

**Religion and Earnings of Immigrants in Ontario**

by

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## **Abstract**

This paper examines the effects of religious background on earnings and the rate of return to human capital of immigrants in Ontario, using the 1991 Canadian Census Microdata.

Religious affiliation and place of birth as two dimensions of cultural background are related to each other. Jews have the highest earnings among religious groups when controlling for other explanatory variables. Male Catholics earn more than male Protestants, while female Catholics earn more than female Protestants. In addition, the western religious groups earn on average more than the eastern religious groups. For the immigrants from People's Republic of China and South Asia, female Christians have an earnings advantage relative to other religions. Male Sikhs have higher earnings than male Hindus among South Asian immigrants.

The rates of return to human capital differ across religious groups. Jews gain the highest returns to schooling and working experience in the male group, but they have no "credential effect" of a university degree, as opposed to their female counterparts. Male Catholics have lower returns to schooling than male Protestants. In addition, Muslims rank the highest for the returns to education and job market experience in the female group. Female Catholics earn significantly more from possessing a university degree than female Protestants. With the sample of male immigrants in Ontario, this paper compares the results with Tomes (1983) based on the sample of native-born white males.

# Religion and Earnings of Immigrants in Ontario

## 1. Introduction

Immigration has played an important role in the Canadian labour market. With the arrival of over 200,000 immigrants per year, the proportion of immigrants in the total population is rising. Moreover, the source countries of recent immigrants are mostly located in Asia, as opposed to Western Europe for earlier immigrants. Consequently, these significant changes brought more foreign cultures and religions to Canada. For example, the number of Buddhists, Hindus, Muslims and Sikhs has increased with the rise of Asian immigration. In addition, the group with no religion is growing since more and more Chinese immigrants come to Canada. Obviously, the diversity of religions is an important dimension of multiculturalism in Canada. Religions have considerable influence on society in a lot of aspects of life, such as politics, economy, and culture.

Economists have expressed much interest in the study of the correlation between immigrant status and earnings. In particular, they have paid attention to factors such as immigrants' language ability, demographic characteristics, gender, visible minority, etc. However, there is almost nothing on religion. Since religion as one factor of immigrant status is quite important, it is worth studying the relationship between the religions of immigrants and their earnings. To what extent can different religions influence earnings? How is the rate of return on human capital affected by different religions? The Canadian Censuses of 1971, 1991 and 2001 had a question on religion. Since the microdata of the 2001 Canadian census are not available yet, I use the 1991 Canadian Census Microdata and focus on four points in this paper:

- (1) An analysis of the relationship between religious affiliation and place of birth for immigrants and study of the means of selected characteristics for the different religious groups;
- (2) An examination of the effects of different religions on earnings for male and female immigrants in Ontario;
- (3) An examination of the rate of return to human capital for the different religious groups with the sample of immigrants in Ontario and comparison with the results of Tomes (1983);
- (4) An analysis of two special groups: immigrants from the People's Republic of China and South Asia.

In the data from the 1991 Canadian Census, about 86.4% of immigrants in Ontario reported they have religious beliefs. Catholics form the largest group among all religions, accounting for 41.3% of the total sample. Protestants form the second largest with 27.3%. No religion is a special group, whose proportion of 13.6% exceeds all groups other than Catholic and Protestant. According to their share of the population, Eastern Orthodox, Muslims, Hindus, Jews, Buddhists, Sikhs, and other religions follow. Religions may influence people in many respects, such as earnings, investment in human capital, the extent of hard work and the way they assimilate into Canada, etc. This paper presents the sample means of several variables to reflect the average levels among different religious groups. Some studies have explored the relationship between religion and earnings, but they focused on the overall population rather than on immigrants. Therefore, this research about immigrants is new. This paper examines the effect of religious affiliation of immigrants on earnings. Tomes (1983) has presented empirical evidence on the relationship between religion and rate of return on

human capital, for native-born white males, excluding immigrants. This paper uses the Tomes' method to have a look at the results for male and female immigrants in Ontario. Since immigrants from the People's Republic of China and South Asia have some particular characteristics with respect to religious affiliation, this paper also investigates the effects of religion on the earnings of these two special groups.

The remainder of this paper proceeds as follows. The second section summarizes the previous empirical research related to the topic of this paper. The third section presents the empirical model and describes the data source. The fourth section analyzes the empirical results. The final section contains a brief summary and the conclusions.

## **2. Previous empirical research**

Gockel (1969) examines the extent to which the differences in total family income among thirteen religious groups are explained by the differences in the composition of those groups. He uses male, fully employed heads of 7,518 households in a 1962 national sample survey conducted in the US as his data source. The mean values of family income indicate that Jews ranks the highest in thirteen religious groups. Further, Gockel investigates how education and occupation can affect the family income of each religious group. However, he finds that "only five of thirteen groups display an adjusted mean which varies more than \$500 from the grand mean." (p.641). Moreover, Gockel employs the interaction of religion with education and occupation to estimate the separate effects of these two variables on the income of each religious group. He finds that "in general, those groups with higher educational achievement receive a higher increment of income per year of schooling completed" (p.642). Meanwhile, the results reveal that Catholics do at least as well as the average in putting their educational

and occupational attainments to financial use. The rate of return to education of Catholics is higher than that of the denominations containing the bulk of Protestants. In his model, Gockel uses family income as the dependent variable rather than the logarithm of earnings which is always employed in human capital estimating equations.

However, in his famous work “The Protestant Ethic and the Spirit of Capitalism”, Weber (1920) argues that “the percentage of Catholics among the students and graduates of higher educational institutions in general lags behind their proportion of the total population,” (p.38). Moreover, he cites another writer’s words “The Catholic is quieter, having less of acquisitive impulse; he prefers a life of the greatest possible security, even with a smaller income, to a life of risk and excitement, even though it may bring the chance of gaining honour and riches.”<sup>1</sup> (p.40) Weber concludes that Protestants earn more than Catholics based on sociological evidence.

The relationship between religion and rate of return on human capital has been discussed by economists. Because cultural background plays an important role in socio-economic status, religion as one dimension of family culture influences the rate of return on human capital and earnings. Tomes (1983) adopts the human capital estimating equation (Mincer, 1974), regressing the logarithm of earnings on schooling, experience, experience square, etc., with the 1971 Canadian Census data for four religious groups: Jews, Roman Catholic, Protestant, and Other / No religion. His sample is restricted to white, native-born, Canadian males (between 25 and 64) with positive earnings. Tomes reports that the earnings mean of Jews is higher than that of Protestants and Catholics. This result is the same as that of Gockel (1969). In the regression analyses, Tomes mentions: “As anticipated, the ‘human capital’ variables – schooling, experience and its square – are important determinants of logarithm earnings. The

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<sup>1</sup> This writer’s name is not specified by Weber (1920).

coefficient estimates display substantial variation across religious groups” (p.129). He finds that the return to schooling of Jews ranks the highest, followed by Protestants, Catholics, and the residual groups (OTHER/NO RELIGION). Several of these differences are statistically significant at the 10 or 5 percent level. Moreover, in terms of the return to job market experience Jews also have higher returns than both Protestants and Catholics. These differences are significant at the 10 percent and 5 percent levels, respectively. Protestants have significantly higher returns to experience than Catholics.

In addition, Tomes examines the “credential” effect of a degree, holding years of schooling constant. He finds that the return to a university degree for Protestants is significantly higher than to either Catholics or Jews. Comparing Protestants and Catholics, Tomes concludes that the returns to schooling, experience, and a degree are substantially and significantly higher for Protestants. For Jews, Tomes finds that there is no credential effect and that there are no differences between the returns from an extra year of university without a degree and those from a year with a degree.

Furthermore, Tomes uses various subsamples including Canada except Quebec, Quebec, Toronto and Montreal metropolitan areas to estimate earnings functions for the four religious groups. With the different subsamples, some conclusions are reinforced and some differences are found. In Canada excluding Quebec, Jews also rank the highest in the returns to human capital (schooling and experience) among religious groups; Protestants rank higher than Catholics in the returns to schooling, experience, and a university degree. However, in the Montreal sample Catholics have the highest return to schooling.

Tomes’ finding that Jews not only invest more in schooling, but also receive a higher rate of return presents evidence in opposition to the hypothesis of Brenner and Kiefer (1981).

These authors argue that Jews invest more in human capital and thus receive a lower rate of return on it. Moreover, Tomes' conclusion that Catholics invest less in schooling and receive a lower rate of return than Jews and Protestants is contrary to the hypothesis used in recent analyses of Catholic-Protestant fertility differentials. (see, e.g., Carliner et al., 1980; Robinson and Tomes, 1982). These authors argue that Catholics are predicted to choose larger families and make less investment per child, so they receive a higher rate of return on their investments. However, Tomes suggests that Catholics face a higher price of quality relative to quantity (number of children) and have larger size families, because they have the lower rate of return to human capital.

