election was contested only between the Guatemalan right wing parties. After winning the election, a political crisis in 1993 forced Serrano from office and this led to a peace agreement being negotiated which stopped the civil war.

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Refugee and Immigration Flows from Guatemala to Canada

Year	1983	1984	1985	1986	1987	1988	1989
Refugees	169	490	546	710	549	391	462
Total	364	648	1063	1311	1089	690	786
Year	1990	***1991***	***1992***	1993	1994	1995	1996
Refugees	760	***1614***	***1193***	778	328	317	432
Total	1019	***2174***	***1913***	1388	764	653	691

Source: CIC Annual Immigration Statistics

Nicaragua

Although the refugee flows from Nicaragua steadily increased throughout the 1980's, they peaked in 1991. From 1979 until 1990 Nicaragua was controlled by the Sandinista Nationalist Liberation Front (FSLN), a Marxist-Leninist political group which promoted a socialist agenda. Starting in 1981 opposing guerilla forces known as the "Contras" waged a sustained conflict against the Sandinistas. In the ensuing decade an estimated thirty thousand Nicaraguans were killed. After enduring a trade

embargo imposed on Nicaragua by United States, in 1990 the Sandinistas lost the subsequent election to an alliance of opposition parties. The increase in refugees in 1991 is likely a result of Sandinista-affiliated Nicaraguans leaving the country to avoid potential reprisals from the newly installed government.

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Refugee and Immigration Flows from Nicaragua to Canada

Year	1983	1984	1985	1986	1987	1988	1989
Refugees	43	93	451	670	955	884	591
Total	50	114	468	716	1073	982	685
Year	1990	***1991***	***1992***	1993	1994	1995	1996
Refugees	548	***1029***	***690***	433	65	71	110
Total	681	***1450***	***2011***	1058	257	248	239

Source: CIC Annual Immigration Statistics

Bosnia and Herzegovina

Bosnia and Herzegovina began to exist as a country only in 1992. An entity in the multiethnic former state of Yugoslavia, the country declared independence from Yugoslavia in 1992, following Slovenia and Croatia which had departed the federation the preceding year. A large and multiethnic country, Yugoslavia was held together through most of the Cold War by Joseph Broz Tito, who was effectively in charge of the country from the end of the Second World War until 1980. After the death of Tito, the state descended into economic difficulties due to the failure of some collective industries, as well as political difficulties due to a rise in ethnic nationalism affecting each of the subnational republics of the federation. Although Bosnia has a large Bosnian majority, there were both sizeable Serb and Croat ethnic minority populations in the country as well, so when Bosnia claimed independence, ethnic Serbs in the country began fighting against the newly declared government, with the support of Serbia. The war, which lasted from 1992 to the end of 1995, was known for its brutal fighting in events such as the

siege of Sarajevo, and there is evidence that genocide was committed during the conflict. Most of that genocide was directed towards the Bosnian Muslim populace by ethnic Serbs.

As one of the largest post-war humanitarian crises in Europe, the conflict displaced a large group of people. Also the multiple conflicts in the Balkans during the 1990's impaired economic growth, which would have made it more attractive for residents in the affected areas to emigrate regardless of the war being fought around them. After a peace treaty was negotiated at the end of 1995, the so-called Dayton Accords, an independent Bosnia and Herzegovina was recognized by Serbia. However, the new country had two autonomous regions, one for ethnic Serbs and one for ethnic Bosnians. The new boundaries could have displaced people further both internally and externally, though the conflict was officially over.

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Refugee and Immigration Flows from Bosnia and Herzegovina to Canada

Year	1992	***1993***	***1994***	***1995***	***1996***
Refugees	74	***1653***	***4468***	***5964***	***4936***
Total	312	***2822***	***4905***	***6270***	***5227***

Source: CIC Annual Immigration Statistics

Poland

Throughout the 1980's Poland was the largest source country of refugees to Canada. The main reason for the flow of refugees from Poland to Canada was due to the political upheaval that the country began experiencing in the 1980's. Due to economic and social stagnation during the 1970's, many Poles became tired of the communist government's stranglehold on the country dating back to the end of the Second World War. Beginning in 1980 a Polish trade union, Solidarity, began actively opposing Communist rule in the country and agitating for an introduction of free elections, and by 1981 had almost 10 million members. In reaction to the dissent in Poland, the Communist dictatorship

declared martial law in 1981, which lasted until 1983. Although semi-free elections were held in 1989, this coincided with a massive increase in refugees from Poland. This is most likely because the barriers to exit for Poles were lifted and Poles were able to travel to the West freely and thus able to come to Canada as refugees. Also, even though the stranglehold that the Communists had over the country was waning, there was still a threat that there could be a hardline Communist coup or an invasion by the Soviet Union. Furthermore, in the transition to a market economy Poland underperformed economically, making exit more attractive to Poles.

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Refugee and Immigration Flows from Poland to Canada

Year	1983	1984	1985	1986	***1987***	***1988***	***1989***
Refugees	2034	2064	2209	3620	***4545***	***6801***	***12393***
Total	5094	4499	3617	5231	***7035***	***9231***	***15985***
Year	***1990***	***1991***	1992	1993	1994	1995	1996
Refugees	***11902***	***10123***	4872	861	69	27	26
Total	***16579***	***15731***	11878	6877	2423	2302	2059

Source: Annual CIC Immigration Statistics

Hungary

Like most European countries that were a source of refugees in the 1980's and 1990's, Hungary was behind the so-called Iron Curtain. Although Hungary was still behind the Iron Curtain, it moved earlier than most other countries in the Eastern Bloc towards a more free society. After the failed 1956 revolution, the Communist regime in Hungary allowed more open dissent than in other countries in the Soviet Bloc. In 1988 the government announced that multi-party elections would be allowed and in 1989 Hungary removed border controls which had previously prevented citizens of Eastern Bloc countries from travelling to the West. Because Hungary allowed freedom of movement earlier than

other Communist countries, the flow of Hungarian refugees peaked earlier than in other Eastern Bloc countries.

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Refugee and Immigration Flows from Hungary to Canada

Year	1983	1984	1985	1986	1987	***1988***	***1989***
Refugees	356	260	516	545	562	***1076***	***772***
Total	484	374	614	697	717	***1201***	***1003***
Year	1990	1991	1992	1993	1994	1995	1996
Refugees	499	330	226	102	31	141	9
Total	805	761	785	684	424	322	371

Source: CIC Annual Immigration Statistics

Czechoslovakia

Like most major European refugee source countries, Czechoslovakia was also behind the Iron Curtain after the Second World War. There was a strong dissident movement in Czechoslovakia ("the Prague Spring"), which culminated in the Warsaw Pact invading the country in 1968 when it appeared that the Czechoslovakian government was beginning to waver from its commitment to communism. After the invasion, many Czechoslovakians decided to leave the country. However, it was difficult to leave immediately due to the restrictions against movement that were prevalent in most Eastern Bloc countries during that time, which could at least in part explain why the number of refugees is higher in 1983 than 1984, while in Poland the flow of refugees was steadily increasing throughout the 1980's. Czechoslovakia also experienced sluggish economic growth in the 1970's and 1980's, like most countries in the Eastern Bloc, giving further impetus for Czechoslovakians to leave the country and claim asylum in Canada. In 1989 and 1990 with the fall of communism the flow of refugees from Czechoslovakia increased with the restrictions on movement within the Eastern Bloc lifted.

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Refugee and Immigrant Flows from Czechoslovakia

Year	1983	1984	1985	1986	1987	1988	***1989***
Refugees	1117	765	764	697	762	725	***830***
Total	1259	924	903	835	922	866	***1089***
Year	***1990***	1991	1992	1993	1994	1995	1996
Refugees	***1151***	311	146	15	1	4	0
Total	***1356***	793	816	382	156	126	10

Source: CIC Annual Immigration Statistics

Romania

From World War II until the 1989 Romanian revolution, Romania was a totalitarian Communist state. Although it had better relations with western countries compared to other Eastern Bloc countries, it was one of the more repressive states in the Communist fold. Under Nicolae Ceausescu, the last communist dictator, Romania resembled the Soviet Union under Stalin with an extensive personality cult and an extensive police state apparatus. Romania began experiencing severe economic stagnation in the 1980's when the central planning authorities began exporting the country's production in order to pay down debt. In 1989 there was a violent revolution which overthrew the Communist dictatorship and Ceausescu and his wife were executed at the end of 1989. Romania was the only Eastern Bloc country to experience a violent overthrow of a Communist government. The increased flow of refugees is almost certainly linked to the lessening of border controls after the Communist government lost its grip on Romania.

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Refugee and Immigrant Flows from Romania

Year	1983	1984	1985	1986	**1987**	***1988***	***1989***
Refugees	490	338	334	442	***832***	***733***	***821***
Total	946	840	852	858	***1550***	***1438***	***2019***
Year	***1990***	1991	1992	1993	1994	1995	1996
Refugees	***1016***	527	598	210	157	202	243
Total	***2784***	2443	2992	3365	2969	3843	3664

Source: CIC Annual Immigration Statistics

Ethiopia

Ethiopia had been going through political upheaval beginning in the 1970's, when the long-term King of Ethiopia, Haile Selassie, was deposed in a coup in 1974. He was replaced with a military Junta called the Derg, which was affiliated with the Soviet Union. In the late 1970's a war was also fought against Somalia. Throughout the 1980's, there were multiple famines in Ethiopia resulting in over 1 million dead and leading to 8 million Ethiopians being displaced. The flow of refugees peaked in 1988 to 1991. This can be attributed to insurrections against the Communist government, as well as retaliation by the government against its opponents. In 1991 the Communist government was overthrown by insurrectionists, and Eritrea gained independence from Ethiopia that year as well. This political upheaval probably best explains the flow of refugees to Canada during this time period.

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Refugee and Immigration Flows from Ethiopia to Canada

Year	1983	1984	1985	1986	1987	***1988***	***1989***
Refugees	457	684	709	905	869	***1429***	***2136***
Total	482	734	742	960	1019	***1524***	***2243***
Year	***1990***	***1991***	***1992***	***1993***	1994	1995	1996
Refugees	***2174***	***2180***	***1588***	***1183***	567	415	358
Total	***2340***	***2423***	***2082***	***1757***	1269	924	949

Source: CIC Annual Immigration Statistics

Somalia

One of the poorest and most unstable nations in Africa, Somalia has undergone political upheaval since the late 1980's that continues until the present day. In the late 1970's after the war with Ethiopia, which was aligned with the Soviet Union, the military government of Somalia aligned with the United States and received military aid from that country. Disillusionment with the military dictatorship in Somalia grew throughout the 1980's and the government became more repressive. After the Cold War ended, Somalia became much less important to the United States' foreign policy objectives and the military government ceased to receive aid. Numerous opposition groups, some supported by Ethiopia, began fighting against the government and managed to overthrow it in 1991. The ensuing civil war saw intervention by UN peacekeepers for a time in the early 1990's while the civil war has still been waged in that country up until the present day.

Sources

Library of Congress. *A Country Study: Somalia*. Retrieved 11 June 2013, from http://lcweb2.loc.gov/frd/cs/sotoc.html.

Refugee and Immigration Flows from Somalia to Canada

Year	1983	1984	1985	1986	1987	1988	1989
Refugees	11	16	28	70	35	201	399
Total	18	23	30	190	52	230	439
Year	***1990***	***1991***	***1992***	***1993***	1994	1995	1996
Refugees	***1072***	***2955***	***4701***	***2514***	735	1080	803
Total	***1148***	***3221***	***5456***	***3074***	951	1445	1192

Source: CIC Annual Immigration Statistics

Ghana

Ghana was one of the more developed countries to achieve independence in Africa, and was granted independence from the United Kingdom in 1957. However, beginning in the 1960's, several military coups led to the country being governed by a succession of military dictators. Beginning in 1982, Ghana became a single party state. During the 1980's and early 1990's Ghana's economy began to stagnate and, succumbing to both international and economic pressure, Ghana's ruling party permitted

other political parties and held elections in 1993. The high flow of refugees in 1992 and 1993 reflects the poor economic performance that Ghana was having during this time period and the rising political tensions within that country before multi-party democracy was reestablished.

Sources

Owusu-Ansah, David. *Historical Dictionary of Ghana*. Lanham, Maryland: Scarecrow Press, 2005.

