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**LABOUR MARKET EXPERIENCES OF SOUTH ASIA-BORN WOMEN
IN VANCOUVER**

by

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I. INTRODUCTION

Within the neo-classical paradigm, studies of the labour market experiences of immigrants are confined to examining participation and earnings differentials according to immigrants' nationality, gender, and ethnicity. The increasing mobility of people with varying characteristics yields outcomes in the labour market that are far removed from the competitive equilibrium conditions where wages are presumed to be equal to the marginal productivity of labour. For immigrants, labour market imperfections are due to several factors such as discrimination, gender inequalities and credential recognition. Isolating these forces is essential, as most social policies are dependent on such research. The present study is undertaken with this intent.

Canada's immigrant population is large and growing, and changes in source country composition have occurred as policies are revised. During the sixties most immigrants came from Europe and the United States whereas by the eighties most came from developing countries. This has given rise to various contentious issues concerning labour market outcomes.

In 1996, Asian immigrants constituted 55.4% of total immigrants to Canada. Among the top ten source countries having a share of 56%, India ranked second with a share of 9.5%. In the category of family-class immigrants, India ranked first with a share of 20%. Thus India is one of the major exporters of human resources to Canada. The purpose of this paper is to examine the labour force outcomes of female Indian immigrants. The Canadian Census, however, presents aggregates over South Asian

countries.¹ The present paper, therefore, uses the information on South Asian women and men as the second-best solution in examining the labour market experiences of Indian women. Existing studies are confined to aggregate samples that rely on gender/ethnicity/minority-based divisions. More often than not, such categories tend to obscure specific characteristics of a particular sample. Furthermore, they disregard the influence of destination in qualifying the results. A review of some aggregate studies is detailed below.

Sheila Fagnan (1995) and Peter Sheldon (1997) address Canadian labour force participation by gender and ethnicity, respectively. Fagnan, using 1971 and 1986 Canadian Census data, concludes that in labour force participation of foreign-born men and women, the effect of aging is consistent with the life-cycle prediction of human capital theory. Participation of men and women differs in terms of marital status and family size. Sheldon, using the 1991 Census Microdata on Families, estimates the participation of Canadian-born and foreign-born families in the Vancouver metropolitan area. He concludes that Asian/Middle Eastern-born females are more likely to participate in the labour force than their European-born or Canadian-born equivalents. He argues that family size affects South Asian women's ability to enter the labour market.

Akbari (1992), employing 1986 Census data, examined ethnicity and earnings discrimination in Canada. He concludes that discrimination is more significant among ethnic men and women and also among the foreign-born than among Canadian-born workers. Discrimination of the foreign-born arises from the undervaluation of their education and labour market experiences. DeSilva and Dougherty (1996), using 1991 Census data, conclude that there is no discrimination against immigrants in general and earnings differentials are mainly the result of quality differences in education, language proficiency and experience. Beach and Worswick (1993), using 1973 data, test for a double-negative effect on the earnings of immigrant women due to their gender and birthplace. Their study reveals a double-negative effect for highly educated women. The initial earnings gaps are more permanent for women than for men. Based on 1989

¹ The 1991 Canadian Census Public Use Microdata File Code Book on Individuals considers Southern Asia to consist of countries such as Bangladesh, Bhutan, India, Nepal, Pakistan, Sri Lanka and the Republic of Maldives.

Labour Market Activity Survey data, Christofides and Swidinsky (1994) examine wage determination by gender and visible minority status. They conclude that less than 30% of offered wage differentials between whites and other groups can be attributed to productivity related variables. The unexplained components are strongly affected by different pay structures assigned by the labour market to full-time and immigrant status.

A recent study by Shamsuddin (1997) on the double-negative effect of gender and immigrant status on female earnings concludes that labour market assimilation occurs at a faster rate for foreign-born females than for foreign-born males. About 71 to 79 percent of the difference in the mean log earnings between native-born males and foreign-born females is attributed to the combined impact of gender and birthplace.

Howland and Sakellariou (1993), using the 1986 Canadian Census public use sample tape on individuals of the, examine the relative economic position of both immigrant and native-born visible minorities by incorporating differences in occupational status between ethnic groups. They find wide divergences in the relative labour market experiences of Blacks, South Asians and Southeast Asians owing to endowment differences, occupation segregation and wage discrimination.

Swidinsky (1997) examines white/visible-minority earnings differentials of immigrant and native-born Canadians using 1991 Census data. He has estimated labour market discrimination for immigrant and native-born minorities, and for four individual ethnic minority groups — Blacks, Chinese, South Asian and South East Asians. His results show that the white minority average weekly log-earnings differential is considerably smaller than the earnings differential for native-born and immigrant men. The observed white minority log-earnings differential for women was lower than for men. Moreover, ethnic groups experience a decline in the relative discriminatory earnings effect as they move from immigrant to native-born status.

Pendakur and Pendakur (1997), using 1991 Census, data argue that there are substantial differences in the earnings gaps within various ethnic groups. Even visible minority immigrants educated in Canada face earnings gaps compared to Canadian-born white workers. Further, ethnicity-based earnings gaps differ across Canada's three

largest Census Metropolitan Areas (CMAs). The earnings gap for immigrant visible minority women is highest in Montreal and lowest in Vancouver.

The literature cited above reveals that significant Canadian earnings differentials arise among various aggregate ethnic groups and across gender. We propose a disaggregation analysis to detect ethnic individual experience. Thus, the present analysis, using 1991 Census data, focuses on South Asian women disaggregated by city with a primary focus on Vancouver. The issues pertaining to their experiences of participation and earnings differentials in the labour market are discussed. Following the literature cited, the issue of double jeopardy due to gender and place of birth is also examined. In order to contextualize the problem, it is necessary to understand the specific features of immigration to Canada and how they appear in a South Asian context.