Meng and Sentence (1984) employ the method of Tomes (1983) to perform a regression analysis about the effect of religious differences on human capital investment and returns. They adopt the data from the 1973 Canadian National Mobility Study to take into account cultural background variables such as parental income, education and family size. Their results indicate a high consistency with those of Tomes. They conclude that differences in earnings caused by religious affiliation significantly exist and that these differences are not influenced in size or degree of significance by adding other appropriate cultural background variables. In the meantime, they also find one interesting point, that larger family sizes may increase rather than decrease the eventual earnings of family members for Catholics.

Tomes (1984) examines the relationship between religious groups and earnings again. However, he chooses religious background rather than current religious affiliation as one dimension of cultural background and employs the cumulative NORC General Social Surveys 1973-1980 data. When he holds schooling constant and restricts all coefficients to be the same across religious groups, he finds no significant differences among the major

religious groups, except for between Jews and Protestants. The absence of any Catholic-Protestant earnings differential is against Greeley's (1976) viewpoint of a sizable and significant Catholic advantage in family income. When he performs a regression analysis of the effect of religious background on human capital variables, Tomes finds that the marginal returns to college received by Catholics are higher than those to Protestants. This conclusion contrasts with Tomes's (1983) results based on the 1971 Canadian Census. These two different conclusions imply that Canadian findings about religious differences can not be extended to North America as a whole.

It appears that no recently published economic study investigates the effects of religious groups on earnings and on the rate of return to human capital; therefore, I cannot present more recent empirical research in this section.

### **3. The empirical framework and data issues**

The empirical results of my paper are based on an analysis of the 1991 Canadian Census Microdata. The sample is restricted to immigrants, age twenty-five to sixty-four with positive earnings in Ontario, and yields 38,642 respondents. The variables employed in the empirical analysis are defined in Table 1. I describe some variables in detail as follows:

**Age:** The ages of all respondents are specified to be between 25 and 64, since the ages of immigrants who can earn money from a job or own business mostly belong to this range.

**Schooling:** This variable is an important factor of human capital and it reflects the education attainment in this paper. By using the category of Total Years of Schooling and taking the mid-points exactly for intervals, I code this variable as follows: "Never or kindergarten only"= 0; "1-4 years of schooling"= 2.5; "5-8 years of schooling"= 6.5; "9 years of

schooling”= 9; “10 years of schooling”= 10; “11 years of schooling”= 11; “12 years of schooling”= 12; “13 years of schooling”= 13; “14-17 years of schooling”= 15.5; “18 or more years of schooling”= 18.

**University Degree:** I use the category of Highest Degree, Certificate or Diploma and consider respondents who have a degree higher than university degree as university graduates in my paper.

**Religion:** In this paper, I pay attention to the major religious groups, so I combine some religious denominations into ten larger groups, including Catholics, Protestants, Eastern Orthodox, Jews, Buddhists, Hindus, Muslims, Sikhs, No religion and Other religions. When I pool all religious groups together to do regression on earnings, I choose Protestants as the reference group.

**Years since immigration:** Because the issues discussed in this paper are about immigrants, this variable is necessary in the estimation. Compared to the year of 1991 and taken mid-points for intervals, this variable is coded as follows: “Before 1946”= 50; “1946-50”= 44; “1951”= 41; “1952”= 40; “1953-55”= 38; “1956”= 36; “1957”= 35; “1958-60”= 33; “1961-62”=31; “1963-65”= 28; “1966”= 26; “1967”= 25; “1968-70”= 23; “1971-72”= 20; “1973-75”= 18; “1976-77”= 16; “1978-79”= 14; “1980”= 12; “1981”= 11; “1982-83”= 10; “1984-85”= 9; “1986”= 6; “1987”= 5; “1988”= 4; “1989”= 3; “1990”= 2; “1991”= 1.

**Place of birth:** Because I restrict the sample to immigrants in this paper, the places of birth of respondents all locate outside Canada.

**Full- time weeks worked in 1990:** The category of Full-time/Part-time Weeks Worked in 1990 is adopted to describe the respondents if they work 30 hours or more per week or not.

**Mother Tongue:** Because language highly influences immigrants' earnings, I take into account if respondents' mother tongue is neither English nor French. If respondents report the mother tongue is not "English single response", "French single response", or "English and French", their mother tongue is considered as being a foreign language.

Cultural background has an important effect on earnings. In this paper, I examine how religion as one dimension of cultural background influences the earnings of immigrants and the rate of return on human capital. However, the data source does not contain a lot of cultural background variables; only respondents' religious affiliation, place of birth, ethnic origin, and mother tongue are available. Ethnic origin is not necessary in the analysis, because it is related to place of birth and I only focus on the information about immigrants. Without information on parents' income, education, and other dimensions of cultural background, the estimated effects of religion in this paper may be capturing the effects of those variables.

In this paper, I adopt the human capital estimating equation (Mincer, 1974) which is also employed by Tomes (1983). For the first regression, my estimating equation is as follows:

$$\begin{aligned}
 LNEARN = & \beta_0 + \beta_1 SCHOOL + \beta_2 EXP + \beta_3 EXPSQ + \beta_4 RCATH + \beta_5 REAST + \beta_6 RJEW + \\
 & \beta_7 RBUDD + \beta_8 RHIN + \beta_9 RISL + \beta_{10} RSIKH + \beta_{11} NOREL + \beta_{12} OTHERREL + \beta_{13} MAR + \\
 & \beta_{14} YSM + \beta_{15} LN WEEKS + \beta_{16} UNV + \beta_{17} FT + \beta_{18} FORMTG + \beta_{19} USA + \beta_{20} GMY + \\
 & \beta_{21} ITALY + \beta_{22} PORTU + \beta_{23} POLAND + \beta_{24} USSR + \beta_{25} THEREU + \beta_{26} MEWASIA + \\
 & \beta_{27} SASIA + \beta_{28} HK + \beta_{29} CHINA + \beta_{30} PHI + \beta_{31} VNAM + \beta_{32} THERESEA + \beta_{33} AFR + \\
 & \beta_{34} CSAC + \beta_{35} OTHER. \quad (1)
 \end{aligned}$$

In equation (1), the logarithm of earnings is the dependent variable and schooling, experience and its square are major explanatory variables. Meanwhile, I control for the logarithm of weeks worked in 1990 and the years since immigration, thus variations in the dependent variable reflect differences in weekly earnings of immigrants.

In addition, I introduce six groups of dummy variables to analyze the effects of other control variables on the logarithm of earnings. They include nine dummy variables indicating religious affiliation, a dummy variable for marital status, a dummy variable representing the possession of a university degree, a dummy variable indicating full-time/part-time weeks worked in 1990, a dummy variable for mother tongue status, and seventeen dummy variables for place of birth.

For the second regression, my estimating equation is as follows:

$$LNEARN = \beta_0 + \beta_1SCHOOL + \beta_2EXP + \beta_3EXPSQ + \beta_4RCATH + \beta_5REAST + \beta_6RJEW + \beta_7RBUDD + \beta_8RHIN + \beta_9RISL + \beta_{10}RSIKH + \beta_{11}NOREL + \beta_{12}OTHERREL + \beta_{13}MAR + \beta_{14}YSM + \beta_{15}LNWEEKS + \beta_{16}UNV + \beta_{17}FT + \beta_{18}FORMTG \quad (2)$$

Compared to the first regression, the dummy variables for place of birth are deleted from the estimating equation (2). Because religion and place of birth are two dimensions of immigrants' cultural background and they are related to each other (see table 2 below), the result of the second regression may yield the mixed effects of religious affiliation on earnings relative to that of the first regression, i.e. the coefficients of religious groups in the second regression may include the effects that the factor of place of birth yields on earnings to some extent. I will compare these two results and explore the relationship between them.

In the third phase, I perform separate earnings regressions for ten religious groups according to religious affiliation. The estimating equation is as follows:

$$LNEARN = \beta_0 + \beta_1SCHOOL + \beta_2EXP + \beta_3EXPSQ + \beta_4MAR + \beta_5YSM + \beta_6LNWEEKS + \beta_7UNV + \beta_8FT + \beta_9FORMTG + \beta_{10}USA + \beta_{11}GMY + \beta_{12}ITALY + \beta_{13}PORTU + \beta_{14}POLAND + \beta_{15}USSR + \beta_{16}OTHEREU + \beta_{17}MEWASIA + \beta_{18}SASIA + \beta_{19}HK + \beta_{20}CHINA + \beta_{21}PHI + \beta_{22}VNAM + \beta_{23}OTHERESEA + \beta_{24}AFR + \beta_{25}CSAC + \beta_{26}OTHER. \quad (3)$$

Relative to the first regression, the dummy variables for religion disappear in the estimating equation (3). With the results, I compare the different effects that human capital variables and other variables have on earnings between religious groups.

#### **4. The empirical results**

Using the 1991 Canadian Census, I calculate the weight of the religious groups for immigrants in Ontario. The results by sex are presented in Figure 1. Putting males and females together, Catholics account for more than 40% of the total sample and rank the highest among all religious groups. Protestants have a weight close to 30% and are the second largest group. The population of No religion is also considerable and this group ranks third among all religious groups, followed by Eastern Orthodox, Muslims, Hindus, Jews, Buddhists, Sikhs, and Other religions.