Refugee and Immigration Flows from Ghana to Canada

Year	1983	1984	1985	1986	1987	1988	1989
Refugees	2	24	51	29	38	61	76
Total	134	122	194	956	234	387	428
Year	1990	***1991***	***1992***	***1993***	1994	1995	1996
Refugees	145	***662***	***1263***	***1027***	133	122	146
Total	444	***1118***	***2451***	***2185***	1352	1445	1161

Source: CIC Annual Immigration Statistics

Iran

Iran had been under the rule of the Shah of Iran until he was overthrown by a popular revolution in 1979. The country soon fell under the control of Ayatollah Khomeini, and Iran became a theocratic Islamic Republic after the Ayatollah's supporters were able to consolidate their power over Iran's institutions and defeat or suppress their revolutionary rivals. Starting in 1980 and lasting until 1988 Iran was engaged in a vicious war with neighboring Iraq which resulted in almost a million Iranian casualties. With a war-damaged economy and a repressive regime, more Iranians sought to leave their country. After the war had drawn down it was easier for Iranian citizens to leave the country, which perhaps explains why the refugee flows began to increase after the war had ended.

Sources

Gettleman, Marvin and Stuart Schaar. *The Middle East and Islamic World Reader*. New York: Grove Press, 2003.

Refugee and Immigration Flows from Iran to Canada

Year	1983	1984	1985	1986	1987	***1988***	***1989***
Refugees	540	608	819	874	994	***1919***	***1993***
Total	1268	1870	1728	1952	3083	***3669***	***3797***
Year	***1990***	***1991***	***1992***	1993	1994	1995	1996
Refugees	***2019***	***4065***	***4323***	1499	718	1250	1728
Total	***3475***	***5209***	***6784***	3885	2694	3684	5828

Source: CIC Annual Immigration Statistics

Iraq

Iraq had fought a fierce war with Iran throughout most of the 1980's, and received financing from neighboring Arab countries to continue the conflict. After a cease-fire was declared between Iran and Iraq, Iraq asked for forgiveness for its debt obligations. After neighboring Kuwait refused, Iraq invaded the country in 1990. After a coalition of Western nations led by the United States forced Iraq out of Kuwait, several ethnic groups in Iraq rose against President Saddam Hussein's government. The Iraqi government brutally repressed the dissension in order to maintain power. Also, Iraq was on the receiving end of several United Nations embargoes, which placed greater strain on its economy. Because of these political and economic reasons, it is understandable to see such a large outflow of refugees from the country after 1991.

Sources

Gettleman, Marvin and Stuart Schaar. *The Middle East and Islamic World Reader*. New York: Grove Press, 2003.

Refugee and Immigration Flows from Iraq to Canada

Year	1983	1984	1985	1986	1987	1988	1989
Refugees	226	408	294	183	130	442	797
Total	325	495	359	242	296	532	891
Year	1990	1991	***1992***	***1993***	***1994***	***1995***	***1996***
Refugees	514	529	***1518***	***2437***	***1447***	***1273***	***1346***
Total	668	799	***1996***	***3084***	***1931***	***1742***	***1838***

Source: CIC Annual Immigration Statistics

Cambodia

The flow of refugees from Cambodia can be explained due to both the political crisis and humanitarian crises that the country experienced throughout the 1960's, 1970's and 1980's. Cambodia was destabilized by the fighting occurring in Indochina during that time, and in 1975 a Maoist group, the Khmer Rouge, took power in the country. After taking power, the Khmer Rouge began a systematic genocide of certain ethnic groups and also a forced relocation of "intellectuals" into the countryside for re-education. Over 2-3 million Cambodians are estimated to have died under the Khmer Rouge between 1975 and 1979. In 1979 Vietnam invaded Cambodia in response to threats Cambodia had made against it, and quickly installed a regime friendly to it while the Khmer Rouge retreated into the countryside to wage a guerrilla war against the new regime and the Vietnamese troops that remained in the country supporting the regime. After the 1979, invasion, multiple embargoes were placed on the country by the United States which made it even more difficult for the war-ravaged Cambodian economy to recover. In 1989 peace talks began which culminated in a peace agreement being signed in 1991, which would explain the drop off in refugee flows from Cambodia after 1989.

Sources

Chandler, David P. *A History of Cambodia*. Boulder, Colorado: Westview Press, 2000.

Refugee and Immigration Flows from Cambodia to Canada

Year	***1983***	***1984***	***1985***	***1986***	***1987***	***1988***	***1989***
Refugees	***1513***	***1492***	***1593***	***1665***	***1546***	***1492***	***1992***
Total	***1542***	***1727***	***1803***	***1745***	***1612***	***1543***	***2041***
Year	1990	1991	1992	1993	1994	1995	1996
Refugees	712	338	221	178	55	21	9
Total	768	424	337	373	261	210	189

Source: CIC Annual Immigration Statistics

Vietnam

Vietnam had been experiencing continual conflict starting soon after the Second World War. A former French colony, Vietnamese Communists fought a war against France. After a disastrous defeat at

Dien Bien Phu in 1954, the French left Vietnam. However, the country was split into a Communist North and a non-Communist South. A Communist insurgency emerged in the South and the United States was drawn into the conflict, and at one point had over half a million military personnel stationed in the region. After 1973, the United States withdrew its troops and in 1975 the North conquered the South to reunite Vietnam. However, many people in the South, as well as some residents of the North, were anti-Communist. Although South Vietnam was by no means free, the personal freedoms enjoyed under the former South were greater than under a united Communist Vietnam, especially with respect to matters such as religious freedom. Furthermore, citizens who were affiliated with the former South Vietnamese government faced potential Communist retribution. Also, in 1979 Vietnam fought a border war against China, and many ethnically Chinese Vietnamese found themselves discriminated against by the Vietnamese government. One highly visible aspect of this refugee crisis was the movement of "boat people." Starting in 1979 many Vietnamese people took to barely seaworthy boats in order to escape the country. More than a million Vietnamese, mostly from the South, escaped Vietnam by ship. Canada was one of the major final destination countries of displaced Vietnamese throughout the 1980's and 1990's.

Sources

Butterfield, Fox. "Hanoi Regime Reported Resolved to Oust Nearly All Ethnic Chinese." in *New York Times*, June 12, 1979.

Olson, James S. *Where the Domino Fell: America and Vietnam, 1945 to 1990*. New York: St. Martin's Press, 1991.

Refugee and Immigration Flows from Vietnam to Canada

Year	***1983***	***1984***	***1985***	***1986***	***1987***	***1988***	***1989***
Refugees	***3021***	***3405***	***4210***	***2783***	***3890***	***4637***	***6378***
Total	***6451***	***10950***	***10400***	***6622***	***5668***	***6196***	***9425***
Year	***1990***	***1991***	***1992***	***1993***	1994	1995	1996
Refugees	***5279***	***3158***	***2266***	***2020***	1229	244	53
Total	***9081***	***8963***	***7681***	***8301***	6230	3954	3486

Source: CIC Annual Immigration Statistics

Afghanistan

Apart from being one of the poorest countries in the world, Afghanistan has been in an almost continuous state of conflict since the late 1970's. In 1979 the Soviet Union invaded the country in order to support the allied government in Kabul. An insurrection rose against the government and the Soviet troops which supported the government. Even though the Soviet Union withdrew from the country in 1989, the Communist government attempted to maintain its hold on the country. However, by 1992 aid from the Soviet Union ceased and the government fell to Islamists. Between 1989 and 1992 the uptick in refugees was probably a direct result of the increase in fighting that took place between the Islamists and the government, especially in urban areas. At the beginning of the Soviet invasion many Afghans moved to refugee camps in neighbouring Pakistan and Iran. With a pullout of the Soviet Union failing to quell the conflict, perhaps Afghans realized that the chances of returning were lower so they were more intent on emigrating somewhere else. The refugee flows from Afghanistan increased in 1995 and 1996 when the Taliban, a more radical Islamic group, began fighting against the government, and captured most of the country by the end of 1996 and imposed very strict Islamic law.

Source

Johnson, Chris. *Afghanistan: The Mirage of Peace*. New York : Zed Books, 2004.

Refugee and Immigration Flows from Afghanistan to Canada

Year	1983	1984	1985	1986	1987	1988	***1989***
Refugees	66	100	346	539	801	960	***1003***
Total	73	125	370	590	975	1010	***1054***
Year	***1990***	***1991***	1992	1993	1994	***1995***	***1996***
Refugees	***972***	***1147***	895	496	431	***1093***	***1798***
Total	***1027***	***1353***	1193	847	717	***1382***	***2008***

Source: CIC Annual Immigration Statistics

Lebanon

Lebanon had been experiencing civil war since 1975. The multiethnic but majority Christian country had its demographics altered dramatically with the influx of displaced Palestinians from Israel.

The changing demographics did not reflect the political situation, where the Christian population of Lebanon was over-represented politically. The civil war had several stages, including intervention by both neighboring Syria and Israel, and United Nations peacekeepers were also dispatched to the country. Not only was the civil war damaging to the economy, but the negotiated peace treaty in 1990 changed the constitution to reflect the demographic reality in Lebanon by increasing the political power of the Muslim population of the country. Much of the Lebanese diaspora are Arab Christians, and it is possible that many of the refugees who left Lebanon saw the potential political situation becoming worse in Lebanon. Furthermore, the Syrian army remained in Lebanon after the war had ended and Syria still exerted influence in Lebanese government.

Sources

Makdisi, Samir and Richard Sadaka. "The Lebanese Civil War, 1975–90" in *Understanding Civil War*. Edited by Collier, Paul and Nicholas Sambanis. The World Bank, 2005.

Refugee and Immigration Flows from Lebanon to Canada

Year	1983	1984	1985	1986	1987	1988	1989
Refugees	8	14	16	874	30	32	81
Total	813	1245	1657	1952	3414	3143	6179
Year	1990	***1991***	***1992***	1993	1994	1995	1996
Refugees	726	***3088***	***1830***	551	271	184	322
Total	12462	***11987***	***6525***	4696	2674	1914	1805

Source: CIC Annual Immigration Statistics

Sri Lanka

Between 1983 and 2009, a civil war was waged in Sri Lanka between the Tamil minority and the Sinhalese majority. While the war first broke out in 1983, fighting did not increase in intensity until later in the decade. In 1987 India sent a peacekeeping force to quell the violence after a rash of suicide bombings by Tamil separatists. However, in 1990 the Indian force left the country and violence ignited with even greater intensity than before. There seems to be a strong link between the renewed fighting in 1990 and the increase in refugee flows from Sri Lanka to Canada that occurred during the same time

frame. A ceasefire was negotiated in 2002 but was soon broken, and in 2009 the Tamil Tigers were finally defeated by government forces.

Sources

Peebles, Patrick. *The History of Sri Lanka*. Greenwood Press, 2006.

Refugee and Immigration Flows from Sri Lanka to Canada

Year	1983	1984	1985	1986	1987	1988	1989
Refugees	1	32	123	265	599	206	230
Total	166	1048	815	1754	4226	2409	2423
Year	***1990***	***1991***	***1992***	***1993***	***1994***	***1995***	***1996***
Refugees	***1234***	***4166***	***7972***	***3894***	***2206***	***4783***	***3616***
Total	***3106***	***6826***	***12635***	***9103***	***6671***	***8926***	***6151***

Source: CIC Annual Immigration Statistics

4 Empirical Study

To examine the wage differences, if any, between Immigrants who come to Canada as refugees and those who come to this country under different immigrant categories, the Census of Population Public Use Microdata Files (PUMF) from Statistics Canada were used for this essay. The essay used the 1991, 1996, 2001, and 2006 censuses because those were the censuses which overlapped with the years in the refugee case studies in the previous section. Although the census contains information on whether a Canadian citizen is an immigrant or not, it does not indicate in the PUMF datasets what category an immigrant came to Canada under (e.g., whether they came as a refugee). Using the Citizenship and Immigration Canada dataset that gave information on which countries were major sources of refugees and when those refugees came, dummy variables were created indicating if an immigrant in the census was likely to be a refugee or not using the PUMF variable indicating Place of Birth and the PUMF variable indicating Year of Immigration in the censuses. Place of Birth was used to indicate country of origin since there is no variable indicating country of origin published in publically available census files.