IMMIGRATION PROFILE OF CANADA

Canadian immigrants are concentrated in three provinces — British Columbia, Ontario, and Quebec. In 1996, the immigrant-landing shares of these three provinces were 23, 53 and 13 percent respectively (Table 1). The three major cities of these provinces— Vancouver, Toronto and Montreal — account for nearly 62% of total immigrants in urban areas. Immigration to Canada can take place under several categories but the family and economic classes are dominant. In 1996, 30.16% and 53.5% of total immigrants arrived under these categories (Table 2). Although Ontario/Toronto still attracts the largest proportion of immigrants, *“we must note that British Columbia and Vancouver now attract an increasing percentage — 24 percent (circa 1996/7) — of a declining total absolute immigration flow to Canada. This share statistic is very telling since it suggests that Vancouver is becoming a relatively more attractive destination for immigrants than either Toronto or Montreal”* (DeVoretz, 1996). In addition, in British Columbia/Vancouver attracts a larger percentage under the economic class as compared to other provinces/cities (Table 3). *“In 1995, 62% of British Columbia’s immigrants passed through the economically assessed gates while in Ontario only 46% were*

economically assessed in 1995. In short, British Columbia has a greater concentration in the assisted relatives (points assessed) and moneyed gateways, which lead to its 62% share of assessed immigrants” (DeVoretz, 1996). Thus, although Toronto and Vancouver are two major destinations for immigrants, in qualitative terms the nature of immigration differs between the cities. This can have implications on the labour market outcomes of these two cities.

The changing immigrant/ethnic mix is another important outcome of Canada’s post-1978 policy changes. Until the late 1960s, Europe and the U.S. were the major sources of immigrants. However by the 1980s, the majority of immigrants were from developing countries. In 1996, Hong Kong, India, China, Taiwan and the Philippines were the top five source countries of immigrants (Table 4). Among this group, India ranks second with a share of 9.5%. The share of other South Asian countries, such as Pakistan was 3.5% ranking it 6th and that of Sri Lanka with a share of 2.7% was ranked 7th. Within the three major cities, India ranks either second or third as a source country. Moreover, under the family entry class, India ranks first with a 19.9% share (Table 5).

One central thesis of this paper is that labour market outcomes are sensitive to the place of destination in Canada. In Vancouver, business class immigrants dominate the labour market, whereas in Toronto, the family class of immigrants dominates. Most Indians immigrate under the family class. It is difficult to hypothesize *a priori* labour market experiences in Vancouver and Toronto, as ultimately the main motivation of all the immigrants is to assimilate in the labour market. However, one cannot disregard the influence of the characteristics of the place of destination, unemployment rates, and industrial structures, and should incorporate them in the modelling of labour market experiences.

Moreover, most immigrants from India are either from Gujrat or Punjab. These two states are quite different from one another. Punjab has an agriculture-based economy while Gujrat is an industrialized province. Punjab’s record is poorer than Gujrat in terms of most socio-economic indicators for women. The key point to note is that most immigrant Punjabis are concentrated in Vancouver whereas Gujratis are mostly

concentrated in Toronto. Thus, this could yield yet another different outcome for female labour force performance by city.

Labour market outcomes are also sensitive to the human capital characteristics of the various immigrant groups. For example, the experience of South Asian women can be different due to their family size, which can determine their labour market participation decision. South Asian women generally arrive as spouses or dependants and are not subject to human capital screening, which will help them participate in the labour market.

Given the above, disaggregation is imperative. The present analysis is undertaken with this contention and therefore restricts itself to South Asian immigrants in Toronto and Vancouver. The key issues are: is there differential participation of South Asian women vis-à-vis Canadian-born women? Are they able to catch up or surpass Canadian-born women in terms of earnings? Moreover, do they suffer from a gender-foreign birth status double jeopardy due to their sex or immigrant status? Finally, are the labour market experiences of South Asian female immigrants sensitive to place of origin or destination? These issues are analyzed within the framework of life cycle and human capital models, which help to isolate the impact of measurable factors on the labour market decisions of women. The unexplained portion in the human capital models is attributed to discrimination.

The paper is divided into four sections. The first section analyzes the descriptive statistics of Canadian-born and South Asian-born men and women. Section II deals with the analysis of labour force participation and the associated earnings functions. Section III examines the double-negative effects of the earnings of South Asian women. I summarize and provide conclusions in Section V.

II. DATA

The study is based on data obtained from the 1991 Census of Canada public use microdata file on individuals. The sample was restricted to Canadian-born and South Asian-born men and women, aged 25 to 64, who were residents of Toronto/Vancouver

working full-time and full years. The rationale for restricting the sample to the two cities is evident from the discussion above. The full-time sample helps to control for the labour supply and therefore earnings can be considered across a homogeneous group of people with respect to labour force commitment.² Restricting the sample to the age group 25-64 reduces the possibility of undue influence at either end of the age distribution. This restriction removes dependants who may still live at home.

Demographic Characteristics

Table 6 provides descriptive statistics whose salient demographic features are:

(1) The average age of both Canadian-born (Canadian-born) and South Asian-born (South Asian-born) men and women was 39 years.

(2) Fifty-seven percentage of Canadian-born women and 86 percent of South Asian-born women were married while 59 percent of Canadian-born men and 83 percent of South Asian-born men were married.

(3) The average family size differed since 20% of South Asian-born men and women reported to have more than four members in the family, which was much higher than that of Canadian-born men and women.

(4) There was an average of 13 years since migration for both South Asian-born men and women.

Furthermore, key human capital features emerge, including:

(1) Canadian-born men and women and South Asian-born men had, on average, 14 years of schooling, while South Asian-born women had 13 years of schooling. As far as different levels of education were concerned, 33% of Canadian-born men and 35% of Canadian-born women had a secondary level of education compared to approximately 25% of both South Asian-born men and women. A university level of education was

² The inclusion of a part-time sample may have an adverse effect on the consistency of the selection effect as the occupational structure between the groups may vary. Not only this, the forces operating for women at demand and supply sides for part-time jobs are qualitatively different from those of men. Further, the weak correspondence between human capital endowments and earnings and a rather complex interplay of

reported by 29% of Canadian-born men and women and South Asian-born women, while 38% of South Asian-born men had university education. Thus, 63% of South Asian-born men reported having education at the secondary level or above compared to 54% for South Asian-born women.

(2) Knowledge of both English and French was limited to 9% of Canadian-born men and 11% of Canadian-born women. A very small percentage of South Asian-born men and women knew both languages.

(3) Thirty-six percent of Canadian-born men and 25% of South Asian-born men reported the highest skill level. For Canadian-born and South Asian-born women, these percentages were 31 and 12 respectively. Thirty percent of Canadian-born men and women had skill level two. The percentages for South Asian-born men and women were 27 and 17 respectively. Thus a higher percentage of Canadian-born men and women were better skilled than the South Asian-born sample.

Our model explicitly introduces place of residence and income conditioners, and I note that:

1) A higher percentage of Canadian-born samples reported to have Vancouver as their place of residence as compared to South Asian-born sample.