Because the weight of the religious groups may be related to the distribution of respondents by place of birth, I put the major places of birth for each religious group in Table 2 and compare these two variables. The evidence indicates that immigrants' religious affiliation is consistent with the major religions of their home countries. For example, a lot of Catholics come from Italy; UK is a major region source of protestants in the sample; most Eastern Orthodox immigrate from Eastern Europe countries, such as Greece; Jews usually come from central or eastern European countries; the majority of Buddhists are born in East/East South Asian countries; the home country of Hindus is mainly India; Muslims usually immigrate from the Middle East and Western Asia; most Sikhs come from Southern Asia; immigrants who have no religion were born in the UK, Hong Kong or P.R.China in general; immigrants who have other religions usually come from the UK, Southern Asia, Middle East or Western Asia. Based on the above results, the relationship between religion affiliation and place of birth is obvious and it indicates that both these factors are dimensions of cultural background which has an important impact on immigrants' earnings.

#### **Analyses of sample means for religious groups**

I present the means of selected variables for the religious groups in Table 3-1 for males and in Table 3-2 for females.

**TABLE 1**  
**Definitions of Variables for the Earnings Equations**

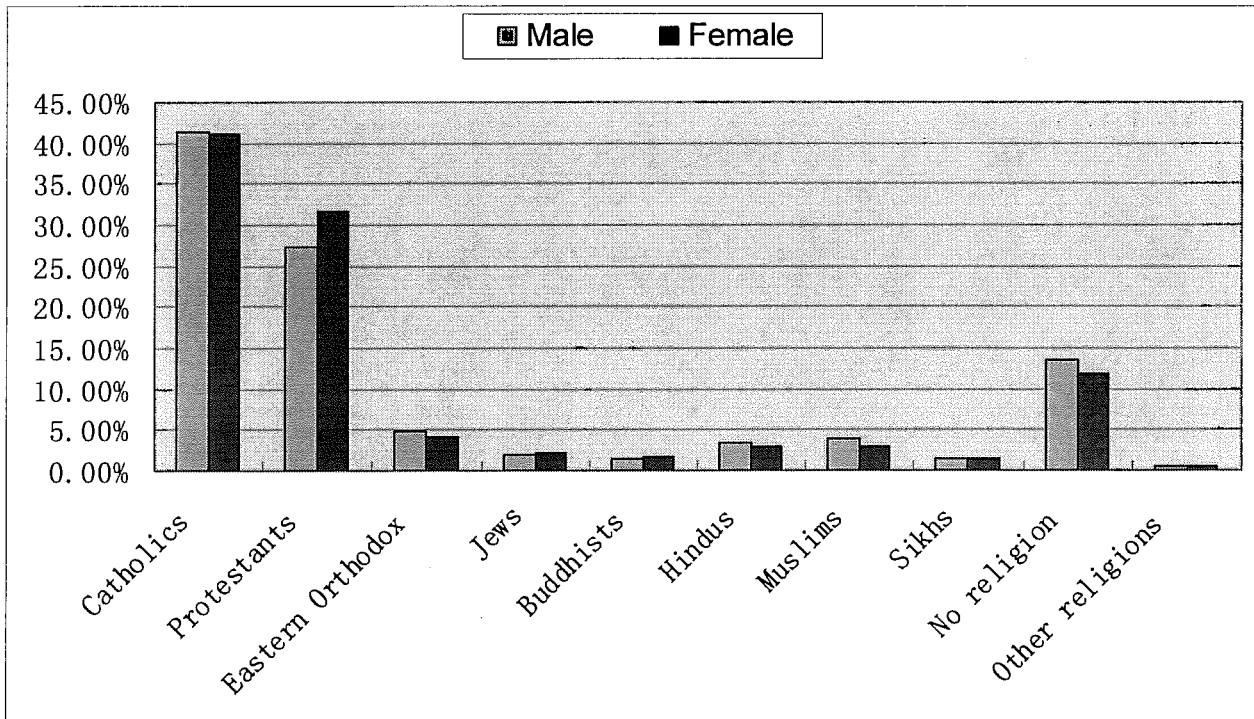
LNEARN	Natural logarithm of earnings (income from wages and salaries plus net income from self-employment)
SCHOOL	Total years of schooling
EXP	Experience = (age – SCHOOL – 6)
EXPSQ	Experience squared
RELIGION*	Reference group: RPROT: Protestants (Anglican; Baptist; Jehovahs Witnesses; Lutheran; Mennonite and Hutterite; Pentecostal; Presbyterian; United Church; Protestant, n.o.s.; and Other protestant) RCATH: Catholics (Roman Catholic and Other Catholic) REAST: Eastern Orthodox (Greek Orthodox and Other Eastern Orthodox ) RCHRIS: Christian (Catholic, Protestant and Eastern Orthodox) RJEW: Jews RBUDD: Buddhists RHIN: Hindus RMUL: Muslims RSIKH: Sikhs NOREL: No religion OTHERREL: Other religions ( Baha'i; Confucian; Jains; Other Eastern Non-Christian; Shinto; Taoist; Zoroastrian; Para-religious groups; Agnostic; Atheist; Free Thinker; Humanist; Other non-religious groups; Other, n.e.c.)
MAR*	Now married (husbands, wives and common-law partners)
YSM	Years since immigration
LNWEEKS	Natural logarithm of weeks worked in 1990
UNV*	University degree
FT*	Worked majorly full- time weeks in 1990
FORMTG*	Mother tongue neither English nor French
PLACE OF BIRTH*	Reference group: UK: United Kingdom USA: United States of America GMY: Federal Republic of Germany ITALY: Italy PORTU: Portugal POLAND: Poland USSR: U.S.S.R. OTHEREU: Other Europe MEWASIA: Middle East and Western Europe SASIA: Southern Asia HK: Hong Kong CHINA: People's Republic of China PHI: Philippines VNAM: Viet Nam OTHERSEA: Other E/SE Asia AFR: Africa CSAC: Central/South America/Carr&Ber OTHER: Other

\*Dummy variables: 1 if criterion satisfied, 0 otherwise

For the male group, Jews have the highest average earnings and earn 31.8% more than the sample mean (\$36,796 versus \$27,913). Moreover, Jews have 2.2 extra years of schooling and a 29.7% higher proportion of holding a university degree relative to the sample mean. In these two categories, Jews also rank the highest among all religious groups. Each of these characteristics may increase the possibility for Jews to obtain higher earnings. In addition, Protestants earn 12.4% more than the sample mean (\$31,361 versus \$27,913), followed by Catholics, No religion, Other religions, Hindus, Eastern Orthodox, Sikhs, Muslims, and Buddhists. The rate of university degree attainment is higher for Other religions, Hindus and Muslims than for the other religious groups, excluding Jews. For the variables of working experience, Eastern Orthodox have the highest number of years among all religious groups. The mean values of years since immigration indicate that Protestants, Catholics, Eastern Orthodox, and Jews immigrated to Canada earlier than the other religious groups. Muslims, Hindus, Sikhs, and Buddhists, who mostly come from Asia, have settled down in Canada for only about 12 years on average. This result is consistent with the fact that Asian immigration increased since the mid-1970s. In addition, the average age of these four groups is also lower than that of the other religious groups. As for the proportion of foreign mother tongue people, Protestants have the lowest rate and Sikhs, Eastern Orthodox, and Buddhists have higher rate than other groups. The reason may be that the most Protestants came from the UK where English is an official language; however, the major places of birth for Sikhs, Eastern Orthodox, and Buddhists are neither English nor French speaking countries.

For the female sample, Jews earn 17.7% more than the sample mean (\$18,583 versus \$15,783) and have the highest level among all religious groups, followed by Other religions, No religion, Catholics, Protestants, Hindus, Eastern Orthodox, Muslims, Buddhists, and

**Figure 1**  
**Weight of Religious Groups of Immigrants in Ontario, 1991**



Data source: 1991 Canadian Census Microdata, 100 percent sample of the male and female immigrants aged 25-64 years in Ontario.

Sikhs. The group of Other religions rank the highest in the category of schooling and university degree. Compared to the sample mean, this group has 2.1 extra years of schooling and a 26% higher ratio of university degree attainment. For these two categories, Jews perform well and rank second among all religious groups. Like their counterpart in the male group, female Eastern Orthodox also achieve the most years of working experience. The years since immigration and the age of Muslims, Hindus, Sikhs, and Buddhists are lower than those for other religious groups, consistently with the results of the male group. In the category of foreign mother tongue, the same results as those based on the male group are shown.