Unfortunately, in every census that was used in this study other than the 2006 census, for individuals living in Atlantic Canada or the Territories, the level of detail reported in the Place of Birth variable was too coarse to determine with any accuracy the country of origin. Because of the low number of observations in the census from the Atlantic Canadian Provinces and the Territories, for privacy reasons Statistics Canada does not provide the same level of detail on individuals from Atlantic Canada. If an individual was foreign born and residing in an Atlantic Province, the census would only indicate for the Place of Birth variable the broad geographic region in which they were born, which for the 1991 and 1996 censuses consisted of “Europe,” “Asia” and “other.” Because of this lack of detail, the refugee dummy variable could not be coded with any reasonable accuracy. Therefore, individuals were

excluded who resided in Atlantic Canada and the Territories from the 1991, 1996 and 2001 census datasets.

In addition to the dummy variable created indicating whether an observation was likely a refugee, other control variables were used in each of the four raw datasets to include in this paper's regression. Since the focus of this paper is on labour market outcomes, the census variable Wages and Salaries was used as the dependent variable. Wages and Salaries is the variable in the census that refers to gross wages and salaries before deductions such as tax and employment insurance premiums. In the 1991, 1996 and 2001 censuses, the range of Wages and Salaries is from zero dollars to two million dollars, while in the 2006 census, the range is from zero to 1,226,490 dollars. For purposes of this exercise, individuals who earned less than one thousand dollars were not included in any of the regressions because of the desire to include only those workers who are reasonably attached to the labour market. Also, observations from the Northwest Territories, Nunavut and the Yukon were excluded from all of the regressions performed because of the markedly higher wages paid there as compared to the rest of Canada. Wages paid in these regions are much higher than in the rest of Canada due to the much higher cost of living in those territories.

For all four censuses, individuals who were below 25 years of age, or older than 59 years of age were excluded from the regressions. This was done to exclude young people who are just entering the labour force and are more likely to be part time workers, as well as older people aged 60 and above who are beginning to exit the labour force and be part time workers as a result. For the 1991, 1996 and 2001 censuses, age is a continuous variable. However, in 2006, rather than being continuous, age is expressed in five year intervals. For example, if someone was 33, the census file would not indicate that they are 33; rather, they would be placed in the 30-34 year old cohort, and it would be expressed as an indicator variable in the census. This posed a problem because both Age and Age squared are independent variables in this essay's regressions. To get around this problem, the midpoint age of each cohort was

taken and was used as the age for all observations in that cohort. So observations in the 25-29 age cohort were given a value of 27, and observations in the 55-59 age cohort were given a value of 57.

For the regressions, age is intended to represent work experience in the labour market, since the older someone is the more likely they are to have more work experience. The Public Use Microdata Files in the census do not include a variable that might better explain work experience, such as total years worked or employment tenure, so age was used as a substitute for the regressions. Age is also squared in the regressions to take into consideration that age would almost certainly have a diminishing effect on wages as a person's age increases. For men, age is a good substitute for experience since most men stay in the labour force for most of their adult life. Conversely for women, age is not as good a substitute for work experience because many women enter and exit the labour force for a variety of reasons, such as childbirth and raising a family. Due to this issue, two regressions were run on each census, one for men and one for women. Separating the observations by sex rather than including them together allows for a clearer estimation of the effects other characteristics had on wages.

Since the paper used the conventional Chiswick equation for the regressions run, an independent variable was needed that captures the amount of years spent in the host country (Chiswick 1978). This variable, Years since Migration (YSM), captures the theoretically positive effect that more years spent in a new country has on wages, because the longer immigrants are in a new country, the more time they have to adapt to their surroundings, thus having potentially better labour market outcomes. Using the Year of Immigration variable in the census, which reports the year in which an immigrant arrived in this country, a Years since Migration variable was created simply by subtracting the Year of Immigration from the year the census was taken.

Like age's effect on wages, Years since Migration would also be expected to have a diminishing effect on wages. Someone who has been in Canada for fifteen years would likely be adapted to a generally similar extent as someone who has been in Canada for twenty, so the difference between

their wages would likely be caused largely by other factors. In contrast, the difference in wages between someone who has just arrived to Canada and someone who has been in Canada for two years would more likely be caused in part by the additional time the less recent immigrant has had to adapt to Canada's language and culture, and to determine how best to make himself or herself more attractive to employers. Therefore, Years since Migration is also squared in the regressions, following the form of the Chiswick equation (Chiswick 1978).

For the regressions on the census data, a variety of dummy variables were included as well. To capture the effect of wage levels being different across provinces, dummy variables were created to deal with this issue. A dummy variable was made that took on a value of one if that person was a resident of British Columbia and zero otherwise. Separate dummies were created for Alberta, the Prairie Provinces (Manitoba and Saskatchewan), Quebec, and the Atlantic Provinces (Newfoundland, New Brunswick, Nova Scotia and PEI). A dummy variable was not created for residents of Ontario to avoid collinearity problems.

There is a large body of economic research that suggests that marital status has an effect on earnings. Typically for men, single men typically earn less than their married counterparts. For women on the other hand, married women on average earn less than their non-married counterparts, because married women are more likely to have children and are thus more likely to either be outside the labour force for a period of time while they are raising children or work part time. Factors such as these mean that married women tend to have less work experience in the labour market and thus receive lower wages as a result. From the census data, one dummy variable was created to take into account if someone was married, and another if someone was divorced, separated or widowed.

In addition to the refugee dummy constructed using the case studies of historical refugee movements to Canada, included was a dummy variable indicating if someone was an immigrant or not. This dummy variable was needed to compare the effect of immigrants who were refugees to those

immigrants who were not. The census variable indicating immigration status was used to create the dummy variable. The census also included individuals who were non-permanent residents, such as foreign students. Those observations were dropped because they were not important to this study. Someone who was both an immigrant and a refugee would have a value of one for both the immigrant dummy and the refugee dummy, while someone who was an immigrant but not a refugee would have a value of one and zero for the immigrant and refugee dummies, respectively. Someone born in Canada would obviously have a value of zero for both dummy variables and thus be the default base of comparison.

A dummy variable was also created for individuals in the census who reside in the Greater Toronto Area (the Toronto, Hamilton and Oshawa census metropolitan areas), the Montreal metro area or the Vancouver metro area. The majority of immigrants to Canada reside in one of those three metro areas and, since wages tend to be higher in those areas, a dummy variable was included to control for those effects.

The final set of dummy variables included for the regression analysis was a set of dummy variables representing educational status. A higher level of education on average leads to a higher wage level. For the observations in the census datasets, individuals were kept who were high school graduates as the default. Dummy variables were created for the highest level of education an individual achieved. A dummy variable was created if someone's highest level of education was below a high school diploma or equivalent; a dummy variable for some post-secondary achievement below the Bachelor's degree, such as college or CEGEP; a dummy variable for a Bachelor's degree; and a dummy variable for educational achievement above the Bachelor's level, such as a Master's, Doctorate or professional degree. The dummy variables for education take on a value of one if an individual's highest level of education matches the corresponding dummy variable, and zero otherwise. This is because there are

some cases where a person could achieve a professional degree such as a law degree without first receiving a Bachelor's degree.

4.1 Estimated Equation

For the empirical study of wages, the following equation was estimated for each of the four censuses using Ordinary Least Squares. Separate estimations were run for both men and women. Interaction variables were also included in the regressions between the Refugee Dummy Variable and Years since Migration and Years since Migration squared:

$$\begin{aligned}\ln(Wage)_i = {} & \beta_{constant} + \beta_{age} AGE_i + \beta_{age^2} AGE_i^2 + \beta_{imm:ysm} YSM_i + \beta_{ref:rysm} RYSM_i \\ & + \beta_{imm:ysm^2} YSM_i^2 + \beta_{ref:rysm^2} RYSM_i^2 + \beta_{immigrant} IMMIGRANT_i \\ & + \beta_{refugee} REFUGEE_i + \beta_{metro} METRO_i + \sum_{k=1}^{m1} \beta_{edu,k}\, EDUCATION_{k,i} \\ & + \sum_{k=1}^{m2} \beta_{mar,k} MARITAL_{k,i} + \sum_{k=1}^{m3} \beta_{prov,k}\, PROVINCE_{k,i} + u_i\end{aligned}$$

Where:

WAGE = Wages and Salaries from the Census. **AGE** = Age of Individual. **AGE^2 =** Age Squared. **YSM** = Years since Migration of Individual (if applicable). **RYSM** = Interaction Variable between Refugee Dummy and Years since Migration. **YSM^2** = Years since Migration Squared. **RYSM^2** = Interaction Variable between Refugee Dummy and Years since Migration Squared. **IMMIGRANT** = Immigrant Dummy Variable. **REFUGEE** = Refugee Dummy Variable. **METRO** = Metro Area Dummy Variable. **EDUCATION** = Matrix containing dummy variable vectors for each level of education. For each individual there will be at most one element equaling one. All other elements will be zero. **MARITAL** = Matrix containing dummy variable vectors for marital status. For each individual there will be at most one element equaling one. All other elements will be zero. **PROVINCE** = Matrix containing dummy variable vectors for province of residence. For each individual there will be at most one element equaling one. All other elements will be zero. **U**= error term

4.2 Regression Results from 1991 Census

For the 1991 regression, separate regressions were run for both men and women for reasons outlined earlier. Since the case studies on refugees used to create the refugee dummy variables only began tracking refugee flows from individual countries in 1983, individuals in the dataset who were immigrants were only included in the regression if they had immigrated to Canada in 1983 or later. This was done to have a clearer comparison between the wages of economic immigrants to those who were

likely to be refugees[2]. Any individual in the census who was not an immigrant was included in the estimation to compare them to both refugees and other immigrant categories (the estimation sample was thus a pooled sample). It is important to note that individuals residing in the Atlantic Provinces were excluded in this regression due to the inadequate detail in the 1991 census on immigrants residing in those provinces. The models for both men and women were estimated using robust standard errors since Breusch-Pagan tests on both models rejected the null of constant error variance (Green, 2012)[3]. The results from both the regression for men and women are displayed in Table 2.

In the regression on the natural log of wages of men, the most important results are that age has a positive effect on wages for younger workers, since the coefficient on age is positive and the age squared coefficients are small. However the effect of age on wages decreases as the age of an individual increases. This is because age is also included as a quadratic term in the regression, and the coefficient on that term is negative. This can be interpreted mathematically as age having a concave relationship with wages. Since age is meant to be a proxy for work experience, as a worker spends more years in the workforce, the marginal return to years in the workforce decreases as age increases (Benjamin, Gunderson, Lemieux and Riddell, 2007). The difference in productivity between someone with one year of working and someone with two years of working is likely to be greater than the difference between someone with fifteen years of working and someone with sixteen years of working. In the results for women, the coefficients for both age and age squared are of a lesser magnitude. As age was included to act as a proxy for work experience in the regressions, for women it is less effective since women are more likely to enter and exit the workforce because of factors such as marriage and childbirth. The effect of age for men and women on the natural log of wages is shown in Figure 2.

[2] Regressions including immigrants who came to this country before 1983 are in Table C in the Appendix.
[3] The results of the Breusch-Pagan tests are in Table A in the Appendix.