2) The annual average total government transfers payments were around \$900 in case of Canadian-born sample. It was \$1465 for South Asian-born men and \$1253 for South Asian-born women. Also the transfer payments are sensitive to the nature and size of the family, which is generally large in case of South Asian-born.

3) The annual average wage and salary earnings of Canadian-born men and women were respectively \$33,620 and \$23,776. The corresponding figures for South Asian-born men and women were \$23,292 and \$14,838. The average wage of Canadian-born men was 44% higher than that of South Asian-born men and 127% higher than that of South Asian-born women. Canadian-born women earned on average 60% more than did South Asian-born women, and South Asian-born men earned on an average 57%

income effect of non-market income and the substitution effect of change in market earnings also yields a different structure to the part-time employment market vis-à-vis the full-time market.

more than did South Asian-born women. Thus, there were considerable differentials in the full-time earnings between the Canadian-born and South Asian-born samples.

In sum, the descriptive statistics of the Canadian-born and South Asian-born males and females reveal that in terms of both life-cycle characteristics and human capital endowments there arise significant differences. The lower percentage of the married Canadians with the smaller family sizes can result in a different labour market experience as compared to the South Asian-born. Since the effects of marital status and family size are not only gender specific but also birthplace specific, there could arise differences in the outcomes in terms of participation and earnings. In terms of crucial human capital components of years of education and higher skill levels, the South Asian-born women were poorer as compared to all others. South Asian men reported a higher percentage with university education but fewer had professional skills. Owing to such differences, the labour market performance of these two groups should also differ. The earnings differentials already indicate this. The next issue, therefore, is to analyze the nature and extent of the factors giving rise to such differentials.

III. Model

One's earnings are a function of two processes that take place simultaneously in the labour market. First, is the decision to enter the labour market, which yields the participant's earnings. As documented in the literature (Berndt 991) the analysis of these processes can be done using two approaches that correct for selection bias, which arises when individuals self-select out of the labour market. As suggested by Heckman (1979), a two-step procedure is adopted. Undertaken first is a probit estimation of a labour force participation decision based on all the observations, i.e., those who are and are not participating in the labour market. The second stage involves the estimation of a wage equation of the following form:

$$\ln W_i = X_i \beta + \theta \lambda_i + \epsilon_i$$

Where $X_i \beta$ yields the expected log wage that may be offered to a randomly selected individual in the sub-group, $X_i \beta + \theta \lambda_i$ yields the expected observed wage for the

group actually in the sample, and λ is the inverse Mill's ratio. The λ so calculated is used as a regressor in the earnings function to correct for selection bias. A positive and statistically significant λ indicates that higher earnings accrue to those who have decided to participate in the labour market as compared to those who choose not to participate.³ Under these circumstances, the estimated unexplained earnings differential remains understated. An alternative technique to recognize self-selection is to first estimate the earnings equation by using data on labour force participants. The resulting OLS parameter estimates and data on regressors are used to create predicted wages for both workers and non-workers. The next step is to use predicted wages as a regressor in the participation equation, which is estimated by OLS using data on all individuals. One of the drawbacks of this approach when modelling for the labour supply of women is that the women who are employed are those who either can command a higher wage in the labour market or are ready to offer their labour at the prevailing wage rate. Thus the employed women do not represent those women who decide not to participate in the labour market. Under such circumstances, the more appropriate value is the wages that are offered rather than the wages that are derived from the offered wage distribution. In order to take care of this characteristic of labour supply of women, the present analysis corrects for sample selection bias using the procedure as suggested by Heckman.

Earnings Estimation

Labour Force Participation

The labour market participation equation inclusive of all irrespective of age, working and non-working, was estimated using age, years of education, total government transfer payments, family size, marital status, and residence as independent variables. The estimated probit model for both Canadian-born and South Asian-born men and women is contained in Table 7.

³ If the converse happens, then it implies that those who are best have decided not to participate and are either in the school or are self-employed. In this case, therefore, the unexplained earnings differential remains overstated.

The estimated coefficients on aging are consistent with the life-cycle prediction of human capital theory. The likelihood of participation increases with age and after reaching a threshold age decreases. The estimated coefficients obtain the sign as per the hypothesis and were statistically significant.

The increase in years of schooling increases the probability of participation. The estimated coefficients though positive are statistically insignificant except in the case of Canadian-born women.

Family size and marital status variables are gender specific. Marriage and large family size induce men to participate whereas it decreases the likelihood of participation for women. The coefficient of family size turned out to be negative and statistically significant in the case of Canadian-born women and South Asian-born men.

The coefficients of marital status were statistically significant for only the Canadian-born sample. Marriage did not have significant effect on the participation of South Asian men and women.

Government transfer payments may reduce the probability of participation if they adversely affect efforts to search for paid employment. The sign of the estimated coefficients were as hypothesized and were statistically significant. As transfer payments are sensitive to the size of the family, an interactive variable was used to capture this effect. The estimated coefficients were statistically insignificant except in the case of Canadian-born men.

On the basis of the results, an age-participation profile was estimated for men and women in age group 25 to 64. The estimated age-participation rate profile is shown in Figure 1 for men and in Figure 2 for women. It can be seen from both the figures that the participation rates in the labour market for both the Canadian-born and South Asian-born are quite high. South Asian men closely follow the participation rates of Canadian men, though marginally lower. The key point is that South Asian men's labour force participation rate surpasses the rate of Canadian after age 58. The probability of participation reaches its peak at the age of 37 for Canadian-born men and at the age of 39 for South Asian-born men. In the case of South Asian women, one finds that their participation rate is tangential to Canadian women between ages 40 to 52, otherwise it

remains below. The peak participation age of Canadian-born women was 39 years and that of South Asian-born women was 42 years. Thus, there is little difference between the participation rates of South Asian- and Canadian-born women. A subsequent question that arises is whether similar participation rates also result in similar rewards. The following analysis addresses this issue.

Earnings Function

Table 8 reports the results of the earnings equation estimated for Canadian-born and South Asian-born earners differentiated by gender. The dependent variable is the natural logarithm of annual earnings. The log of earnings is regressed on variables representing the human capital arguments and other life-cycle characteristics that influence one's earnings.

The estimated values of life-cycle variables of Age and Age 2 were consistent with the inverted U-shaped age earnings profile derived from human capital theory. Increasing age has successively smaller impacts on the growth of earnings. There were differences in the estimated returns to aging due to country of birth and gender effects. In addition, given an increase in the age by one year yielded an 8.2% increase in the earnings of Canadian-born men but only a 6.3% increase for South Asian-born men. The corresponding increase in the earnings of Canadian-born women was 8.4% and only 5.2% for South Asian-born females.