Comparing the male and female groups, some important differences emerge: First, males

**TABLE 2**  
**Major Places of Birth for Religious groups in Ontario(1991)**

	<b>Major Places Of Birth</b>
Catholics	Italy, Other Europe, Portugal
Protestants	UK, Other Europe, Central/South America/Carr&Ber
Eastern Orthodox	Other Europe, Middle East and Western Asia
Jews	Other Europe, Africa, U.S.S.R.
Buddhists	Vietnam, Other E/SE Asia, P.R.China
Hindus	Southern Asia, Central/South America/Carr&Ber
Muslims	Middle East and Western Asia, Africa, Southern Asia
Sikhs	Southern Asia
No religion	UK, Hong Kong, P.R.China
Other religions	UK, Southern Asia, Middle East and Western Asia

Data source: 1991 Canadian Census Microdata, 100 percent sample of the immigrants aged 25-64 years in Ontario.

Notes: The major places of birth for each religious group are indicated if they have a weight of more than 10 percent in a category. If more than three places are applied to this condition for one religious group, I only choose the three places whose weight ranks the highest.

earn 76.8% more than females and the earnings advantage for males exists in all religious groups. Especially for male Protestants, their earnings are twice those of female Protestants (\$31,361 versus \$15,666). Second, males in most religious groups make a little more investment in education than their female counterparts. However, male Catholics have a little less years of schooling than female Catholics. Third, for all religious groups, males usually have more years of working experience than females, excluding Sikhs and Buddhists. Finally, the proportion possessing a university degree is higher for males than for females in each religious group, except Catholics and Other religions. Generally, married females may devote more time to their families than males, so differences of earnings and working experience between males and females are often observed.

#### **Analyses of Regression Estimates of Earnings among Immigrants**

Table 4-1 and Table 4-2 report OLS earnings regressions among immigrants for males and

females, respectively. In these two estimations, I introduce dummy variables for religious affiliation with Protestants as the reference group since this religion plays an important role in Canada. For the group of place of birth dummy variables, I use the UK as the reference group because a large proportion of immigrants were born in the UK. In addition, two regressions are performed for each sex group. Regression (1) includes dummy variables for place of birth and regression (2) does not. Since religion and place of birth can be seen as two dimensions of cultural background for immigrants, and since they are related to each other, I employ these two regressions to measure the net effect and mixed effect of religion on earnings, respectively. "Mixed effect" refers to the effect of religion which may include the influence that place of birth yields on earnings.

In regression (1) for the male group, holding other explanatory variables constant, I find some significant differences in earnings between the various religious groups and the reference group. Jews earn 13.5% ( $t = 3.14$ ) more than the Protestant reference group; Muslims and Eastern Orthodox earn 8.4% ( $t = -2.4$ ) and 8.3% ( $t = -2.8$ ) less than Protestants, respectively; Other religions and Hindus earn 12.1% ( $t = -1.65$ ) and 6.9% ( $t = -1.87$ ) less than Protestants (significant at the 10 percent level). On the other hand, the difference in earnings between Catholics and Protestants is not statistically significant. In regression (2) for the male group, deleting the dummy variables for place of birth, I get some different coefficient estimates from those in regression (1). The results indicate that more religious groups have significantly different earnings from Protestants. Jews earn 12.1% ( $t = 2.89$ ) more than Protestants; Catholics' earnings are 4.3% ( $t = 2.91$ ) higher than Protestants' rather than the result of no difference between them in regression (1); Muslims, Hindus and Eastern Orthodox all earn significantly less than Protestants at the 5 percent level; Other religions,

Buddhists, and No religion all have significantly lower earnings than Protestants at the 10 percent level. Comparing the results of two regressions, the mixed effect of religion in regression (2) captures the effect of place of birth on immigrants' earnings, so it may overestimate the real effect of religion on the earnings. However, the net effect of religion in regression (1) may not be estimated precisely, since religion and place of birth as two dimensions of cultural background are related indeed.

For the female group, the results present some differences from those for male. In regression (1), Jews have 16% ( $t = 3.6$ ) higher earnings than the Protestants reference group; Eastern Orthodox, Catholics, and No religion earn 8.1% ( $t = 2.29$ ), 6.4% ( $t = 3.74$ ), and 5.6% ( $t = 2.45$ ) more than Protestants, respectively. These differences are all significant at the 5 percent level. In regression (2), Jews earn 12.9% ( $t = 3.03$ ) more than Protestants; No religion, Eastern Orthodox, and Catholics earn 7.6% ( $t = 3.55$ ), 7.5% ( $t = 2.27$ ), and 6.1% ( $t = 3.88$ ) more than Protestants, respectively. These differences are statistically significant at the 5 percent level. Obviously, the results of two regressions for female group are very similar. The estimated effect of religion does not capture the effect of place of birth to a large extent; therefore, I infer that the effect of relation between religion and place of birth for female group is less than that for male group.

### **Analyses of Regression Estimates of Earnings for Separate Religious Groups**

Based on the above analyses, I conclude that religion has an impact on immigrants' earnings. Furthermore, I attempt to investigate the differences in the effects of other explanatory variables on earnings between religious groups, in particular, the influence that religion has on the rate of return to human capital.

The earnings regressions for religious groups are reported in Table 5-1 for males and in

**TABLE 3-1**  
**Sample Means for Earnings Equations**

Variable	MALE										
	All	Catholics	Protestants	Eastern Orthodox	Jews	Buddhists	Hindus	Muslims	Sikhs	No religion	Other religions
Earnings	27912.50	27877.91	31361.30	23549.97	36795.84	19875.83	24174.41	21191.39	21701.79	27313.87	25043.76
Schooling Year	12.9092	11.8923	13.6606	11.6660	15.0811	11.9369	14.3154	14.3315	12.8494	13.9105	14.8730
Experience	24.6132	26.0109	25.6696	27.0462	23.7220	20.7400	19.2355	19.0941	18.9829	21.6351	20.9139
Age	43.5	43.9	45.3	44.7	44.8	38.7	39.6	39.4	37.8	41.6	41.8
Years since immigration	21.9783	23.3025	24.6885	22.5842	21.2170	11.8769	12.3857	12.6261	11.9317	19.8291	19.9426
Logarithm of weeks worked	3.7797	3.7696	3.8120	3.7533	3.7975	3.7249	3.7908	3.6993	3.6996	3.7887	3.7515
University degree	23.155%	16.866%	23.001%	16.266%	52.868%	20.308%	36.915%	35.178%	27.019%	33.065%	43.443%
Foreign language	63.607%	76.958%	36.791%	95.091%	54.863%	91.692%	61.295%	79.090%	95.963%	56.693%	50.820%
N	21084	8710	5765	1039	401	325	726	813	322	2861	122

Data source: 1991 Canadian Census Microdata, 100 percent sample of the male immigrants aged 25-64 years in Ontario.

**TABLE 3-2**  
**Sample Means for Earnings Equations**

Variable	FEMALE										
	All	Catholics	Protestants	Eastern Orthodox	Jews	Buddhists	Hindus	Muslims	Sikhs	No religion	Other religions
Earnings	15783.34	15864.83	15666.03	14693.64	18583.33	13864.40	15176.75	14000.66	13814.86	16839.96	17274.38
Schooling Year	12.7078	12.0594	13.3387	11.0782	14.7646	11.5313	13.7076	13.2500	11.6504	13.3110	14.8059
Experience	23.4870	24.3152	24.5288	25.5871	22.6578	21.7122	17.6176	18.8153	19.0953	20.6449	19.0882
Age	42.2	42.4	43.9	42.7	43.4	39.2	37.3	38.1	36.8	40.0	39.9
Years since immigration	21.2842	21.9126	23.8606	22.2803	20.5267	11.6678	12.4826	13.6735	12.9703	18.2850	19.4941
Logarithm of weeks worked	3.7048	3.7089	3.7151	3.6617	3.7077	3.6980	3.6813	3.6379	3.6562	3.7070	3.6715
University degree	19.928%	17.445%	18.031%	13.469%	45.293%	18.092%	33.538%	21.840%	21.610%	26.515%	45.882%
Foreign language	58.179%	72.606%	30.400%	95.782%	49.873%	92.763%	57.873%	68.367%	95.339%	59.234%	49.412%
N	17558	7217	5546	735	393	304	489	490	236	2063	85

Data source: 1991 Canadian Census Microdata, 100 percent sample of the female immigrants aged 25-64 years in Ontario.

Table 5-2 for females. As predicted, the “human capital” variables – schooling, experience and its square – are important determinants of logarithm earnings. However, the coefficient estimates vary across religious groups.

For the male group, the returns to schooling are all significantly different from zero at the 5 percent level, with the exception of the small group of Other religions (significant at the 10 percent level,  $t = 1.74$ ). Jews rank the highest, followed by Hindus, Other religions, Muslims, Sikhs, Buddhists, Protestants, No religion, Eastern Orthodox, and Catholics. The returns to Jews and Hindus are significantly higher than those of Protestants at the 5 percent level ( $t = 2.1$  and  $2.41$ , respectively).<sup>2</sup> Moreover, the returns for Catholics are significantly less than for Protestants at the 5 percent level ( $t = -2.88$ ). For the male group, the average return to schooling is 2.94 percent.<sup>3</sup> The return to Jews is 7.4 percent, which exceeds the average level by 152 percent (7.4 percent versus 2.94 percent). Hindus, Other religions, Muslims, Sikhs, Buddhists, Protestants, and No religion also receive the returns which are higher than the mean. However, Eastern Orthodox and Catholics obtain the less returns than the mean by 16 percent (2.48 percent versus 2.94 percent) and 19 percent (2.37 percent versus 2.94 percent), respectively.