Table 2: 1991 Census Regression Results[4]

VARIABLES	1991 (Male) Natural Log of Wages	1991 (Female) Natural Log of Wages
Age	0.0850***	0.0749***
	(0.00209)	(0.00245)
$Age^2/100$	-0.0934***	-0.0831***
	(0.00255)	(0.00301)
YSM	0.219***	0.200***
	(0.0244)	(0.0237)
$YSM^2/100$	-1.429***	-1.501***
	(0.228)	(0.228)
Refugee*(YSM) (I)	0.0975**	0.0567
	(0.0433)	(0.0483)
Refugee*(YSM^2/100) (I)	-0.897**	-0.410
	(0.438)	(0.507)
Immigrant (D)	-1.135***	-0.883***
	(0.0568)	(0.0526)
Refugee (D)	-0.224***	-0.196**
	(0.0848)	(0.0911)
Montreal, GTA or Vancouver (D)	0.139***	0.205***
	(0.00442)	(0.00553)
Post Graduate (D)	0.375***	0.541***
	(0.00938)	(0.0126)
Bachelor (D)	0.260***	0.415***
	(0.00722)	(0.00869)
Some Post-Secondary (D)	0.0711***	0.135***
	(0.00524)	(0.00623)
No High School (D)	-0.193***	-0.236***
	(0.00573)	(0.00700)
Single (D)	-0.361***	0.150***
	(0.00554)	(0.00642)
Divorced, Widowed, or Separated (D)	-0.183***	0.109***
	(0.00682)	(0.00685)
Quebec (D)	-0.145***	-0.155***
	(0.00468)	(0.00590)
Prairies (D)	-0.183***	-0.128***
	(0.00841)	(0.00991)
Alberta (D)	-0.0217***	-0.0282***
	(0.00726)	(0.00904)
British Columbia (D)	-0.0755***	-0.153***
	(0.00667)	(0.00826)
Constant	8.555***	8.008***
	(0.0417)	(0.0484)
Observations	125,178	108,968
F-Statistic	1279.12***	737.93***
R-squared	0.175	0.113

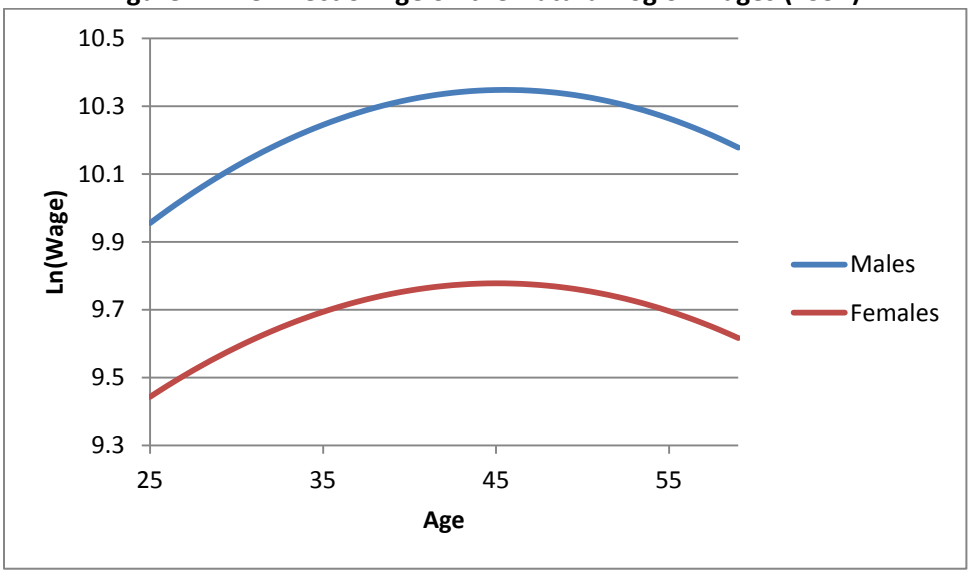
Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

[4] (D) refers to a dummy variable coefficient. (I) refers to an interaction variable coefficient

The coefficients on the dummy variables are positive for education levels above the high school diploma level and negative for a level of achievement below the high diploma school level. The coefficients are greater as the level of education achieved increases. This result is consistent with labour market theory, since educated workers either have more relevant training, making them more productive, and thus receiving higher wages; alternatively education does not provide relevant training, but it signals to employers that workers are capable because receiving higher levels of education is time consuming and difficult (Benjamin et al, 2007).

Figure 2: The Effect of Age on the Natural Log of Wages (1991)[5]



For men and women, the coefficients for dummy variables indicating marital status differ. Married is the default for both male and female regression equations. In the male regression results, not being married has a negative impact on wages and salaries, and being divorced, widowed or separated has a negative impact as well, but not to the same magnitude. The economic interpretation for these

[5] The male and female regressions are evaluated at the sample mean for each respective variable other than age to make the graph. Each census provides information on incomes received in the previous year. But for simplicity of presentation, we refer to the year of the census in the title heading. Figures 4, 6, and 8 follow the same method.

results for single men is that single men are perhaps likely to have less stability in their lives, including in the employment sphere, and are likely to have less success due to instability in their lives. For men who are divorced or separated, one of the major factors in marital breakdown is economic or financial pressures, such as a lost job (Stevenson and Wolfers, 2007). The economic intuition behind the positive coefficients on not being married for women is that women who are married are more likely to not work or only work part time. Thus, women who are unmarried, divorced, separated or widowed are more likely to work, and when they work, it is more likely to be full time, and therefore they have a higher wage as a result.

The coefficients on the dummy variables for province or region of residence are all negative and separately significant. As Ontario is the default, the negative coefficients on the other provinces or regions are negative. This implies that wages are lower on average in provinces other than Ontario. In 1991 Ontario was one of the wealthiest provinces in the country, so wages were higher there as a result (Osberg and Sharpe, 2011).

The coefficient on the dummy indicating residence in the three metro areas of Canada, Montreal, the Greater Toronto Area and Vancouver where the majority of immigrants to Canada settle, is also positive. This positive impact of residing in one of the major areas on wage is likely a result of both the concentration of industries that have higher salaries in those areas as well as the higher cost of living in those regions.

The major point of study for this paper is assessing the differences in labour market outcomes, if any, between refugees and other categories of immigrants. For both male and female regressions, the coefficient on the immigrant dummy variable is negative, which is understandable, since immigrants who come to this country take time to adjust to the labour market and would initially have lower wages as a result. The immigrant dummy coefficient is significant for both sexes at the 99 percent confidence level.

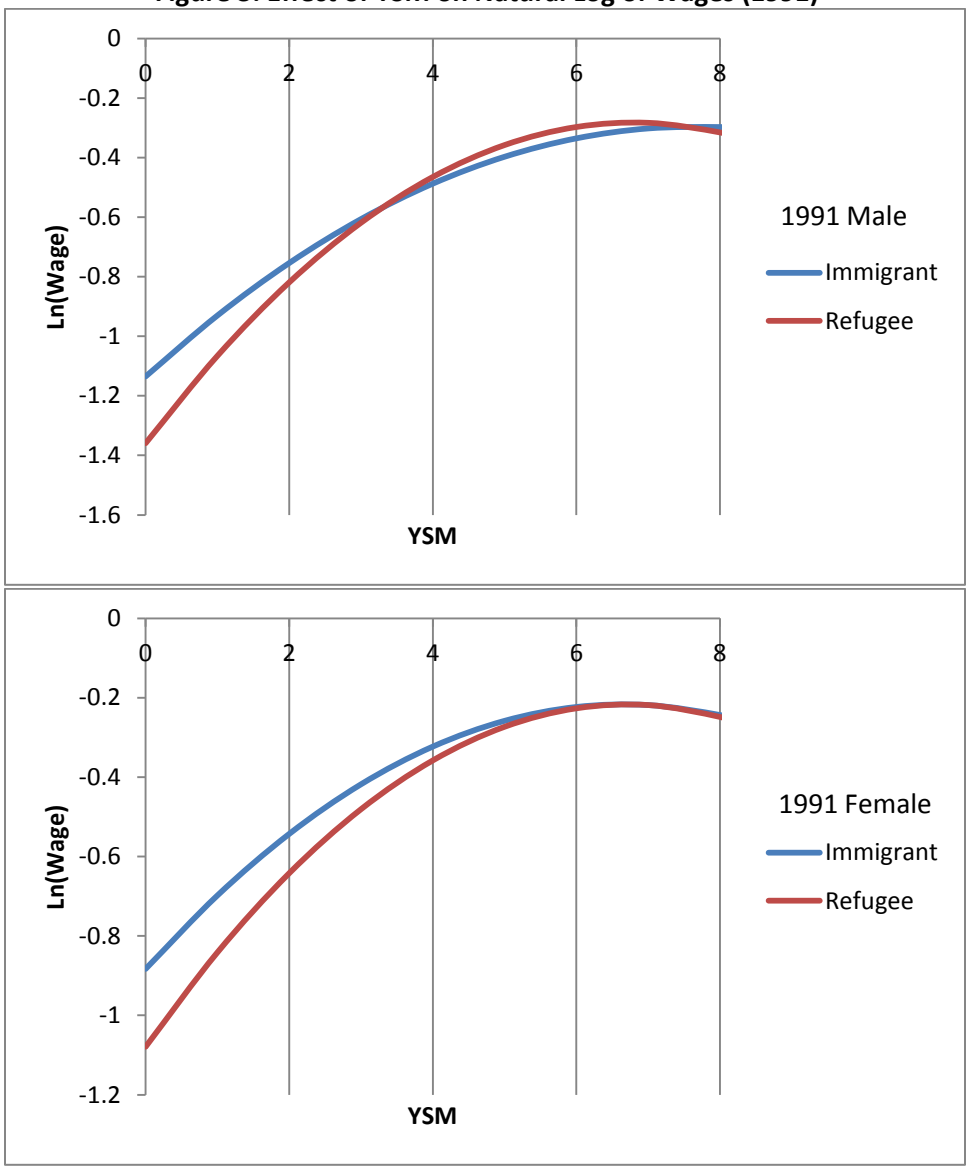
The coefficient on the refugee dummy variable is also negative for the regressions of both sexes. This implies that refugees have even lower wages than other categories of immigrants. This result should be expected, since refugees come from largely poorer countries and/or countries that have been swept by conflict. They are more likely to come to Canada with fewer resources, and almost always their immigration to Canada is unexpected and follows some traumatic event. Since refugees do not generally migrate for economic reasons, they would be less likely to have skills that align to the demands of the Canadian labour market (such as language fluency in either English or French). It is important to note, however, that in the female regression, the refugee dummy coefficient is significant only at the 95% confidence level, while in the male regression it is significant to the 99% confidence level.

The Years since Migration (YSM) coefficient is positive for both regressions, while the coefficient on the Years since Migration squared term is negative. This implies a similar relationship to the effect an individual's age had on wages. As the years an immigrant spends in Canada increases, they adapt to the labour market and are able to make themselves more attractive to employers (such as becoming more fluent in English or French), and they are likely to receive higher wages as a result. However, as the years they spend in the country increases, the marginal return for an extra year spent in Canada diminishes, implying a concave relationship between Years since Migration and wages and salaries (Chiswick, 1978).

To more precisely compare the wage differences between refugees and other immigrants, interaction variables were included in the estimated model. For both male and female regressions, the interaction between the refugee dummy and YSM is positive, while the interaction variable between the refugee dummy and YSM-squared is negative. This implies that the YSM curve is steeper for refugees than it is for other categories of immigrants. The interpretation for this result is as follows: as refugees arrive in Canada, their wages are initially lower than for other immigrants, but they rise faster as the amount of years they have been in the country relative to other types of immigrants increases, at least initially. For males, the coefficients on both interaction variables are independently significant at the

95% confidence level. A Wald F-test on the restriction that the refugee dummy coefficient and the two interaction variable coefficients are all equal to zero results in a p-value of 0.0601, just slightly below significance at the 95% level. However, in the female regression, both interaction variables are not significantly different than zero even at the 90% level. Nevertheless, a Wald F-test on the restriction that the refugee dummy and the two interaction variables are all equal to zero results in a p-value of 0.0108, meaning that the three coefficients are jointly significant at the 95% confidence level. Joint tests were performed to see whether there was a significant difference between refugees and non-refugee immigrants as it pertained to wages. If there was not a significant difference, then one would expect the variables related to refugees in the regression (the two interaction variables and the refugee dummy) to be jointly not significantly different than zero. The effects of Years since Migration, or YSM, on the natural log of wages for both other types of immigrants and refugees are displayed graphically in Figure 3.

Figure 3: Effect of YSM on Natural Log of Wages (1991)



4.3 Regression Results from 1996 Census

Like the regressions for the 1991 census, separate regressions were run for both male and females. For the same reasons as with the 1991 census, individuals residing in Atlantic Canada were excluded from the regression because the level of detail of foreign born residents of Atlantic Canada was too low to make a precise refugee dummy variable. Since the refugee case study has a timeframe from 1983 to 1996, only immigrants who arrived to the country from 1983 onwards were included, to better compare refugees with different classes of immigrants[6]. After estimating the model for both males and females with homoscedastic errors, Breusch-Pagan post-estimation tests were performed where the null is that the variance is homoscedastic. Both the test on the male and the female regressions led to a rejection of the null of homoscedastic variance[7]. Therefore the model was estimated with robust standard errors. The estimated coefficients for both male and female equations are presented in Table 3.

[6] Regressions including immigrants who came to this country before 1983 are in Table D in the Appendix.
[7] The results of the Breusch-Pagan tests are in Table A in the Appendix.