The sign of the estimated coefficients for the marital status variable was as hypothesized but was statistically insignificant for women. Marriage had a significant positive effect on men's earnings as compared to those who were divorced, separated, never married or widowed.

The human capital variables were levels of education, proficiency in both the official languages of Canada, and different levels of skill.

Those with less than a secondary education were the reference category for the educational dummy variable. It is expected that higher levels of education will have a positive impact on earnings. The estimated coefficients show that human capital

investment in education acts as expected for both the Canadian-born or South Asian-born. Returns to South Asian women with secondary and university education were respectively 17% and 18% higher than to those who had less than secondary levels of education. Thus, more education results in significantly higher returns.

Knowledge of both languages had a theoretically unexpected negative impact on the earnings of men as compared to those who knew either English or French or neither of the two. However, the reverse was true in the case of women where the coefficients were not only positive but also statistically significant. Since a relatively small percentage of the sample reported knowledge of both the languages, the regressions were re-run omitting this variable. The results, however, were insensitive to this change.

Canadian-born males with secondary education earned on average 6.5% more than those with less than a secondary level of education. A Canadian-born university graduate earned 15.5% more than those having less than secondary level. A Canadian woman's earnings advantage increased by 8.3% with a secondary level of education and by 21.9% with university education (relative to those who have less than secondary level). A South Asian man with secondary education earned 10.8% and 22.9% more than those who obtained less than a secondary education.

The estimated coefficients measuring skill levels indicated that, relative to the reference category of lowest skill level, the acquisition of higher skills does have a positive impact on the earnings for both the Canadian-born and South Asian-born. For example, a Canadian-born woman earns 65%, 41.5%, and 25.1% more than his unskilled counterpart. A South Asian woman with a high skill component also experiences higher returns.

In the case of the South Asian-born, the years since migration had a positive impact on earnings due to greater assimilation in the labour market with the passage of time. However, the increase in years since migration becomes successively less important in determining earnings. South Asian men on average would take 40.5 years and South Asian women would take 34 years to reach their peak earnings, respectively.

The impact of place of residence was significant for all labour force participants. The negative coefficients show that earnings are adversely affected if a person is a resident of Vancouver rather than Toronto.

The coefficients of *lambda* were positive and statistically significant implying that control for sample selection bias is required.

The earnings profile (Figure 3) estimated on the basis of the earnings function shows that South Asian men and women never catch up to the earnings of the Canadian-born. South Asian women always earn less than Canadian-born women. South Asian-born men initially earn less than Canadian-born women but surpass them after age 34. Compared to Canadian-born men, however, their earnings were low. Since this is a cross-sectional study, the age-earnings profile indicates the situation in 1991 of earnings at different ages of a given sample. The results are different from other studies, which report that a typical female immigrant (male) catches up with the earnings of a typical native-born female (male) within thirteen (eighteen) years of settlement in Canada (Shamsuddin 1997; Fagnan 1995). It is important to note that a disaggregated sample, as in this study, can have a labour market experience that is different from an aggregate sample.

A counter-factual question was posed to see how South Asian women fair if their attributes are rewarded as per the coefficients of Canadian-born women or South Asian-born men. It can be seen from Figure 4 that there is an improvement in South Asian-born women's earnings if their attributes are rewarded similarly vis-à-vis Canadian-born women; however, they still remain lower. Thus, South Asian-born women do suffer owing to their immigrant status. If they are rewarded similar to South Asian-born men, at age 37 their earnings surpass those of Canadian-born women. Thus, they also suffer for being female. Therefore, in order to examine the nature and extent of the influence of their foreign-born status and gender on their earnings — often referred to as double negative/double jeopardy — a decomposition of their earnings following the Oxaca-Blinder (1973) methodology is detailed below.

IV. DISCRIMINATION

The differences in the mean log of earnings between Canadian-born men and South Asian-born women were explained either in terms of differences in the human capital endowments or the residual discrimination in the labour market. The extent of discrimination was further decomposed to examine the nature and extent of the influence of foreign birth status (which also includes ethnicity) and gender effects.

The mean log earnings gap is shown in diagrammatic form in Figure 5. There was a difference of 0.82 in the earnings between Canadian-born men and South Asian-born women implying that the former earn 82% more than the latter. Between Canadian-born women and South Asian-born women the difference was 0.47 (47%) and between Canadian-born men and South Asian-born men it was 0.37 (37%). Between South Asian-born men and women the difference was 0.45 (45%). Two routes can be used to examine the direction of the double-negative effect of foreign-born status and gender on South Asian women. These two routes are shown in Figure 6, which are based on Figure 5. The path of route (1) is through CBM-SBM-SBW and the path of route (2) is through CBM-CBW-SBW. These two paths depict the process of discrimination that operates in the labour market. The resulting outcome for South Asian women can be different if the interplay of the forces operating on the demand side for a particular type of labour with a given endowment or of a given gender or due to a given occupational structure exerts influence on the employment decisions. The difference in the mean log earnings between Canadian-born men (CBM) and South Asian-born women (SBW), which is written below, is decomposed using both possible paths of discrimination.

$$\ln \bar{Y}_{CBM} - \ln \bar{Y}_{SBW} = \left[\ln \bar{Y}_{CBM} - \ln \bar{Y}_{SBM} \right] + \left[\ln \bar{Y}_{SBM} - \ln \bar{Y}_{SBW} \right] \quad (1)$$

The above equation can be decomposed in two ways and into two parts, one showing endowment differences and the other showing differences in the coefficients resulting in the discrimination.

$$\ln \bar{Y}_{CBM} - \ln \bar{Y}_{SBW} = \beta_{CBM} (\bar{X}_{CBM} - \bar{X}_{SBW}) + \bar{X}_{SBW} (\beta_{CBM} - \beta_{SBW}) \quad (2)$$

$$\ln \bar{Y}_{CBM} - \ln \bar{Y}_{SBW} = \beta_{SBW} (\bar{X}_{CBM} - \bar{X}_{SBW}) + \bar{X}_{CBM} (\beta_{CBM} - \beta_{SBW}) \quad (3)$$

Equation 2 assumes that the earnings structure of the Canadian-born applicable to the South Asian-born in the absence of discrimination, and Equation 3 assumes the earnings structure of the South Asian-born in the absence of discrimination. If the earnings coefficients were higher in the first equation as compared to the second, then the first equation would show an upper bound and the second equation would show a lower bound estimate of discrimination in the labour market. The results of both these equations are contained in Table 9 (Figure 6).