For the female group, the situation is very different from that of the male group. Muslims receive the highest returns to schooling, followed by Protestants, Hindus, Catholics, Jews, No religion, Eastern Orthodox, Sikhs, Buddhist, and Other religions. The coefficients of “SCHOOL” are significant for Muslims, Protestants, Hindu, Catholics, and No religion at the 5 percent level. Eastern Orthodox have statistically significant

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<sup>2</sup> In the significance tests for difference of returns to human capital across religious groups, the t-values are derived from pooled regressions in which interaction terms are introduced, such as Catholic\*SCHOOL, Catholic\*EXP, Catholic\*UNV, etc. This way to proceed is the same as Tomes' (1983). Protestant continues to be the reference group.

<sup>3</sup> See Table 4-1.

return to schooling at the 10 percent level ( $t = 1.82$ ). Comparing with Protestants, the group of Other religions gains significantly less than Protestants from an extra year of schooling at the 5 percent level ( $t = -1.98$ ). Eastern Orthodox' returns to schooling are significantly lower than those of Protestants' at the 10 percent level ( $t = -1.75$ ).

Regarding the return to job market experience, Jews also rank the highest in the male group, followed by Protestants, Hindus, Muslims, No religion, Catholics, Eastern Orthodox, Sikhs, Buddhists, and Other religions. However, when I use Protestants as benchmark group, the differences between Protestants and other religious groups are not statistically significant. For the female group, Muslims obtain the highest return to experience, followed by No religion, Eastern Orthodox, Buddhists, Catholics, Protestants, Other religions, Jews, Sikhs, and Hindus. However, the coefficients of "EXP" are significant only for Muslims, No religion, Catholics, and Protestants.

The coefficients of "UNV" for males are all significant at the 5 percent level, except for Jews, Other religions, and Sikhs. The results indicate that for most religious groups, the returns from a university degree are substantially higher than without a degree. Although Jews receive the highest returns to schooling and job market experience, they have no "credential" effect of a university degree. Compared to males, more female religious groups have no "credential" effect of a university degree, including Other religions, Buddhists, Hindus, Sikhs, and Muslims. However, it is interesting that the coefficient of "UNV" for female Jews is statistically significant. Using again Protestants as benchmark group, I observe that Eastern Orthodox and Catholics earn significantly more than Protestants from possessing a university degree at the 5 percent and 10 percent levels ( $t = 1.97$  and  $1.66$ ), respectively.

**TABLE 4-1**  
**Regression Estimates of Earnings among Immigrants**  
**(All Religious groups pooled)**

Variable	MALE			
	Parameter Estimates (1)	t Value	Parameter Estimates (2)	t Value
Intercept	5.58989	85.51	5.49632	87.31
SCHOOL	0.02939	13.64	0.02477	12.29
EXP	0.02595	12.84	0.02577	12.75
EXPSQ	-0.00043724	-11.67	-0.00044782	-11.93
RCATH	0.01981	1.21	0.04274	2.91
REAST	-0.08323	-2.80	-0.07469	-2.66
RJEW	0.13516	3.14	0.12071	2.89
RBUDD	-0.01621	-0.31	-0.08791	-1.88
RHIN	-0.06875	-1.87	-0.10462	-3.24
RMUL	-0.08373	-2.40	-0.11143	-3.58
RSIKH	-0.02215	-0.41	-0.04232	-0.90
NOREL	-0.02050	-1.04	-0.03504	-1.87
OTHERREL	-0.12082	-1.65	-0.13217	-1.80
MAR	0.18663	12.04	0.19767	12.75
YSM	0.00866	13.48	0.01158	20.39
LNWEEKS	0.79209	57.86	0.79360	57.80
UNV	0.27724	17.20	0.27511	17.31
FT	0.72002	24.81	0.72806	24.98
FORMTG	-0.07518	-4.03	-0.09256	-7.26
USA	-0.11695	-3.44		
GMY	-0.06140	-1.80		
ITALY	0.01535	0.51		
PORTU	0.04541	1.29		
POLAND	-0.17032	-4.49		
USSR	-0.17242	-2.93		
OTHEREU	-0.06000	-2.37		
MEWASIA	-0.17458	-4.21		
SASIA	-0.14275	-3.99		
HK	-0.09766	-2.42		
CHINA	-0.27170	-6.42		
PHI	-0.27198	-6.10		
VNAM	-0.17117	-3.36		
OTHERESEA	-0.24740	-5.69		
AFR	-0.12289	-3.44		
CSAC	-0.20544	-9.08		
OTHER	0.12422	1.34		
Adjust R <sup>2</sup>	0.2966		0.2902	
N	21084		21084	

Data source: 1991 Canadian Census Microdata, 100 percent sample of the male immigrants aged 25-64 years in Ontario.

Notes: The dependent variable is the natural logarithm of earnings LNEARN.

Regression (1) includes dummy variables for place of birth; Regression (2) does not include dummy variables for place of birth.

Protestant is reference group for religion dummy variables; UK is reference group for place of birth dummy variables.

**TABLE 4-2**  
**Regression Estimates of Earnings among Immigrants**  
**(All Religious groups pooled)**

Variable	FEMALE			
	Parameter Estimates (1)	t Value	Parameter Estimates (2)	t Value
Intercept	5.21488	82.82	5.22738	87.21
SCHOOL	0.03474	13.91	0.03323	14.26
EXP	0.01198	5.50	0.01171	5.39
EXPSQ	-0.00023973	-5.71	-0.00024166	-5.77
RCATH	0.06410	3.74	0.06085	3.88
REAST	0.08114	2.29	0.07493	2.27
RJEW	0.16013	3.60	0.12855	3.03
RBUDD	0.00820	0.15	-0.00220	-0.05
RHIN	-0.01656	-0.38	-0.02465	-0.63
RMUL	0.00098577	0.02	-0.00227	-0.06
RSIKH	0.03001	0.47	0.00421	0.08
NOREL	0.05601	2.45	0.07626	3.55
OTHERREL	0.04105	0.46	0.01636	0.19
MAR	-0.03742	-2.51	-0.03502	-2.37
YSM	0.00964	13.32	0.00980	15.62
LNWEEKS	0.82975	68.04	0.83253	68.30
UNV	0.23900	12.94	0.23770	13.13
FT	0.72321	44.59	0.72517	44.89
FORMTG	-0.07481	-3.52	-0.05662	-4.08
USA	-0.03054	-0.95		
GMY	0.03776	0.99		
ITALY	0.02052	0.60		
PORTU	0.08087	2.01		
POLAND	-0.05585	-1.33		
USSR	-0.12725	-1.99		
OTHEREU	0.02540	0.89		
MEWASIA	-0.07164	-1.38		
SASIA	-0.00521	-0.13		
HK	0.15172	3.57		
CHINA	0.04723	0.96		
PHI	-0.02375	-0.58		
VNAM	-0.02045	-0.35		
OTHERESEA	-0.00251	-0.06		
AFR	0.06651	1.60		
CSAC	-0.00185	-0.08		
OTHER	0.15638	1.67		
Adjust R <sup>2</sup>	0.3731		0.3720	
N	17558		17558	

Data source: 1991 Canadian Census Microdata, 100 percent sample of the female immigrants aged 25-64 years in Ontario.

Notes: The dependent variable is the natural logarithm of earnings LNEARN.

Regression (1) includes dummy variables for place of birth; Regression (2) does not include dummy variables for place of birth.

Protestant is reference group for religion dummy variables; UK is reference group for place of birth dummy variables.

The constant terms differ across religious groups and are generally negatively correlated with returns to human capital. For the male group, I find that Catholics and Eastern Orthodox who have the lowest returns to human capital are characterized by the largest intercept. However, Jews who gain the highest returns to human capital are not characterized by the smallest intercept among religious groups. For the female group, Muslims who have the highest returns to schooling and experience are characterized by the smallest intercept. Sikhs have the nearly lowest returns to human capital and they are given the largest intercept.

The coefficients of "LNWEEKS" vary across religious groups. For males, the elasticity of earnings with respect to weeks is less than one, except for Sikhs. It is interesting that Jews have the lowest elasticity among religious groups, which is totally different from Tomes' (1983) result. For females, the elasticity of earnings with respect to weeks is less than one, too. Sikhs rank the lowest in this category. The elasticity of earnings with respect to weeks less than one means that the weeks-worked-earnings profiles are backward bending for nearly all religious groups. Tomes (1983) considers that the different supply schedule of weeks worked for religious groups may cause the difference of the coefficients for "LNWEEKS".

Since the sample is restricted to immigrants, the coefficients of "YSM" are all statistically significant, except for male Buddhists, female Sikhs and female Other religions group.