Table 3: 1996 Census Regression Results[8]

VARIABLES	1996 (Male) Natural Log of Wages	1996 (Female) Natural Log of Wages
Age	0.105***	0.0980***
	(0.00241)	(0.00266)
$Age^2/100$	-0.115***	-0.106***
	(0.00291)	(0.00325)
YSM	0.119***	0.136***
	(0.0104)	(0.0108)
$YSM^2/100$	-0.447***	-0.603***
	(0.0665)	(0.0701)
Refugee*(YSM) (I)	0.0384	-0.0239
	(0.0234)	(0.0276)
Refugee*(YSM^2/100) (I)	-0.221	0.292*
	(0.154)	(0.176)
Immigrant (D)	-1.080***	-0.977***
	(0.0354)	(0.0359)
Refugee (D)	-0.194**	-0.0365
	(0.0789)	(0.0946)
Montreal, GTA or Vancouver (D)	0.106***	0.197***
	(0.00500)	(0.00578)
Post Graduate (D)	0.400***	0.554***
	(0.00988)	(0.0119)
Bachelor (D)	0.282***	0.434***
	(0.00769)	(0.00844)
Some Post-Secondary (D)	0.0713***	0.135***
	(0.00582)	(0.00650)
No High School (D)	-0.180***	-0.233***
	(0.00660)	(0.00793)
Single (D)	-0.366***	0.0642***
	(0.00601)	(0.00670)
Divorced, Widowed, or Separated (D)	-0.196***	0.0467***
	(0.00733)	(0.00704)
Quebec (D)	-0.135***	-0.155***
	(0.00536)	(0.00627)
Prairies (D)	-0.177***	-0.134***
	(0.00917)	(0.0103)
Alberta (D)	-0.0448***	-0.0875***
	(0.00806)	(0.00941)
British Columbia (D)	-0.0312***	-0.0774***
	(0.00719)	(0.00823)
Constant	8.168***	7.575***
	(0.0488)	(0.0533)
Observations	121,659	108,358
F-Statistic	1229.48***	759.52***
R-squared	0.169	0.118

Robust standard errors in parentheses

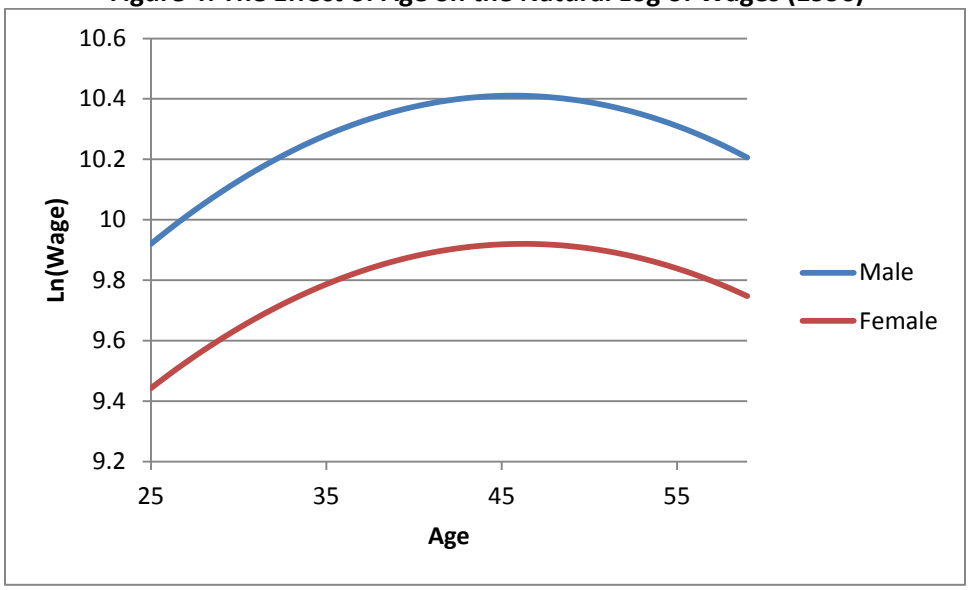
*** p<0.01, ** p<0.05, * p<0.1

[8] (D) refers to a dummy variable coefficient. (I) refers to an interaction variable coefficient

The male and female regression results, excluding the variables related to immigration, on the 1996 census dataset for the most part are similar to the results from the 1991 census. The coefficients on age and age squared imply a positive concave relationship between age and wages for both sexes, which economic intuition suggests is the case. Figure 4 graphically shows this relationship. With a high school diploma as the default in the regression and contained in the constant term, a higher level of education achieved had a higher positive coefficient for the corresponding dummy variable. The coefficient on the dummy variable for a lack of a high school diploma on the other hand was negative. The coefficients for the dummy variable indicating single marital status and the dummy variable indicating divorced, separated or widowed were negative in the male regression. Both dummy variables indicating marital status in the female equation were positive. These results for the variables indicating marital status in the 1996 are broadly similar to the results in the 1991 census. The control dummy variables for province of residence and residence in the three major metro areas of Canada also have the same positive signs as the 1991 regressions. All of the coefficients for the aforementioned variables are significant to the 99% confidence level for both men and women.

In both the male and female regressions, the results with the YSM and YSM-squared coefficients present the same concave relationship between Years since Migration and wages, which economic intuition would suggest is the case. As the years since arriving in the country increases, for immigrants the marginal impact of an extra year in Canada is positive but diminishes as the total number of years in the country increases, which is illustrated in Figure 5.

Figure 4: The Effect of Age on the Natural Log of Wages (1996)



The coefficient on the immigrant dummy variable is negative in both the female and male estimated equations and is significant in both at the 99% confidence level. The interpretation of that result is that wages are lower for immigrant workers than they are for workers who are native born Canadians at least upon initial arrival in Canada.

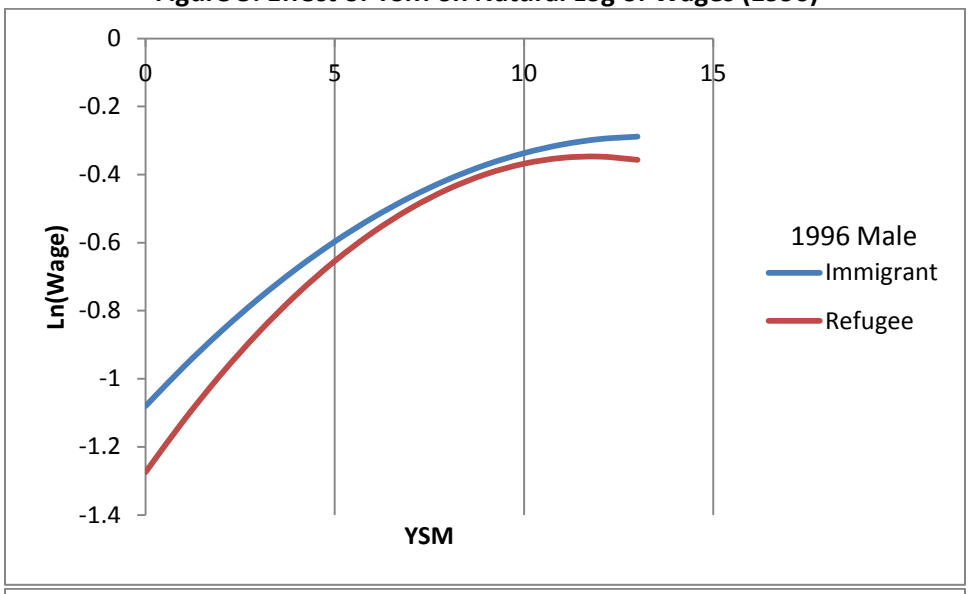
The result for the coefficient on the refugee dummy variable in the male regression is negative, so refugees on average would be expected to have lower wages than immigrants, all else being equal. This coefficient is significant at the 95% confidence level. The coefficient on the interaction variable between the refugee dummy and YSM is positive, while the interaction variable between the refugee dummy and YSM-squared is negative. Neither of these two coefficients are independently significant at even the 90% confidence level. However, a Wald F-test that the refugee dummy coefficient and the two interaction variables are all equal to zero results in a p-value of 0.0033, meaning the three coefficients are jointly significant at the 99% confidence level for males. The interpretation of this result is the same as the 1991 census regression for males. Initially, wages are lower for refugees than they are for other

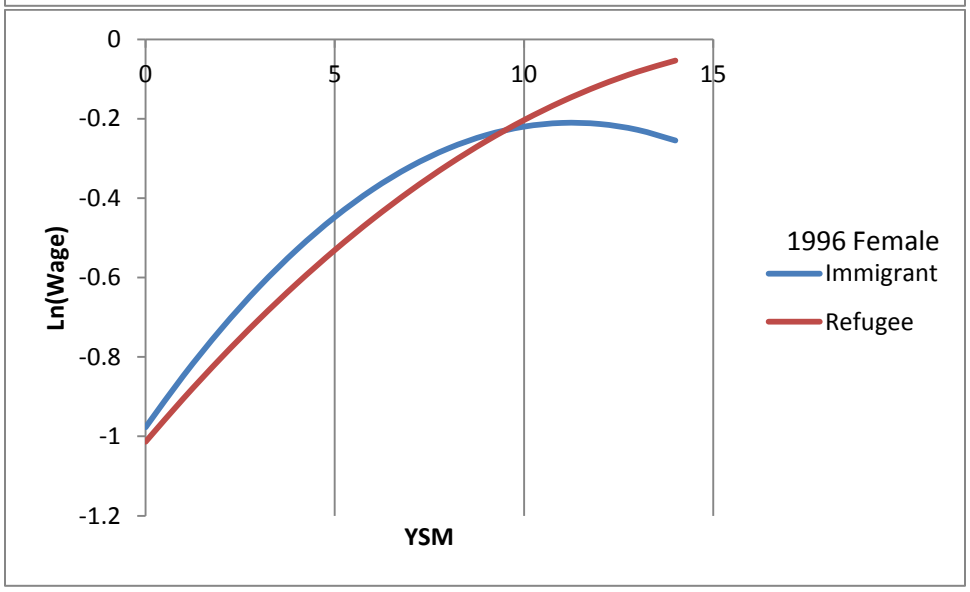
types of immigrants, but as the number of years residing in Canada increases, refugees' wages rise at a faster rate than the rate that other immigrants' wages increase.

The results for the female regression on the 1996 census are less clear-cut than for the male regression. The coefficient on the refugee dummy variable is negative, which is to be expected, but it is also small and insignificant at even the 90% confidence level. The coefficient on the interaction variable between the refugee dummy and YSM is negative, and is lower in absolute value than the coefficient on YSM. However, this coefficient is not significant at even the 90% confidence level. The coefficient on the interaction variable between the refugee dummy and YSM-squared is positive, and is lower in absolute value than the coefficient on the YSM-squared variable. This coefficient is individually significant at the 90% confidence level. This result means that, since the coefficients on the interaction variables are less in absolute value than the coefficients on YSM and YSM-squared, the relationship between refugee wages and Years since Migration is still a concave one. However, the slope for the YSM curve for refugees would show less curvature than the YSM curve for immigrants. This could be because female refugees are more likely to work part time, or they do not have the skills that make them attractive to employers as compared to female immigrants who base the decision to come to Canada with a greater weighting to economic criteria.

In the female regression, separately the refugee dummy and the interaction variable between YSM and the refugee dummy are not significant. With only the squared YSM interaction variable having a coefficient that is only significant at the 90% confidence level, it may be easy to discount these results as insignificant. However, a F-test where the null is that the coefficients on the refugee dummy and the two interaction variables are all equal to zero results in a p-value of 0.0011, leading to a rejection of the null that those coefficients are jointly insignificant. The YSM curves for the regressions are displayed in Figure 5.

Figure 5: Effect of YSM on Natural Log of Wages (1996)





4.4 Regression Results from 2001 Census

Because the case study on refugees only extends from 1983 to 1996, immigrants were included in the estimation if they had come to the Canada during or after 1983, but not after 1996. As with the previous two sets of regressions, both male and female natural log regressions were run, and all residents from the Atlantic Provinces were excluded due to the lack of detail on immigrants residing in those provinces[9]. Running Breusch-Pagan tests after estimating both models with constant variances led to a rejection of the null of homoscedasticity of the error variances[10]. Therefore the regressions for 2001 were again estimated using robust standard errors. The results from these estimations are displayed in Table 4.