The results indicate that a 113.8% difference in the mean log earnings between Canadian-born men and South Asian-born men can be explained by discrimination. This implies that endowments of South Asian-Born men are more than those of CBM, which helps them to reduce the earnings gap. Between SBM and SBW, the mean log earnings differentials can be explained as 75.5% due to discrimination and the rest due to differences in endowments. Discrimination explained an approximate 90% and 60% mean log earnings differential between CBM and CBW and between CBW and SBW respectively. The earnings structure of the South Asian-born dampens the extent of discrimination due to a relatively low reward structure as compared to the Canadian-born.

The mean logs earnings differential between CBM and SBW was 0.82. Ninety-five percent of this gap is due to discrimination and 5 percent of the gap is due to differences in the endowments. The decomposition of discrimination through route 1 indicates that foreign birth status explains 54% of the gap and gender explains 45% of the gap. Taken together, both these components explain 92.7% of the earnings gap. If discrimination is analyzed through route 2, one finds that the gender effect is 49% and the foreign-born effect is 51%. Both these effects taken together explain 77% of the earnings gap. The results indicate that, whatever route is adopted, the effect of being foreign born and of being a particular ethnic group is stronger than that of just being a ‘woman.’ The

range of the double-negative effect lies between 0.63 and 0.75. The range of foreign-born status effect lies between 0.32 to 0.41 and that of gender effect between 0.31 and 0.34.

The above results are in direct contrast to the studies undertaken to detect earnings differentials between men and women to capture the double-negative effects of foreign born/ethnicity and gender. Beach and Worswick (1993), using 1973 data, conclude that the double-negative effect on the earnings of immigrant women is much more pronounced in the case of highly educated women. In addition, an earnings disadvantage persists over the working life of immigrant women relative to native-born women. Christofides and Swidinsky (1994), using survey data, conclude that less than 30% of the offered wage differentials between white males and minority women can be explained through productivity related characteristics. Swidinsky (1997), using the 1991 data, argues that the earnings disadvantage of immigrant South Asian men when compared to the native-born is 40% due to discrimination, and, in the case of women, it is 54%. Shamsuddin (1997) concluded that 71 to 79% of the differences in the mean log earnings between native-born males and foreign-born females could be attributed to the combined effect of birthplace and gender. Seventy-five percent to 94% of earnings variations can be explained by this effect. Thus, the main conclusion of most of the studies has been that the 'gender effect' is responsible for foreign-born female discrimination in the labour market. The main reason for such a conclusion is that most of the studies are based on samples, which include immigrants and native-born ethnic minorities as a whole. If one analyzed the earnings differential of a particular group of people originating from a particular country or countries having similar cultural backgrounds, an altogether different picture could emerge. In short, the results of the present study as compared to other studies indicate that discrimination explains a much higher percentage variation in the earnings gap.

V. Summary and Conclusions

This study estimated the double-negative effects of gender and ethnicity on the earnings of South Asian females residing in Vancouver and Toronto. The two cities differ not

only in terms of composition of South Asian immigrants by area of origin but also in terms of the structure of their labour market for South Asians. Correcting for aggregation errors and focusing on one ethnic immigrant group, leads to non-standard results. I conclude that it is not gender but foreign-born status and ethnicity that reduce South Asian female earnings in Canada. This indicates that policy prescriptions arising from aggregate studies would be inappropriate for this ethnic group in Canada. For example, simply alleviating gender-based discrimination while helping all female immigrants may not be effective for South Asian females.

Similar studies of this nature can reveal the causes of discrimination in the Canadian labour market and can help in formulating birth-place/ ethnicity-sensitive policies for different immigrant groups that are contributing to the vertical mosaic of Canadian society.

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Table 1: Immigration by Major Provinces and Urban Areas

PROVINCE		MAJOR URBAN AREAS	
(i) Quebec	13.10 %	Montreal	9.76 %
(ii) Ontario	52.77%	Toronto	32.35%
(iii) British Columbia	22.84%	Vancouver	19.91%
Total (i+ii+iii)	95.05%		61.92%
Total Immigrants	224050		224050

Source: Facts and Figures 1996 Immigration Overview, Citizen and Immigration Canada

Table 2: Immigration by Levels Component

	CANADA	MONTREAL	TORONTO	VANCOUVER
(i) Family	30.16 %	28.30%	23.39%	23.31%
(ii) Economic	53.49%	39.12%	62.28%	68.29%
(iii) Others	3.55%	4.02%	3.99%	3.90%
(iv) Total Immigrants	87.2%	71.44%	89.66%	95.50%
(v) Refugees	12.72%	28.53%	10.17%	4.46%
(vi) Total Immigrants	224050	21871	72471	44615

Source: Ibid.

Table 3: Immigration by Class-Major Provinces and Urban Areas

	Family Class		Business Class	
	Major Provinces	Major Urban Areas	Major Provinces	Major Urban Areas
Quebec	13.5%	Montreal 9.16%	Quebec 11.75%	Montreal 10.79%
Ontario	55.52%	Toronto 25.10%	Ontario 30.63%	Toronto 22.86%
British Columbia	20.98%	Vancouver 15.4%	British Columbia 39.81%	Vancouver 36.58%
Total	90.0%	49.66%	82.19%	70.23%
Total Immigrants	67579	67579		6151

Source: Ibid.

Table 4: Immigration by Top Five Countries

CANADA		MONTREAL		TORONTO		VANCOUVER	
Hong Kong	13.33%	France	9.21%	Hong Kong	15.33 %	Hong Kong	26.63%
India	9.45%	India	5.85%	China	9.67%	Taiwan	20.45%
China	7.8%	Algeria	5.13%	India	7.35%	India	9.28%
Taiwan	5.88%	Hong Kong	5.02%	Pakistan	6.5%	China	8.94%
Philippines	5.77%	Haiti	4.69%	Philippines	5.42%	Philippines	6.12%
TOTAL	42.23%		29.9%		44.27%		71.42%
Total Ten Countries	56.04 %		47.34%		59.9%		81.86%
Total Immigrants	224050		21871		72471		44615

Source: Ibid.

Table 5: Class Based Immigration to Canada from Top Five Countries

Family Class		Business Class (Principal Applicant)	
India	19.91%	Honk Kong	37.52%
Hong Kong	7.79%	Taiwan	19.20%
Philippines	7.30%	South Korea	6.94%
China	6.27%	China	3.50%
United States	4.61%	Germany-W	3.01%
Total	45.88%	Total	70.17%
Top Ten Countries	61.02%	Top Ten Countries	81.32%
Total Immigrants	67579	Total Immigrants	6151

Source: Ibid.