Marital status influences males' earnings more than females' across religious groups. For example, married males who belong to the group of Other religions, Buddhists, Protestants, No religion, or Catholics earn significantly more than not-married males who

belong to the same religious group at the 5 percent level. The possible reason is that married males devote themselves more into the labour market to support family or they have higher ability. In addition, although the results show that the married status negatively affects females' earnings in most religious groups, the effect is not significant, except for Other religions group.

Males who are engaged mainly in full-time work have significantly higher earnings than those who are not, with the exception of Buddhists and Sikhs. The same rule applies to each female religious group. In addition, mother tongue is also an important factor that influences immigrants' earnings in Canada. For the male group, Hindus, Protestants, and Catholics whose mother tongue is neither English nor French receive significantly lower earnings than those whose mother tongue is an official language in the same religious group. Moreover, the same situation exists for female Catholics and Eastern Orthodox groups. Lastly, the variables indicating place of birth are not significant for males or females across religious groups, except for male Catholics, Protestants, and No religion groups.

### **Comparing the Rate of Return to Human Capital with Tomes' (1983) Results**

With my sample of immigrants, I compare the rate of return to human capital for male religious groups in Ontario with Tomes' results which are based on the sample of native-born white males in Canada as follows.

Regarding the return to schooling, I get some results which are the same as Tomes'. First, Jews rank the highest among religious groups in this category. Second, the returns to schooling received by Jews and Protestants are greater than the average return,<sup>5</sup> whereas Catholics have a lower return than average. Third, Protestants significantly earn

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<sup>5</sup> See Table 4-1.

more than Catholics from an extra year of schooling.

In terms of the return to job market experience, the result that Jews have the highest return is consistent with Tomes' findings. However, I do not find the result that the estimated experience coefficient for Protestants is significantly larger than that for Catholics, which is presented in Tomes' paper.

About the earnings advantage with a university degree, I find that Jews have no "credential" effect from a degree, which Tomes also mentions in his paper. The difference between my results and Tomes' is that the return to Protestants is not significantly greater than to either Catholics or Jews in my paper.

#### **Analysis of two special groups: immigrants from People's Republic of China and South Asia**

The data of this study can be used to analyse two immigrant groups which present a special interest. Due to political reasons, religion played no role in the People's Republic of China for many years. In spite of that, and even though 67.9% of Chinese immigrants report that they have no religion, the proportions of Christians and Buddhists still account for 24.2% and 7.9% of the total sample of Chinese immigrants, respectively. How does religion affect the earnings of immigrants from P.R.China? Table 6-1 reports earnings regressions among Chinese immigrants by sex. In these two estimations, I have No religion as the reference group and include dummy variables for Buddhist and Christian (including Catholic, Protestant, and Eastern Orthodox). For the analysis, I delete all the other religions which are small groups.

For the male group, the results indicate that the earnings of Christians and Buddhists are not significantly different from those of the No religion group. However, female

Christians earn 22.9% more than the females who have no religion ( $t = 2.85$ ). For female Buddhists, there is no significant difference in earnings between them and No religion females.

The relationship between religion and the earnings of immigrants from South Asia is also interesting to study. The majority of South Asian immigrants are Hindus, accounting for 32.7% of my sample, followed by Christians, Sikhs, and Muslims. Pakistan and Bangladesh are officially Muslim countries and India has a tradition of some tolerance towards religion, although the majority of Indians are Hindus. Table 6-2 shows the results of earning regressions among South Asian immigrants by sex. In these two estimations, I choose Hindus as reference group and set dummy variables for Sikhs, Muslims, and Christians (including Catholic, Protestant, and Eastern Orthodox). Meanwhile, I delete all the other religions which are small groups.

For the male group, Sikhs have 17.8% ( $t = 2.71$ ) higher earnings than Hindus, but Christians and Muslims have no significant differences in earnings compared to Hindus. However, in the female group, the earnings of Christians are higher than those of Hindus by 19.7% ( $t = 2.7$ ). Sikhs and Muslims are not significantly different from Hindus in the category of earnings.

Based on the above two analyses, I find that female Christians have an earnings advantage relative to other religions. The reason may be that compared to female immigrants who have other religions, it is probably easier for female Christians to assimilate to Canada because it is a predominantly Christian country. Therefore, they may get more earnings opportunities than other female religious groups in the labour market. However, there is no obvious explanation as to why we do not observe the same

relationship for males.

## 5. Conclusions

This paper has examined the relationship between religion and place of birth, the effects of religion on earnings and the differences across religious groups in the rates of return to human capital for immigrants in Ontario, using the 1991 Canadian Census Micodata. The major findings of my study are as follows:

Religious affiliation and place of birth are two dimensions of cultural background which has an important impact on immigrants' earnings and they are highly correlated with each other. Therefore, the "mixed effect" of religion may overestimate the real effect of religion on earnings and "net effect" of religion may not be estimated precisely due to this relation.

Holding other explanatory variables constant, the different religions have different influences on immigrants' earnings. For the male group, with the dummy variables of place of birth included in the estimating equation, Jews earn significantly more than Protestants; however, Muslims, Eastern Orthodox, Other religions and Hindus have significantly lower earnings than Protestants. Deleting the place of birth variables, more significant results emerge due to the "mixed effect": Catholics earn more than Protestants; Buddhists and No religion earn less than Protestants on the contrary. For the female group, whether or not the estimating equation includes the dummy variables for place of birth, Jews, Eastern Orthodox, Catholics, and No religion earn more than Protestant significantly. The evidences indicate that the effect of relation between religion and place of birth for the female group is less than that for the male group.

The rate of return to human capital varies across religious groups. For the male group, Jews not only invest the most years in schooling, but also receive the highest rate of return on schooling among religious groups. Moreover, the returns to Jews and Hindus in schooling are significantly greater than those of Protestants, whereas the returns to Catholics are significantly less than those of Protestants. For the female group, Muslims rank the highest in this category among religious groups. Protestants gain significantly more than Other religions and Eastern Orthodox from extra year of schooling. For the return to working experience, Jews rank the highest in the male group and Muslims obtain the greatest return to experience in the female group. In addition, it is interesting that male Jews have no "credential" effect of a university degree, although they receive the highest returns to schooling and job market experience. However, female Jews have a significant return to a university degree, as opposed to the male counterparts. Moreover, more religious groups have no "credential" effect of a university degree for females than for males. Compared to Protestants, Eastern Orthodox and Catholics earn significantly more from processing a university degree in the female group.

My results are based on the sample of immigrants in Ontario rather than the sample of native-born white males Tomes (1983) employs. However, for the male group, I get some results which are consistent with Tomes' findings. For example, Jews receive the highest return to schooling and job market experience among religious groups; the returns to schooling obtained by Jews and Protestants are greater than the average level, whereas Catholics have a lower return than the average level; Protestants significantly gain more than Catholics from additional year of schooling; and Jews have no "credential" effect of a university degree. In addition, some of my results show differences from Tomes',

including that the returns to experience and a university degree for Protestants are not significantly larger than those of Catholics and the advantage in earnings from a university degree for Protestants are not significantly higher than those for Jews. I think that the status of immigrants may reduce the difference of returns to human capital across religious groups to some extent.

Comparing the western religious groups with the Eastern ones for immigrants, I find some differences between them. First, the western religious groups, such as Catholics, Protestants, Jews, etc., earn on average more than the eastern religious groups including Buddhists, Hindus, Muslims, and Sikhs. The reason may be that the western groups immigrated to Canada earlier than the eastern ones and the proportion of foreign mother tongue for the western groups is lower than the eastern ones at the average level, which have the important impact on immigrants' earnings. Second, the average proportion of holding a university degree for the eastern groups is higher than that of the western groups. With the introduction of point system in 1967, a large number of independent immigrants from Asian countries were admitted to Canada on the basis of the specific skills that they have, which may cause the higher ratio of possessing a university degree for eastern religious groups. Third, the average effects that the eastern groups have on earnings are less than those of the western ones. Moreover, although the return to schooling for the eastern groups is on average higher than the western groups, there is no significant earnings advantage from "credential effect" of a university degree for the eastern groups relative to the western ones. I infer that because the eastern groups have not lived in Canada for a long time and they thus lack language skills and the working experience in North America, the "credential effect" may not have the reasonable

influence on their earnings.

There are some interesting results for immigrants from People's Republic of China and South Asia. Religious status does not cause significant differences in earnings for male Chinese immigrants. The female Chinese immigrants who are Christians earn more than those who have no religion. In addition, for the immigrants from South Asia, the male Sikhs have higher earnings than the male Hindus and the female Christians earn more than the female Hindus.

The evidence of this paper indicates that religion, as an important dimension of cultural background, influences earnings and the rate of return to human capital. Since some important dimensions of cultural background, such as parental income, education, family size, etc. are not included in the estimation, further research should focus on the investigation of the effect that different religious groups have on immigrants' earnings by controlling for these variables.