The results from estimating the coefficients for the control dummy variables indicating residence, marital status and educational achievement all were significant at the 99% confidence level for both males and females. In both male and female regressions, the coefficient on age is positive, while the age squared coefficient is negative, meaning that there is a concave relationship between age and wages, which is shown graphically in Figure 6. This is the same relationship found in the regressions using the 1991 and 1996 datasets as well.

[9] 2001 Regressions including all immigrants are in Table E in the Appendix.
[10] The results of the Breusch-Pagan tests are in Table A in the Appendix.

Table 4: 2001 Census Regression Results[11]

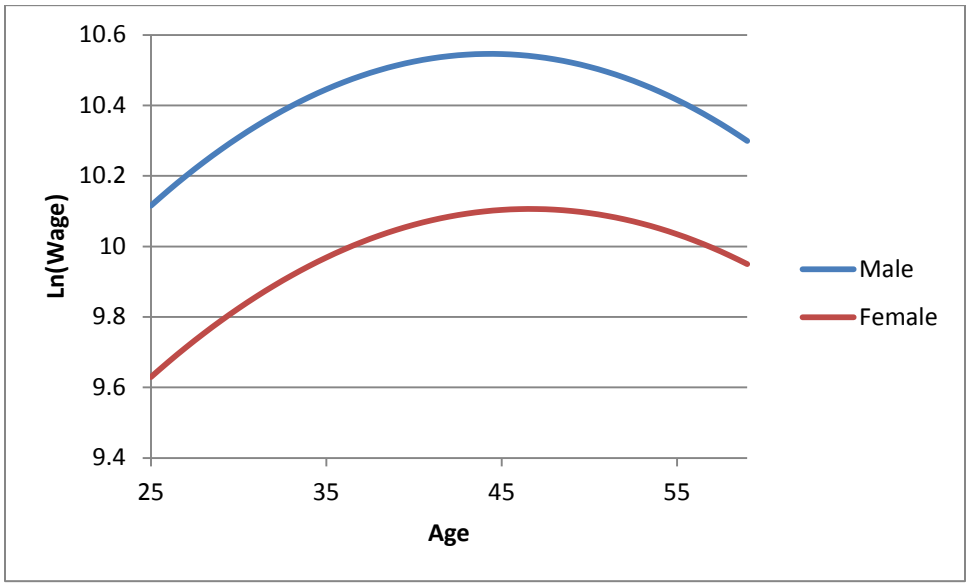
VARIABLES	2001 (Male) Natural Log of Wages	2001 (Female) Natural Log of Wages
Age	0.102***	0.0951***
	(0.00224)	(0.00246)
$Age^2/100$	-0.115***	-0.102***
	(0.00270)	(0.00298)
YSM	0.0324***	0.0357***
	(0.0123)	(0.0128)
$YSM^2/100$	-0.0438	-0.0412
	(0.0517)	(0.0534)
Refugee*(YSM) (I)	0.0469*	0.0781***
	(0.0260)	(0.0297)
Refugee*(YSM^2/100) (I)	-0.138	-0.240*
	(0.109)	(0.123)
Immigrant (D)	-0.690***	-0.609***
	(0.0666)	(0.0695)
Refugee (D)	-0.389***	-0.565***
	(0.146)	(0.169)
Montreal, GTA or Vancouver (D)	0.119***	0.199***
	(0.00478)	(0.00546)
Post Graduate (D)	0.437***	0.593***
	(0.00957)	(0.0103)
Bachelor (D)	0.337***	0.467***
	(0.00730)	(0.00774)
Some Post-Secondary (D)	0.107***	0.147***
	(0.00545)	(0.00622)
No High School (D)	-0.161***	-0.204***
	(0.00650)	(0.00793)
Single (D)	-0.329***	0.0528***
	(0.00548)	(0.00618)
Divorced, Widowed, or Separated (D)	-0.160***	0.0395***
	(0.00674)	(0.00658)
Quebec (D)	-0.137***	-0.143***
	(0.00517)	(0.00590)
Prairies (D)	-0.197***	-0.118***
	(0.00900)	(0.00987)
Alberta (D)	0.0257***	-0.0339***
	(0.00741)	(0.00872)
British Columbia (D)	-0.101***	-0.0836***
	(0.00697)	(0.00782)
Constant	8.388***	7.751***
	(0.0457)	(0.0499)
Observations	127,672	118,608
F-Statistic	1132.3***	785.03***
R-squared	0.149	0.112

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

[11] (D) refers to a dummy variable coefficient. (I) refers to an interaction variable coefficient

Figure 6: The Effect of Age on the Natural Log of Wages (2001)

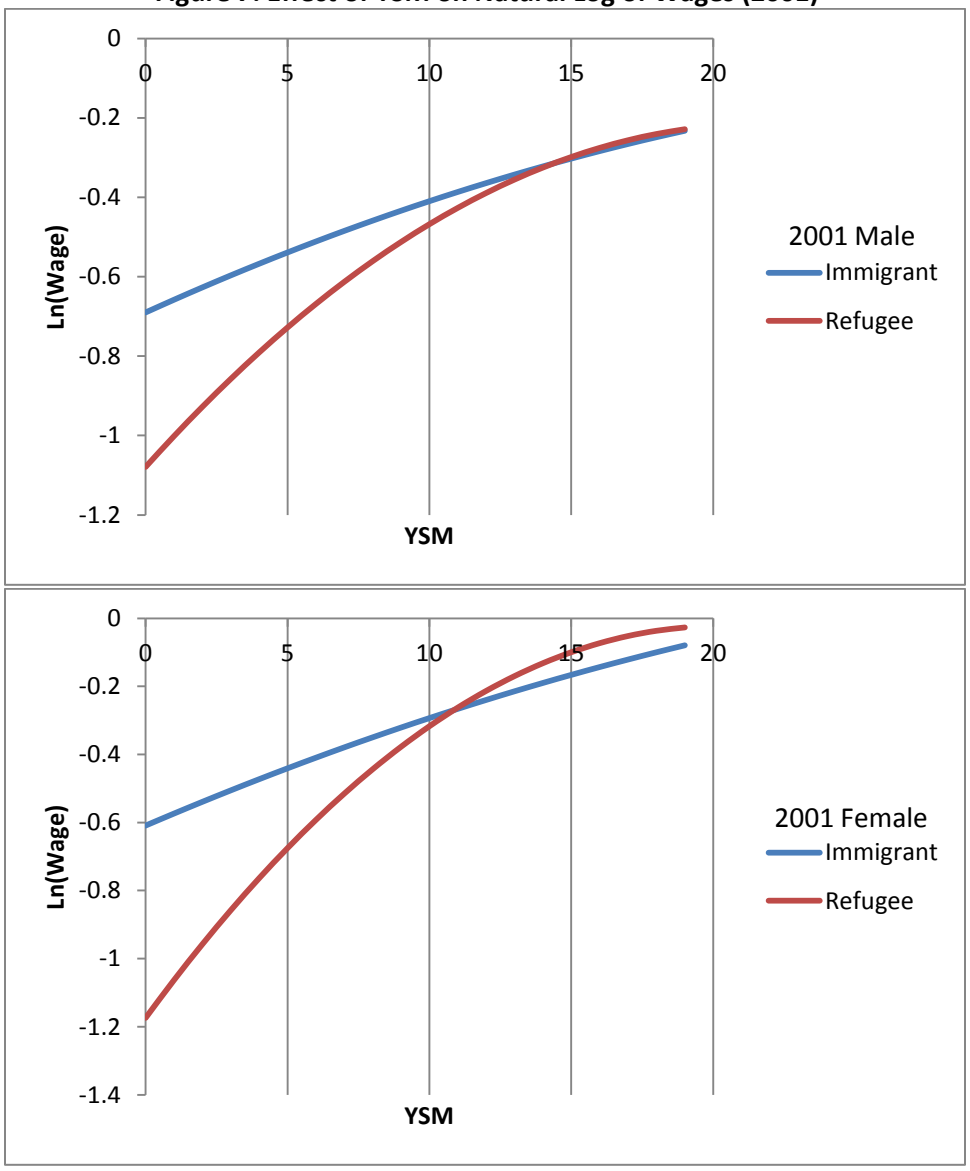


In both regressions, the coefficient on the immigrant dummy variable is negative, meaning that immigrant wages, all else being equal, are lower than for native-born Canadians. Both the male and female regressions had positive coefficients on the YSM variable and negative coefficients on the YSM-squared variable. This is the same result as the regressions using the 1991 and 1996 data sets, and implies that immigrants may initially start with lower wages, but wages increase after their arrival to Canada. However, the YSM-squared coefficients are not significant even at the 90% confidence level for both males and females.

For male regressions, the refugee dummy is negative as expected, and is significant at the 99% confidence level. The coefficient on the interaction variable between the refugee dummy and YSM is positive, but is significant only at the 90% confidence level. The coefficient on the interaction variable between the refugee dummy and YSM-squared is negative, but this coefficient is not even significant at the 90% confidence level. A Wald F-test on the three male refugee-related coefficients all being equal to zero results in a p-value of 0.00001424, leading to a rejection of the null that the refugee dummy coefficient and the two refugee interaction coefficients are jointly equal to zero for the male regression.

For the female regression, the refugee dummy coefficient is negative and significant at the 99% confidence level, while the coefficient on the interaction variable between YSM and the refugee dummy is positive and the coefficient on the interaction variable between the refugee and YSM-squared is negative. A Wald test on the three female refugee related coefficients all being equal to zero results in a p-value of 0.00003385, leading to a rejection of the null that the coefficients on the refugee related variables are all jointly equal to zero. The YSM curves for the regressions are displayed in Figure 7. Note that, since immigrants are only included in the regressions if they immigrated between 1983 and 1996, the lowest value YSM would take is 5.

Figure 7: Effect of YSM on Natural Log of Wages (2001)



The results of the regressions for both male and female on 2001 regressions indicate that refugees initially have lower wages than other immigrants when they first come to the country, but have a faster increase in wages compared to other categories of immigrants the longer they stay in the country.

4.5 Regression Results from 2006 Census

Unlike the regressions on the three previous censuses, the detail on immigrants residing in Atlantic Canada now allows the inclusion of them in the regressions using the 2006 dataset. Individuals who were immigrants were included in the regressions only if they had immigrated to Canada during the 1983 to 1996 timeframe which aligns with the refugee case study[12]. The model was also estimated using robust standard errors since Breusch-Pagan tests on both the male and female regressions rejected the null of homoscedasticity of the error variances[13]. The results from the regression output for both males and females are displayed in Table 5.

For both the male and female regressions, the coefficients on the control dummy variables indicating residence, marital status and educational achievement all are statistically significant at least at the 95% confidence level for both males and females. In both male and female regressions, the coefficient on age is positive, while the age squared coefficient is negative, meaning that there is once again a concave relationship between age and wages. This is the same relationship found in the regressions using the 1991, 1996 and 2001 datasets as well. The effect of age on the natural log of wage is displayed graphically in Figure 8.

[12] 2006 Regressions including all immigrants are in Table F in the Appendix.
[13] The results of the Breusch-Pagan tests are in Table A in the Appendix.