Table 6: Sample Means of Selected Variables

VARIABLES	DESCRIPTION	CANADA BORN		SOUTHERN ASIA BORN	
		MEN	WOMEN	MEN	WOMEN
Annual Average Earnings	CDN. \$	33620	23776	23292	14838
Age		39	38.7	39.9	38.9
Marital Status	1=Married Else=0	0.59	0.57	0.83	0.86
Family Size	1=>4, Else=0	0.084	0.074	0.20	0.20
Total Government Transfer Payment	Annual CD\$	928	844.4	1465.4	1252.9
Knowledge of Official Languages	1=Eng.& Fren. Else=0	0.091	0.11	0.0189	0.0123
Years of Schooling		13.87	13.87	13.87	12.59
Secondary level education	Else=0 Less than Sec.	0.334	0.349	0.254	0.242
University level education	Else=0, Less than Sec.	0.290	0.294	0.378	0.289
Skill 1- Managerial	Else=0, Lowest Skill	0.355	0.307	0.248	0.116
Skill 2-Semi-Professional	Else=0, Lowest Skill	0.307	0.294	0.268	0.172
Skill 3-Semi-Skilled	Else=0,Lowest Skill	0.268	0.353	0.365	0.489
Years Since Migration				12.4	12.5
Place of Residence	1=Vancouver 0=Toronto	0.34	0.32	0.27	0.29

Source: 1991 Census of Canada, Public Use Microdata File on Individuals

Table 7: The Probit Model For Labor Force Participation

(Dependent Variable: Labor Force Activity, D=1 for participation, D=0 otherwise)

VARIABLES	CANADA - BORN		SOUTHERN ASIA- BORN	
	MEN	WOMEN	MEN	WOMEN
Age	0.135 (10.06)	0.0977 (8.69)	0.126 (2.24)	0.165 (3.44)
Age2	-0.00182 (-11.98)	-0.00125 (-9.57)	-0.0016 (-2.58)	-0.00197 (-3.45)
Marital Status	0.306 (7.60)	-0.345 (-10.96)	0.136 (0.697)	-0.389 (-1.9)
Family Size	0.0325 (0.361)	-0.266 (-4.96)	-0.4067 (-2.1)	-0.286 (-1.7)
Total Government Transfer Payment	-0.0000577 (-10.26)	-0.0000775 (-14.50)	-0.0000712 (-2.9)	-0.0000649 (-2.6)
Years of Schooling	0.00968 (1.645)	0.0254 (4.76)	0.0244 (1.4)	0.0030 (0.21)
Residence	-0.0647 (-1.69)	-0.0321 (-1.05)	0.22 (1.29)	0.0063 (0.047)
Total (Gov. Trans .Pay.)* (Fam. Size)	-0.0000364 (-1.79)	0.0000214 (1.18)	0.0000638 (1.4)	0.0000509 (0.945)
Constant	-0.511	-0.254	-0.612	-1.36
No. of Observations	22100	19785	1528	1073
No. of Correct Prediction	21478	18512	1484	991
Log L(max)	-2574.314	-4454.635	-184.8586	-277.9606
Log L(0)	-2844.566	-4712.960	-199.4514	-289.6463
χ^2	540.505	516.650	29.1865	23.3712

Table 8: Results Of Regression Analysis Of Earnings
(Dependent Variable=Log of annual earnings)

VARIABLES	CANADA - BORN		SOUTHERN ASIA - BORN	
	MEN	WOMEN	MEN	WOMEN
Age	0.0817 (17.70)	0.0627 (12.32)	0.0839 (3.74)	0.0523 (2.2)
Age2	-0.000862 (-15.89)	-0.000680 (-11.07)	-0.00104 (-4.0)	-0.000664 (-2.36)
Marital Status	0.288 (23.94)	-0.0218 (-1.76)	0.214 (2.56)	-0.0179 (-0.225)
Secondary	0.0647 (4.78)	0.0829 (5.56)	0.108 (1.56)	0.170 (2.4)
University	0.155 (9.86)	0.219 (11.93)	0.229 (3.6)	0.182 (2.7)
Marital Status	0.288 (23.94)	-0.0218 (-1.76)	0.214 (2.56)	-0.0179 (-0.225)
Know.of English and French	-0.0417 (-1.9)	0.0409 (2.26)	-0.0229 (-0.142)	0.319 (1.97)
Skill 1	0.548 (20.23)	0.65 (18.10)	0.447 (5.16)	0.756 (7.2)
Skill 2	0.338 (12.97)	0.415 (11.86)	0.181 (2.07)	0.433 (4.27)
Skill 3	0.225 (8.78)	0.251 (7.19)	0.0922 (1.14)	0.274 (3.35)
Yrs. Since Migra tion(YSM)			0.047 (4.85)	0.0379 (2.77)
YSM2			-0.00058 (-1.95)	-0.000561 (-1.17)
Residence	-0.0882 (-7.58)	-0.139 (-10.31)	-0.155 (-2.9)	-0.315 (-4.84)
Constant	8.07	8.27	7.56	7.99
Lambda	0.153 (7.12)	0.275 (12.78)	0.229 (2.38)	0.254 (3.94)
No. of Observations	19381	14861	1322	893
ADJ. R2	0.16	0.14	0.19	0.24

Table 9: Decomposition of Canadian-Southern Asian Earnings Differential

EARNINGS GAP			CANADA- BORN		SOUTHERN ASIA- BORN	
			β_{CB}		β_{SAB}	
			DISC	ENDOW	DISC	ENDOW
ROUTE-I						
CBM-SBM (<i>B.placeEffect</i>)	Mean Log Absolute	0.3670 44%	0.4179 (113.87%)	-0.05089 (-13.87%)	0.3788 (103.22%)	-0.01178 (-3.21%)
SBM-SBW (<i>Gender Effect</i>)	Mean Log Absolute	0.4509 57%	0.3406 (75.54%)	0.1113 (24.68%)	0.3118 (69.15%)	0.1401 (31.07%)
CBM-SBW	Mean Log Absolute	0.8179 127%	0.7787 (95.21%)	0.04023 (4.92%)	0.5787 (70.75%)	0.2403 (29.38%)
ROUTE-II						
CBM-CBW (<i>Gender Effect</i>)	Mean Log Absolute	0.3465 41%	0.3115 (89.89%)	0.03482 (10.05%)	0.3424 (98.82%)	0.003867 (1.12%)
CBW-SBW (<i>B.place Effect</i>)	Mean Log Absolute	0.4715 60%	0.3205 (67.97%)	0.1521 (32.26%)	0.2242 (47.55%)	0.2484 (52.68%)
DOUBLE -NEGATIVE EFFECTS (CBM-SBW)						
GENDER+BIRTHPLACE EFFECT						
ROUTE-I			0.7585(92.7%)		0.6906(84.4%)	
ROUTE-II			0.6320(77.3%)		0.5666(69.3%)	

NOTES

1 β_{CB} = Coefficients of Canadian born used for decomposition; β_{SAB} = Coefficients of Southern Asia born used for decomposition .