TABLE 5-1

Regression Estimates of Earnings for Separate Religious Groups

Variable	MALE										
	Catholics	Protestants	Eastern Orthodox	Jews	Buddhists	Hindus	Muslims	Sikhs	No religion	Other religions	
Intercept	6.03634 (57.44)	5.22219 (40.93)	6.38920 (13.16)	5.41399 (9.62)	6.07988 (6.87)	5.29186 (10.15)	5.04779 (5.83)	4.22614 (7.74)	5.04892 (28.71)	4.14022 (5.19)	
SCHOOL	0.02366 (7.05)	0.03356 (7.99)	0.02480 (2.74)	0.07403 (3.36)	0.04228 (2.68)	0.06492 (4.71)	0.04385 (3.50)	0.04290 (2.43)	0.03017 (4.93)	0.06298 (1.74)	
EXP	0.02311 (7.27)	0.03853 (9.71)	0.01956 (2.05)	0.04301 (2.52)	-0.00722 (-0.38)	0.03374 (2.53)	0.03333 (2.90)	0.01401 (0.85)	0.02546 (4.86)	-0.01537 (-0.53)	
EXPSQ	-0.00036526 (-6.45)	-0.00071814 (-9.62)	-0.00032034 (-1.88)	-0.00081167 (-2.43)	0.00021037 (0.60)	-0.00061251 (-2.19)	-0.00057252 (-2.33)	-0.00025865 (-0.82)	-0.00045490 (-4.41)	0.00039996 (0.66)	
MAR	0.15810 (6.20)	0.23124 (8.01)	0.09380 (1.21)	0.14416 (1.20)	0.27252 (2.08)	0.15936 (1.69)	-0.01987 (-0.26)	0.09863 (0.69)	0.20345 (5.57)	0.36354 (2.06)	
YSM	0.00806 (7.55)	0.00693 (6.21)	0.01013 (3.30)	0.01336 (3.02)	0.01387 (1.63)	0.01106 (2.24)	0.02260 (5.06)	0.01626 (2.21)	0.00790 (4.83)	0.01920 (2.30)	
LNWEEKS	0.74771 (35.52)	0.80650 (28.70)	0.69046 (11.66)	0.59749 (5.24)	0.75050 (6.92)	0.82470 (9.19)	0.82922 (14.89)	1.02798 (13.33)	0.91148 (23.60)	0.92164 (5.83)	
UNV	0.27269 (9.77)	0.25514 (8.70)	0.26400 (3.14)	0.19231 (1.57)	0.37362 (2.37)	0.20667 (2.40)	0.22847 (3.04)	0.12473 (0.99)	0.29162 (7.41)	0.29105 (1.55)	
FT	0.59173 (12.39)	0.87720 (15.55)	0.63257 (5.30)	0.85326 (3.73)	0.17593 (0.54)	0.60435 (3.65)	0.62624 (5.29)	0.47294 (1.87)	0.83794 (11.78)	1.09743 (3.90)	
FORMTG	-0.09759 (-3.41)	-0.10987 (-2.97)	0.04796 (0.36)	-0.07002 (-0.52)	0.07917 (0.35)	-0.2456 (-1.88)	0.00400 (0.04)	0.16731 (0.66)	0.05975 (1.12)	-0.25125 (-1.10)	
USA	-0.17574 (-2.49)	-0.10707 (-2.17)	-0.28986 (-0.56)	0.05399 (0.30)	0.23191 (0.28)	0.65476 (0.71)	0.45728 (0.46)	0.19175 (0.29)	-0.16273 (-2.31)	-0.09814 (-0.35)	
GMY	-0.05821 (-0.90)	-0.00192 (-0.04)	-0.37476 (-0.81)	-0.10443 (-0.38)	-0.69307 (-0.58)	-1.87309 (-2.00)	*	*	-0.12988 (-1.52)	-0.02755 (-0.06)	
ITALY	0.01079 (0.24)	0.15842 (1.28)	-0.35860 (-0.61)	0.13942 (0.22)	1.35676 (1.14)	-0.30521 (-0.33)	*	*	-0.29608 (-2.14)	-0.75937 (-1.01)	
PORTU	0.02882 (0.57)	0.12751 (0.75)	-0.33901 (-0.48)	*	*	*	*	*	-0.14270 (-0.94)	*	

POLAND	-0.16548 (-3.06)	0.00921 (0.08)	-0.49569 (-1.03)	-0.22737 (-0.93)	*	*	0.18583 (0.16)	*	-0.18981 (-1.37)	*
USSR	-0.05108 (-0.38)	0.01147 (0.12)	-0.51985 (-1.15)	-0.23224 (-1.05)	-0.22907 (-0.19)	*	*	*	-0.43148 (-2.62)	*
OTHEREU	-0.03812 (-0.86)	0.03327 (0.76)	-0.43898 (-1.04)	-0.09233 (-0.46)	-0.11199 (-0.10)	*	-0.04484 (-0.05)	*	-0.26948 (-4.16)	-0.03705 (-0.13)
MEWASIA	-0.18702 (-2.07)	-0.20941 (-1.94)	-0.43398 (-1.02)	-0.04327 (-0.20)	*	-0.50359 (-0.72)	-0.11017 (-0.14)	*	-0.26000 (-1.85)	-0.31292 (-0.94)
SASIA	-0.14084 (-2.08)	-0.15396 (-1.98)	-0.63611 (-1.18)	0.06942 (0.08)	0.05520 (0.08)	-0.41020 (-1.15)	-0.08783 (-0.11)	0.34694 (1.02)	0.10443 (0.74)	0.28472 (0.97)
HK	-0.02208 (-0.27)	-0.12934 (-1.52)	*	*	-0.55600 (-0.75)	*	1.16196 (1.02)	*	-0.25739 (-3.44)	0.40438 (0.77)
CHINA	-0.29631 (-2.58)	-0.09217 (-0.93)	-0.06041 (-0.07)	*	-0.24481 (-0.34)	*	0.06461 (0.07)	*	-0.46599 (-6.29)	0.58519 (1.41)
PHI	-0.26507 (-4.55)	-0.03096 (-0.23)	*	*	*	*	*	*	-0.43606 (-1.72)	*
VNAM	-0.27093 (-2.29)	-0.11527 (-0.68)	*	*	-0.01064 (-0.01)	*	-0.05199 (-0.05)	*	-0.37521 (-4.22)	0.45063 (0.80)
OTHER ESEA	-0.26415 (-2.52)	-0.21238 (-3.03)	-1.05594 (-1.15)	*	-0.24803 (-0.35)	0.65859 (1.09)	0.33993 (0.30)	-0.47583 (-0.97)	-0.36965 (-4.26)	-0.32761 (-0.83)
AFR	-0.16621 (-2.18)	-0.12774 (-2.01)	-0.59050 (-1.36)	0.16030 (0.89)	-0.14815 (-0.16)	-0.06071 (-0.16)	-0.08176 (-0.10)	0.45932 (1.11)	-0.34155 (-2.61)	-0.02438 (-0.07)
CSAC	-0.18235 (-3.98)	-0.22392 (-7.22)	-0.47875 (-0.93)	-0.00382 (-0.01)	*	-0.45098 (-1.24)	-0.11857 (-0.15)	*	-0.30999 (-5.02)	0.18703 (0.70)
OTHER	0.17322 (0.94)	0.15785 (1.04)	0.13798 (0.15)	*	*	-0.49495 (-1.11)	0.29108 (0.31)	*	0.22631 (1.18)	*
Adjust R <sup>2</sup>	0.2432	0.3086	0.2174	0.2696	0.2248	0.2882	0.3949	0.4751	0.3615	0.4997
N	8710	5765	1039	401	325	726	813	322	2861	122

Data source: 1991 Canadian Census Microdata, 100 percent sample of the male immigrants aged 25-64 years in Ontario.

Notes: The dependent variable is the natural logarithm of earnings LNEARN.

Values of t-statistics are reported in parentheses beneath each coefficient.  
 \*\* means no observations.