Table 5: 2006 Census Regression Results[14]

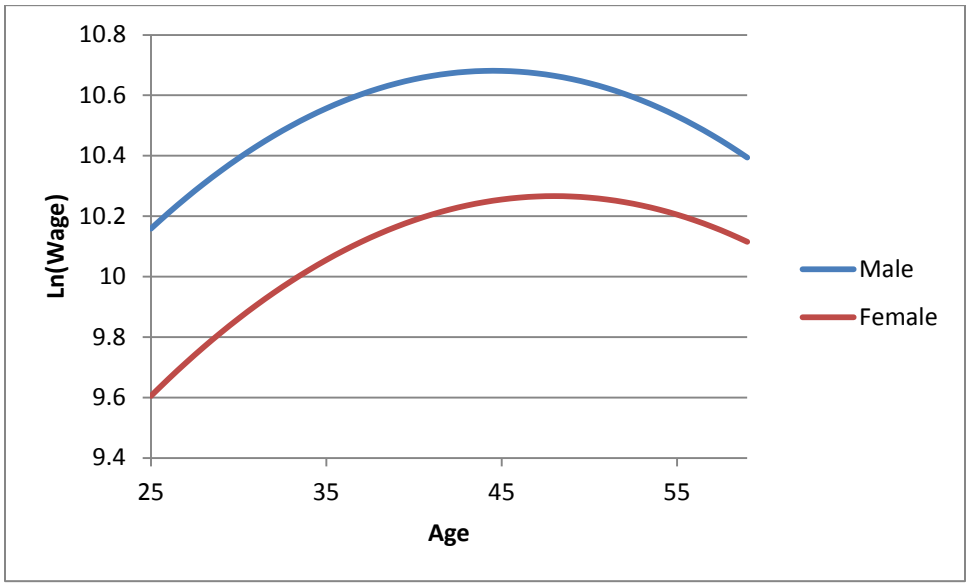
VARIABLES	2006 (Male) Natural Log of Wages	2006 (Female) Natural Log of Wages
Age	0.122***	0.120***
	(0.00242)	(0.00253)
$Age^2/100$	-0.137***	-0.125***
	(0.00291)	(0.00302)
YSM	0.0802***	0.0175
	(0.0241)	(0.0232)
$YSM^2/100$	-0.191**	0.00972
	(0.0758)	(0.0717)
Refugee*(YSM) (I)	-0.0740	0.0319
	(0.0473)	(0.0534)
Refugee*(YSM^2/100) (I)	0.254*	-0.0787
	(0.145)	(0.164)
Immigrant (D)	-1.097***	-0.530***
	(0.184)	(0.179)
Refugee (D)	0.477	-0.287
	(0.375)	(0.424)
Montreal, GTA or Vancouver (D)	0.0990***	0.164***
	(0.00558)	(0.00596)
Post Graduate (D)	0.437***	0.598***
	(0.0110)	(0.0102)
Bachelor (D)	0.355***	0.489***
	(0.00785)	(0.00760)
Some Post-Secondary (D)	0.106***	0.0903***
	(0.00554)	(0.00609)
No High School (D)	-0.248***	-0.419***
	(0.00778)	(0.00937)
Single (D)	-0.366***	0.0450***
	(0.00568)	(0.00625)
Divorced, Widowed, or Separated (D)	-0.183***	0.0229***
	(0.00752)	(0.00690)
Atlantic (D)	-0.320***	-0.264***
	(0.00924)	(0.00977)
Quebec (D)	-0.150***	-0.165***
	(0.00602)	(0.00638)
Prairies (D)	-0.160***	-0.105***
	(0.0102)	(0.0107)
Alberta (D)	0.152***	0.0205**
	(0.00822)	(0.00927)
British Columbia (D)	-0.0884***	-0.148***
	(0.00789)	(0.00839)
Constant (D)	8.089***	7.297***
	(0.0494)	(0.0520)
Observations	141,871	137,557
F-Statistic	1092.29***	889.45***
R-squared	0.141	0.119

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

[14] (D) refers to a dummy variable coefficient. (I) refers to an interaction variable coefficient

Figure 8: The Effect of Age on the Natural Log of Wages (2001)



In both the 2006 male and female regressions, the coefficient on the immigrant dummy variable is negative, meaning that immigrant wages, all else being equal, are initially lower than native born Canadians. The male regressions had a positive coefficient on the YSM variable and negative coefficients on the YSM-squared variable. This is the same result as the regressions using the three earlier datasets, and implies that immigrants may initially start with lower wages, but their wages increase at a faster rate than wages of non-immigrants. The results for the female coefficients on YSM and YSM-squared are quite different, however. For females, the coefficient on YSM-squared is positive but is very small. Furthermore, a test of the female YSM-squared coefficient for significance returns a p-value of 0.892, allowing the retention of the null that the coefficient on YSM-squared is not different than zero.

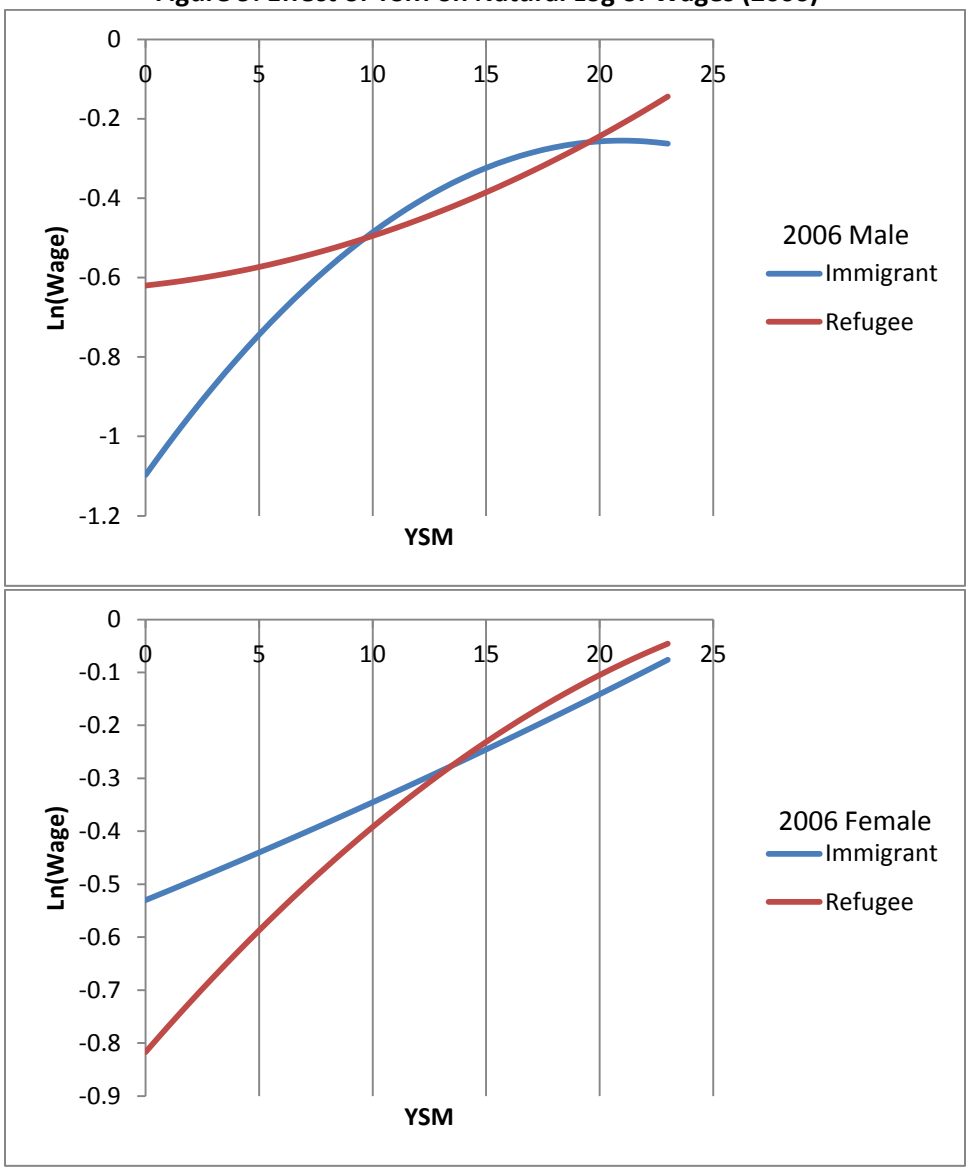
The results for the refugee-related coefficients in the female regression for 2006 are in line with the earlier regressions. The coefficient on the refugee dummy is negative, so all else being equal refugees would be expected to have lower wages initially than other types of immigrants. The coefficients on the interaction variables between the refugee dummy and YSM and YSM-squared also imply that, even though initially wages are lower for refugees than other immigrants, they grow at a

faster rate than immigrants of other categories the longer they stay in the country. However, neither the refugee dummy refugee coefficient, the coefficient on the interaction variable between YSM and the refugee dummy, or the coefficient on the interaction variable between the refugee dummy and YSM-squared is individually significant at the 90% confidence level. A Wald F-test for joint significance for the three female refugee coefficients returns a p-value of 0.711, resulting in retention of the null that the coefficients are all jointly equal to zero.

The results from the 2006 male regression are much different than all other regressions performed in this study. The refugee dummy is positive, unlike in other regressions. However, the dummy coefficient is not significant at the 90% confidence level. The coefficient on the interaction variable between the refugee dummy and YSM was negative, but it was lower in absolute value than the coefficient on YSM. This coefficient is not significant at the 90% confidence level, however. The coefficient on the interaction variable between the refugee dummy and YSM-squared is positive, individually significant at the 90% confidence level, and greater in absolute value than the YSM-squared coefficient. The results of the male regression imply a complex relationship between the natural log of refugee wages and YSM. This is an unexpected result in the male regression. However, since foreign born individuals were only included in the regression if they had immigrated between the years 1983 to 1996, since earlier male regressions had the log of male refugee wages increase faster than the wages of other types of immigrations, for the 2006 census one would expect the wage difference between refugee and other categories of immigrants to be smaller, which could explain the signs on the coefficients for males to be opposite than what would be expected. The relationship between Years since Migration and the log of wage for males is shown in Figure 9. Note that for this regression immigrants are only included if YSM is equal to or above 10 and equal to or less than 23, because immigrants are only included in the 2006 regressions if they immigrated between 1983 and 1996. A

Wald test for joint significance for the three male refugee coefficients returns a p-value of 0.0503, significant only at the 90% confidence level.

Figure 9: Effect of YSM on Natural Log of Wages (2006)



5 Conclusion

Because it was not possible with the census PUMF datasets to identify exactly which individuals in the censuses were refugees and which individuals were not, the results of this study are not as definitive as would be ideal. However, even with identifying individuals in the census who are likely to be refugees, conclusive results were still obtained. For males, the regressions in the 1991, 1996 and 2001 censuses all suggested that refugees have initially lower wages than immigrants of other categories, but their wages rise faster than immigrants in other categories. Wald F-tests on the coefficients related to refugees with the null that the refugee coefficients were jointly equal to zero led to strong rejections of the null. The 2006 census also suggested that refugee wages would rise faster than for other immigrants, but the coefficients implied that wages would be increasing at an increasing rate the longer refugees have been in the country. The 2006 census regression for males only included immigrants and immigrants who were likely to be refugees who had lived in Canada for at least ten years and up to 23 years. If it is true that refugee wages increase at a faster rate than their non-refugee counterparts, then it would be likely that there would be little difference between the wages of refugees and other types of immigrants after such a length of stay, and Ordinary Least Squares might produce a result that at first may seem counterintuitive, but is more likely an aspect of the 2006 dataset that is different than the other censuses. Also, the coefficients on the refugee variables for the 2006 census were not as statistically significant as they were in regressions performed on the three earlier censuses. Furthermore, the 2006 census did not have age as a continuous variable; rather age was expressed in 5-year interval cohorts, which could affect the results of the 2006 regressions, since both age and age squared are not as precise as they were in the other three censuses used for this paper.

The results of the female regressions are not as definitive as the male results. This is likely because the variable used in the regressions as a proxy of work experience, age, is not as good a proxy for females because of the higher propensity of women to enter and exit the labour force throughout

their lives and to work part time. However, in the 1991 and 1996 female regressions, the results suggest that women who are likely to be refugees start off with lower wages than other immigrants, but their wages rise at a faster rate. The coefficients related to refugees in the female 1991 and 1996 regressions are also statistically significant. The 2006 female regression has a similar result to the 1991 and 1996 regressions, but the coefficients related to refugees are not statistically significant, either individually or jointly. This is probably a result of both the relative weakness of the 2006 census' detail on age, and also because the individuals likely to be refugees included in the regression would have been settled in Canada for at least ten years, and thus the difference between refugee wages and the wages of other categories of immigrants would be smaller. The results of the 2001 census do suggest that wages for females likely to be refugees grow at a slower rate than other types of immigrants, but this is arguably outweighed by earlier the results that show the opposite.

One thing to consider for the regressions for the more recent datasets is that many of the individuals likely to be refugees in the 2001 and 2006 census who are younger could have been raised in Canada, and could be barely discernible from native- born Canadians. The data obtained from Citizenship and Immigration Canada on refugee flows was on refugees and their dependants. If a refugee came to Canada and brought his or her family along with them as dependants, they would be counted as refugees for the purpose of this study. However, if they came to Canada as youths in the early 1990's, they would be adults by the time of the 2006 census, and be counted among individuals likely to be refugees in that census. However, since such dependants came to Canada when they were younger when it is easier for them to adapt and integrate into a new culture, they may not be burdened with the same level of disadvantages that are typical of older immigrants. Such disadvantages for older immigrants include weak official language skills and foreign education credentials that are less recognized by employers, whereas immigrants coming to Canada at a younger age are more likely to have received more of their education in Canada.