2 CAW= Canada born Women; CAM= Canada born men; SAM= Southern Asia born men; SAW= Southern Asia born women

3 Figures in the bracket show percentage to mean log earnings differentials

Figure 1: Estimated Age-Participation Rate Profile of Men

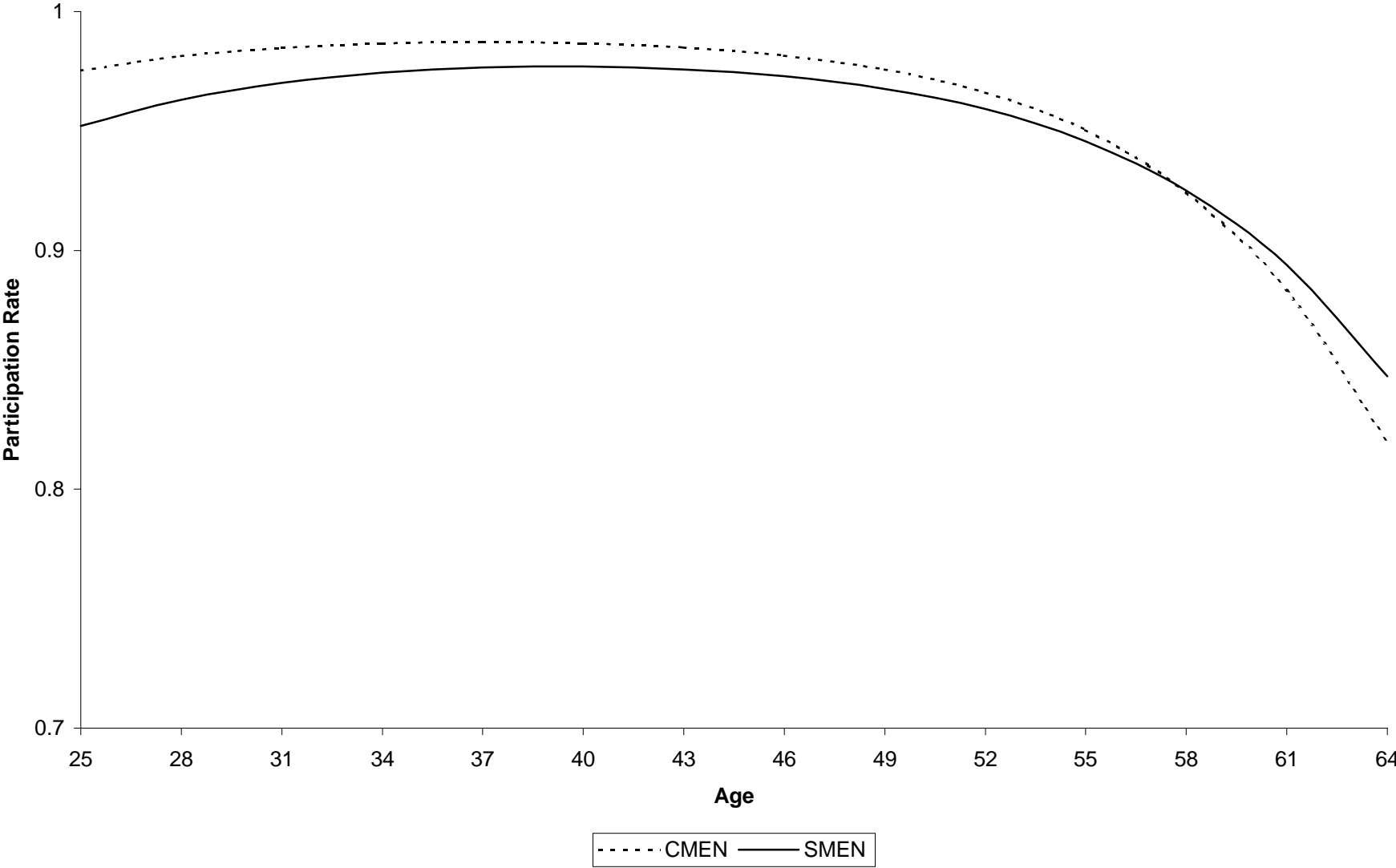


Figure 2: Estimated Age-Participation Rate Profile of Women