TABLE 5-2

Regression Estimates of Earnings for Separate Religious Groups

Variable	FEMALE										
	Catholics	Protestants	Eastern Orthodox	Jews	Buddhists	Hindus	Muslims	Sikhs	No religion	Other religions	
Intercept	5.24107 (52.02)	5.11361 (44.40)	5.52586 (12.43)	5.16124 (10.29)	6.07869 (9.90)	5.49910 (11.22)	4.18336 (8.53)	6.58838 (9.59)	5.26247 (29.44)	6.56605 (7.02)	
SCHOOL	0.03419 (8.97)	0.04311 (8.43)	0.02095 (1.82)	0.03311 (1.40)	0.01638 (1.38)	0.04096 (2.80)	0.05627 (3.87)	0.01881 (0.86)	0.03081 (4.26)	-0.04283 (-1.06)	
EXP	0.01256 (3.77)	0.01210 (2.87)	0.01489 (1.17)	-0.00146 (-0.08)	0.01428 (1.07)	-0.01913 (-1.50)	0.04281 (2.96)	-0.01741 (-1.08)	0.02071 (3.44)	0.00528 (0.22)	
EXPSQ	-0.00021744 (-3.50)	-0.00025719 (-3.13)	-0.00035574 (-1.54)	0.00002166 (0.06)	-0.000461 (-1.91)	0.00055357 (1.96)	-0.0009985 (-3.05)	0.00010286 (0.33)	-0.00041864 (-3.44)	-0.00032994 (-0.58)	
MAR	-0.03128 (-1.31)	-0.03057 (-1.17)	-0.06497 (-0.69)	-0.10190 (-0.93)	0.06530 (0.72)	0.00514 (0.06)	-0.14457 (-1.74)	0.02005 (0.12)	-0.07712 (-1.90)	-0.31375 (-2.01)	
YSM	0.01102 (9.57)	0.00633 (4.92)	0.01452 (3.60)	0.00899 (2.06)	0.02400 (3.53)	0.01002 (1.95)	0.01978 (3.67)	0.01483 (1.62)	0.00905 (4.32)	-0.01239 (-1.39)	
LNWEEKS	0.81032 (41.93)	0.84027 (37.85)	0.72216 (12.78)	0.96177 (10.45)	0.85422 (10.61)	0.85946 (13.34)	0.92847 (15.07)	0.66708 (7.24)	0.85748 (23.79)	0.98972 (5.98)	
UNV	0.27517 (9.27)	0.20424 (5.79)	0.45828 (3.96)	0.31063 (2.68)	0.11542 (0.95)	0.06202 (0.68)	-0.13748 (-1.41)	-0.04113 (-0.25)	0.27817 (5.78)	0.28078 (1.52)	
FT	0.71131 (27.58)	0.80765 (29.64)	0.55996 (6.33)	0.50615 (5.13)	0.68431 (4.75)	0.58221 (4.96)	0.50750 (5.09)	0.51043 (2.39)	0.61504 (12.44)	1.02164 (5.32)	
FORMTG	-0.10653 (-3.50)	-0.03085 (-0.67)	0.35702 (1.95)	-0.03348 (-0.24)	0.27188 (1.29)	0.10820 (0.83)	-0.16493 (-1.50)	0.05383 (0.21)	-0.00091346 (-0.01)	0.24331 (0.82)	
USA	0.00796 (0.13)	-0.08350 (-1.78)	1.15113 (1.63)	0.15401 (0.85)	-0.99015 (-1.63)	*	*	*	-0.00517 (-0.06)	-0.46767 (-1.77)	
GMY	0.20664 (3.12)	-0.05641 (-0.90)	-0.10584 (-0.24)	0.20704 (0.69)	*	*	*	*	-0.04892 (-0.46)	-0.25898 (-0.58)	
ITALY	0.08644 (1.79)	-0.07264 (-0.48)	0.46768 (1.04)	0.46482 (1.00)	*	*	*	-0.39847 (-0.45)	-0.08667 (-0.38)	*	
PORTU	0.15277 (2.85)	0.32428 (2.02)	-0.05680 (-0.06)	*	*	*	*	*	0.22443 (1.06)	*	

POLAND	0.01373 (0.25)	0.06763 (0.46)	0.01755 (0.03)	0.38593 (1.58)	-1.29218 (-1.53)	0.74498 (0.91)	0.96540 (1.20)	*	-0.13336 (-0.56)	*
USSR	-0.10356 (-0.79)	0.07669 (0.64)	-0.10525 (-0.25)	-0.28089 (-1.23)	*	*	*	*	-0.09516 (-0.50)	*
OTHEREU	0.09908 (2.15)	-0.01401 (-0.26)	-0.04225 (-0.13)	0.08161 (0.38)	-0.38717 (-0.64)	*	0.66243 (1.56)	*	-0.01035 (-0.12)	*
MEWASIA	-0.07258 (-0.73)	-0.08952 (-0.59)	-0.12842 (-0.37)	-0.00349 (-0.02)	*	*	0.48490 (1.35)	-0.97769 (-1.10)	-0.01517 (-0.07)	-0.72481 (-2.10)
SASIA	0.19935 (2.77)	0.02355 (0.25)	-0.11752 (-0.23)	0.08126 (0.18)	-1.46926 (-2.68)	-0.33483 (-0.87)	0.34408 (0.97)	-0.17745 (-0.48)	0.07257 (0.46)	-0.38259 (-1.33)
HK	0.29411 (3.61)	-0.00998 (-0.11)	*	*	-1.12877 (-2.07)	*	1.16492 (1.43)	*	0.09074 (0.99)	-0.51752 (-0.75)
CHINA	0.39668 (3.40)	-0.00417 (-0.03)	*	0.14898 (0.18)	-1.14890 (-2.15)	*	*	0.11170 (0.12)	-0.07706 (-0.80)	*
PHI	0.06350 (1.16)	-0.02520 (-0.25)	*	0.56980 (0.67)	*	-0.13917 (-0.17)	0.26483 (0.33)	*	-0.58659 (-2.04)	-0.60987 (-0.90)
VNAM	-0.11274 (-0.91)	-0.16261 (-0.67)	*	*	-1.14806 (-2.18)	*	*	*	-0.05629 (-0.52)	-0.95430 (-1.90)
OTHER ESEA	0.30070 (3.21)	-0.13914 (-1.74)	*	*	-1.18257 (-2.26)	-0.64381 (-1.23)	-1.78183 (-3.56)	0.28341 (0.41)	-0.10061 (-0.96)	-0.34229 (-0.72)
AFR	0.14655 (1.71)	0.00711 (0.09)	0.02802 (0.08)	0.07393 (0.39)	-0.81151 (-1.21)	-0.10148 (-0.26)	0.46031 (1.33)	0.51758 (0.94)	-0.00620 (-0.04)	*
CSAC	0.08793 (1.98)	-0.07626 (-2.33)	-0.59476 (-1.33)	-0.07736 (-0.26)	-0.88809 (-1.55)	-0.07776 (-0.21)	0.49896 (1.46)	*	-0.04652 (-0.62)	-0.67216 (-2.56)
OTHER	0.34180 (1.69)	0.12993 (0.93)	-0.02179 (0.69951)	*	*	-0.21713 (-0.46)	0.24107 (0.38)	*	-0.07332 (-0.33)	*
Adjust R <sup>2</sup>	0.3705	0.3882	0.3144	0.3471	0.4262	0.3939	0.5018	0.2523	0.3631	0.5678
N	7217	5546	735	393	304	489	490	236	2063	85

Data source: 1991 Canadian Census Microdata, 100 percent sample of the female immigrants aged 25-64 years in Ontario.

Notes: The dependent variable is the natural logarithm of earnings LNEARN.

Values of t-statistics are reported in parentheses beneath each coefficient.

\*\* means no observations.

**TABLE 6-1****Regression Estimates of Earnings among Chinese Immigrants**

Variable	MALE		FEMALE	
	Parameter Estimates	t Value	Parameter Estimates	t Value
Intercept	4.46266	9.78	6.15877	15.55
SCHOOL	0.01226	0.95	0.00031462	0.03
EXP	0.04177	3.20	0.02682	2.28
EXPSQ	-0.00075418	-3.36	-0.00066439	-3.29
RCHRIS	0.06801	0.78	0.22854	2.85
RBUDD	0.12264	0.86	0.02715	0.25
MAR	0.31146	2.80	-0.03305	-0.37
YSM	0.01464	4.45	0.01199	3.38
LNWEEKS	0.91209	9.37	0.73298	10.50
UNV	0.44951	4.57	0.29336	3.10
FT	0.81649	4.82	0.71835	7.46
FORMTG	0.00053222	0.00	-0.30955	-1.34
Adjust R2	0.3666		0.4497	
N	544		416	

Data source: 1991 Canadian Census Microdata, 100 percent sample of the Chinese immigrants aged 25-64 years in Ontario.

Notes: The dependent variable is the natural logarithm of earnings LNEARN.

No religion is reference group for religion dummy variables.

**TABLE 6-2****Regression Estimates of Earnings among South Asia Immigrants**

Variable	MALE		FEMALE	
	Parameter Estimates	t Value	Parameter Estimates	t Value
Intercept	5.03711	19.17	5.16604	21.05
SCHOOL	0.05495	5.08	0.03315	3.08
EXP	0.02570	2.61	0.00184	0.21
EXPSQ	-0.00049751	-2.46	-0.00005870	-0.32
RCHRIS	0.02441	0.33	0.19658	2.70
RMUL	0.06946	1.01	-0.08336	-1.01
RSIKH	0.17839	2.71	0.01168	0.17
MAR	0.17076	2.38	-0.07332	-1.00
YSM	0.01585	4.60	0.01658	4.52
LNWEEKS	0.81917	14.83	0.87232	17.95
UNV	0.14649	2.35	-0.00653	-0.10
FT	0.64943	5.39	0.66311	8.19
FORMTG	-0.20755	-2.77	-0.00988	-0.14
Adjust R2	0.3364		0.4308	
N	1253		849	

Data source: 1991 Canadian Census Microdata, 100 percent sample of the South Asia immigrants aged 25-64 years in Ontario.

Notes: The dependent variable is the natural logarithm of earnings LNEARN.

Hindu is reference group for religion dummy variables.

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