Due to the weaknesses in the data sets, the results obtained from the regressions by no means definitively prove the fact that refugees' wages increase over time at a faster rate that puts their earnings closer with other immigrants and native-born Canadians after a considerable residence in Canada, but the results do provide surprisingly strong evidence that points in that direction. The results are similar to earlier studies done on immigrant wages and incomes that have achieved similar results when it comes to refugee labour market performance. This study's results are evidence that points in the opposite direction to the commonly held belief that refugees are economic underperformers when they arrive who continue to underperform, a belief that is used to argue that Canada's immigration policy should be focused by an even greater margin away from its humanitarian component.

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7 Appendix

Appendix Table A: Tests for Heteroskedasticity

Breusch-Pagan Test Results

Null is Constant Variance (Homoskedasticity)

Regression		Test on Regressors
1991 Male	χ^2	4252.29
	P-value	0.0000
	restrictions	19
1991 Female	χ^2	626.65
	P-value	0.0000
	restrictions	19
1996 Male	χ^2	3443.81
	P-value	0.0000
	restrictions	19
1996 Female	χ^2	516.41
	P-value	0.0000
	restrictions	19
2001 Male	χ^2	3298.08
	P-value	0.0000
	restrictions	19
2001 Female	χ^2	743.6
	P-value	0.0000
	restrictions	19
2006 Male	χ^2	3991.54
	P-value	0.0000
	restrictions	20
2006 Female	χ^2	699.6200
	P-value	0.0000
	restrictions	20

Appendix Table B: Case Study Place-of-Birth Tables

To construct the refugee dummy in the census datasets for the countries in the historical case study, Place of Birth variable was used in each of the census Public Use Microdata Files which aligned to each particular source country. Table B shows how each source country was reported in the 1991, 1996, 2001 and 2006 censuses.

	Corresponding Place of Birth Country/Region on Census			
Case Study Country	**1991**	**1996**	**2001**	**2006**
El Salvador	Central/South America & Caribbean	Central/South America & Caribbean	Central/South America & Caribbean	Central America
Guatemala	Central/South America & Caribbean	Central/South America & Caribbean	Central/South America & Caribbean	Central America
Nicaragua	Central/South America & Caribbean	Central/South America & Caribbean	Central/South America & Caribbean	Central America
Bosnia and Herzegovina	Yugoslavia	Yugoslavia	Yugoslavia, Former	Southern Europe
Poland	Poland	Poland	Poland	Poland
Hungary	Other Europe	Other Europe	Other Europe	Other Eastern Europe
Czechoslovakia	Other Europe	Other Europe	Other Europe	Other Eastern Europe
Romania	Other Europe	Other Europe	Other Europe	Other Eastern Europe
Ethiopia	Africa	Africa: East Africa	Eastern Africa	Eastern Africa
Somalia	Africa	Africa: East Africa	Eastern Africa	Eastern Africa
Ghana	Africa	Africa: Other	Other Africa	Other Africa
Iran	Middle East and Western Asia	West Central Asia & the Middle East	West Central Asia & the Middle East	West Central Asia & the Middle East
Iraq	Middle East and Western Asia	West Central Asia & the Middle East	West Central Asia & the Middle East	West Central Asia & the Middle East
Cambodia	Other South East Asia	East and South East Asia: Other	Eastern and South-East Asia: Other East Asia	Other South East Asia
Vietnam	Vietnam	Vietnam	Vietnam	Other South East Asia
Afghanistan	Middle East and Western Asia	West Central Asia & the Middle East	West Central Asia & the Middle East	West Central Asia & the Middle East
Lebanon	Middle East and Western Asia	West Central Asia & the Middle East	West Central Asia & the Middle East	West Central Asia & the Middle East
Sri Lanka	Southern Asia	Other Southern Asia	Other Southern Asia	Other Southern Asia

Appendix Tables C to F are the reported coefficients for regressions run including all immigrants in the census, not just immigrants who came to Canada during the time period of my historical case study.

Appendix Table C: 1991 Regression

VARIABLES	1991 (Male) Natural Log of Wages	1991 (Female) Natural Log of Wages
Age	0.0856***	0.0750***
	(0.00188)	(0.00221)
Age Squared/100	-0.0944***	-0.0835***
	(0.00227)	(0.00270)
YSM	0.0392***	0.0354***
	(0.00154)	(0.00175)
YSM Squared/100	-0.0563***	-0.0574***
	(0.00325)	(0.00396)
Refugee*(YSM) (I)	0.277***	0.221***
	(0.0358)	(0.0421)
Refugee*(YSM Squared/100) (I)	-2.263***	-1.855***
	(0.373)	(0.453)
Immigrant (D)	-0.665***	-0.506***
	(0.0166)	(0.0177)
Refugee (D)	-0.693***	-0.574***
	(0.0651)	(0.0764)
Montreal, GTA or Vancouver (D)	0.125***	0.205***
	(0.00405)	(0.00510)
Post Graduate (D)	0.402***	0.542***
	(0.00824)	(0.0113)
Bachelor (D)	0.270***	0.402***
	(0.00663)	(0.00798)
Some Post-Secondary (D)	0.0783***	0.131***
	(0.00487)	(0.00575)
No High School (D)	-0.187***	-0.228***
	(0.00528)	(0.00632)
Single (D)	-0.356***	0.148***
	(0.00525)	(0.00604)
Divorced, Widowed, or Separated (D)	-0.175***	0.110***
	(0.00631)	(0.00625)
Quebec	-0.156***	-0.159***
	(0.00440)	(0.00552)
Prairies	-0.186***	-0.119***
	(0.00789)	(0.00936)
Alberta	-0.0346***	-0.0281***
	(0.00671)	(0.00837)
British Columbia	-0.0842***	-0.157***
	(0.00587)	(0.00730)
Constant	8.549***	8.013***
	(0.0379)	(0.0441)
Observations	149,960	130,026
F-Statistic	1518.94***	862.85***
R-squared	0.172	0.111

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Appendix Table D: 1996 Regression

VARIABLES	1996 (Male) Natural Log of Wages	1996 (Female) Natural Log of Wages
Age	0.102***	0.0965***
	(0.00222)	(0.00245)
Age Squared/100	-0.112***	-0.104***
	(0.00266)	(0.00298)
YSM	0.0464***	0.0434***
	(0.00154)	(0.00162)
YSM Squared/100	-0.0641***	-0.0666***
	(0.00317)	(0.00346)
Refugee*(YSM) (I)	0.111***	0.0695***
	(0.0211)	(0.0254)
Refugee*(YSM Squared/100) (I)	-0.603***	-0.247
	(0.139)	(0.162)
Immigrant (D)	-0.833***	-0.685***
	(0.0173)	(0.0176)
Refugee (D)	-0.438***	-0.331***
	(0.0726)	(0.0892)
Montreal, GTA or Vancouver (D)	0.0954***	0.195***
	(0.00466)	(0.00541)
Post Graduate (D)	0.423***	0.553***
	(0.00896)	(0.0109)
Bachelor (D)	0.285***	0.429***
	(0.00719)	(0.00786)
Some Post-Secondary (D)	0.0752***	0.128***
	(0.00547)	(0.00608)
No High School (D)	-0.174***	-0.229***
	(0.00617)	(0.00726)
Single (D)	-0.365***	0.0673***
	(0.00574)	(0.00634)
Divorced, Widowed, or Separated (D)	-0.192***	0.0482***
	(0.00688)	(0.00653)
Quebec	-0.139***	-0.163***
	(0.00508)	(0.00594)
Prairies	-0.176***	-0.135***
	(0.00878)	(0.00983)
Alberta	-0.0469***	-0.0906***
	(0.00757)	(0.00885)
British Columbia	-0.0374***	-0.0845***
	(0.00649)	(0.00742)
Constant	8.216***	7.613***
	(0.0454)	(0.0496)
Observations	140,605	125,115
F-Statistic	1386.14***	863.47***
R-squared	0.165	0.115

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Appendix Table E: 2001 Regression Results

VARIABLES	2001 (Male) Natural Log of Wages	2001 (Female) Natural Log of Wages
Age	0.0961***	0.0921***
	(0.00210)	(0.00229)
Age Squared/100	-0.108***	-0.0986***
	(0.00251)	(0.00277)
YSM	0.0470***	0.0445***
	(0.00134)	(0.00144)
YSM Squared/100	-0.0618***	-0.0626***
	(0.00271)	(0.00294)
Refugee*(YSM) (I)	0.0317	0.0693***
	(0.0229)	(0.0268)
Refugee*(YSM Squared/100) (I)	-0.119	-0.219**
	(0.0959)	(0.111)
Immigrant (D)	-0.882***	-0.741***
	(0.0150)	(0.0160)
Refugee (D)	-0.188	-0.432***
	(0.130)	(0.154)
Montreal, GTA or Vancouver (D)	0.106***	0.195***
	(0.00454)	(0.00516)
Post Graduate (D)	0.430***	0.577***
	(0.00881)	(0.00966)
Bachelor (D)	0.329***	0.450***
	(0.00686)	(0.00727)
Some Post-Secondary (D)	0.107***	0.141***
	(0.00518)	(0.00586)
No High School (D)	-0.160***	-0.199***
	(0.00614)	(0.00734)
Single (D)	-0.321***	0.0552***
	(0.00525)	(0.00589)
Divorced, Widowed, or Separated (D)	-0.156***	0.0384***
	(0.00638)	(0.00616)
Quebec	-0.143***	-0.149***
	(0.00496)	(0.00564)
Prairies	-0.194***	-0.115***
	(0.00866)	(0.00946)
Alberta	0.0199***	-0.0383***
	(0.00706)	(0.00826)
British Columbia	-0.0985***	-0.0860***
	(0.00639)	(0.00712)
Constant	8.518***	7.828***
	(0.0431)	(0.0469)
Observations	147,143	136,308
F-Statistic	1284.96***	920.7***
R-squared	0.149	0.115

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Appendix Table F: 2006 Regression Results

VARIABLES	2006 (Male) Natural Log of Wages	2006 (Female) Natural Log of Wages
Age	0.115***	0.115***
	(0.00228)	(0.00238)
$Age^2/100$	-0.129***	-0.120***
	(0.00273)	(0.00284)
YSM	0.0546***	0.0537***
	(0.00151)	(0.00152)
$YSM^2/100$	-0.0716***	-0.0709***
	(0.00311)	(0.00303)
Refugee*(YSM) (I)	-0.0482	-0.00392
	(0.0406)	(0.0480)
Refugee*(YSM^2/100) (I)	0.134	5.82e-06
	(0.123)	(0.147)
Immigrant (D)	-1.022***	-0.930***
	(0.0159)	(0.0166)
Refugee (D)	0.408	0.113
	(0.326)	(0.384)
Montreal, GTA or Vancouver (D)	0.0861***	0.159***
	(0.00533)	(0.00568)
Post Graduate (D)	0.430***	0.574***
	(0.00986)	(0.00946)
Bachelor (D)	0.346***	0.466***
	(0.00728)	(0.00711)
Some Post-Secondary (D)	0.104***	0.0846***
	(0.00529)	(0.00576)
No High School (D)	-0.245***	-0.409***
	(0.00735)	(0.00870)
Single (D)	-0.355***	0.0508***
	(0.00547)	(0.00597)
Divorced, Widowed, or Separated (D)	-0.174***	0.0293***
	(0.00718)	(0.00650)
Atlantic (D)	-0.328***	-0.266***
	(0.00913)	(0.00963)
Quebec (D)	-0.165***	-0.172***
	(0.00576)	(0.00610)
Prairies (D)	-0.164***	-0.106***
	(0.00986)	(0.0103)
Alberta (D)	0.145***	0.0231***
	(0.00785)	(0.00879)
British Columbia (D)	-0.0990***	-0.141***
	(0.00727)	(0.00764)
Constant (D)	8.235***	7.420***
	(0.0468)	(0.0492)
Observations	162,004	157,159
F-Statistic	1269.9***	1078.67***
R-squared	0.144	0.127

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1