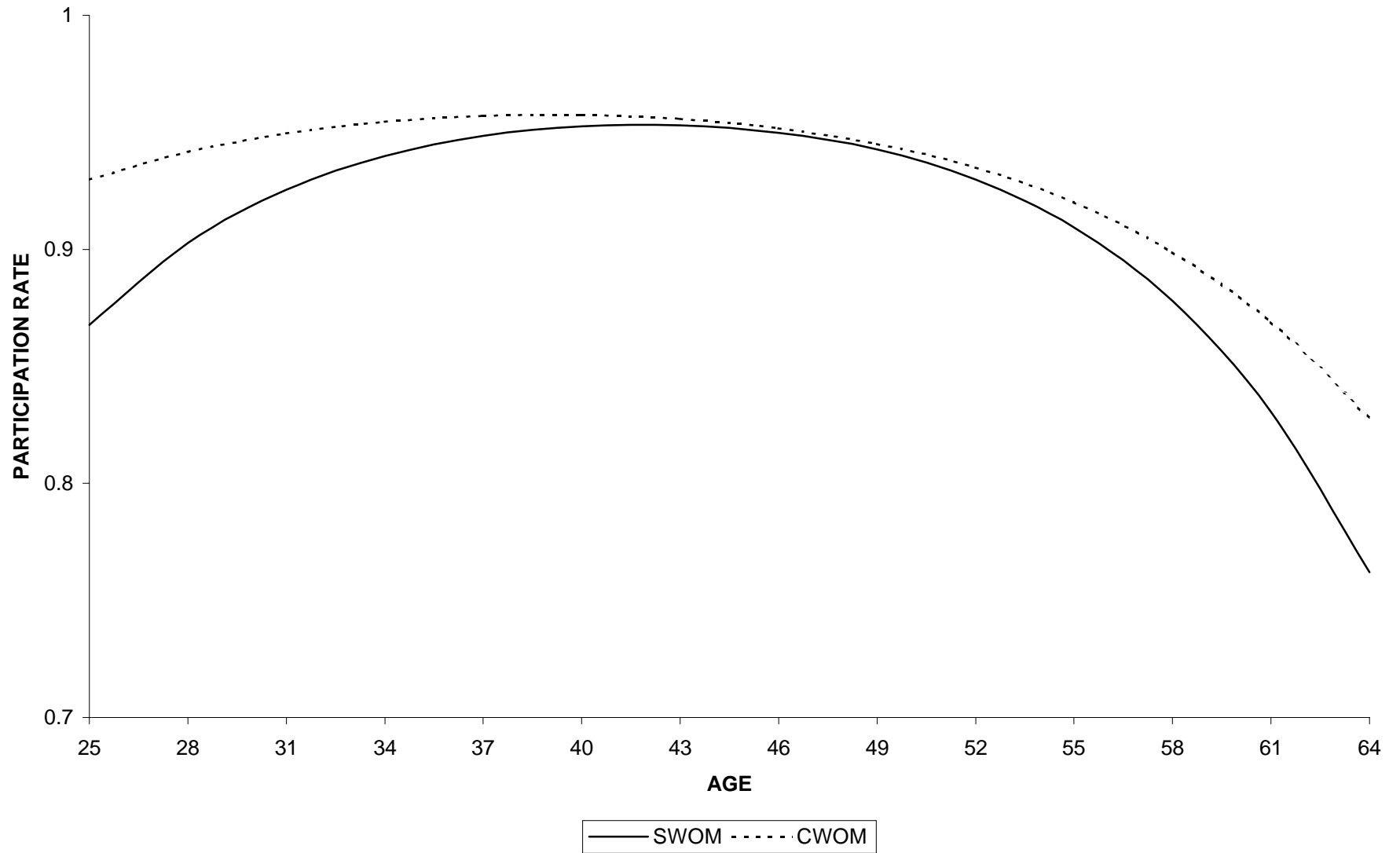


Figure 3: Estimated Age Earnings Profile of Canada Born and Southern Asia Born Men and Women

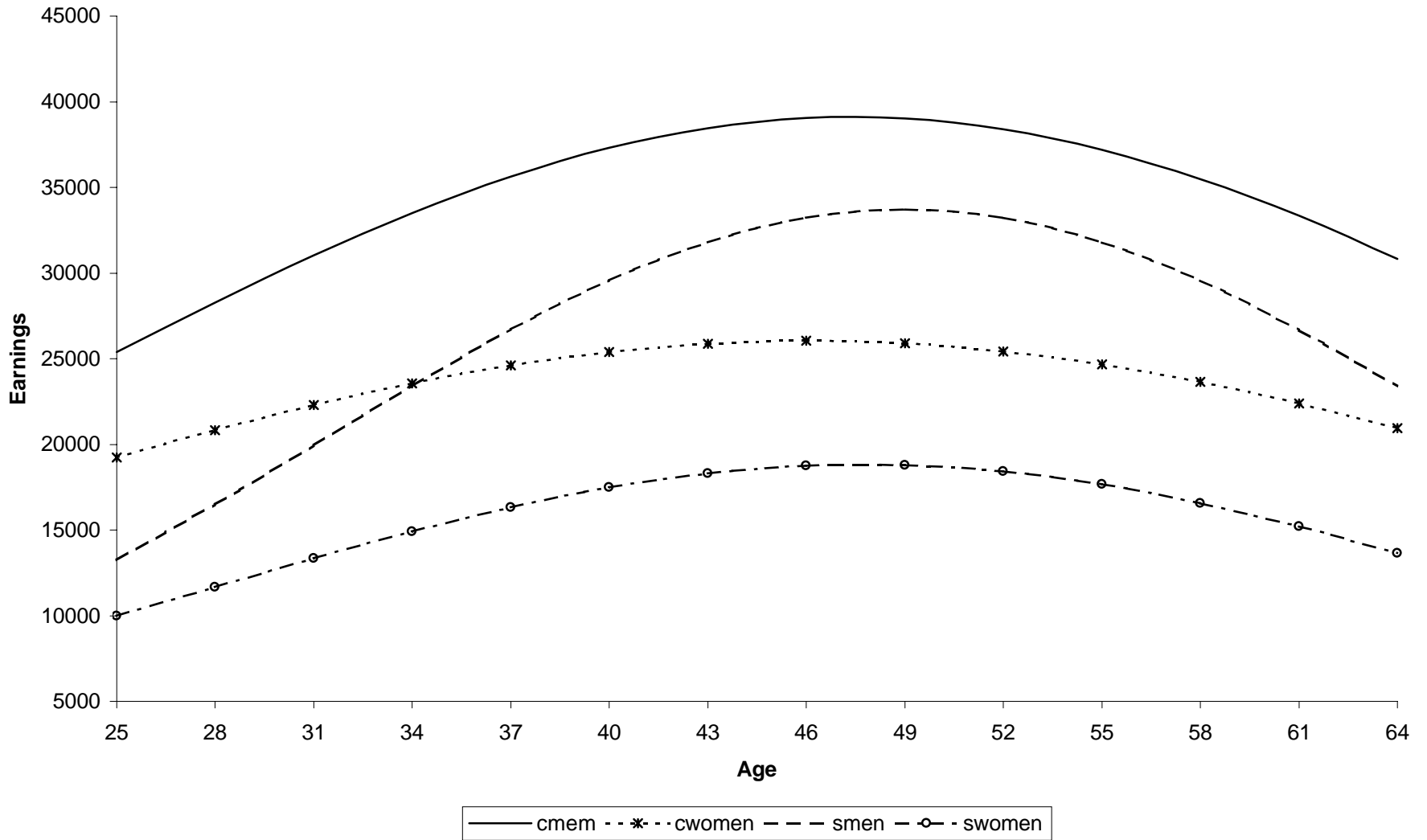


Figure 4: Predicting Age Earnings Profile for South Asian- Born Women Using the coefficients of Canadian-born Women and South Asian-born Men

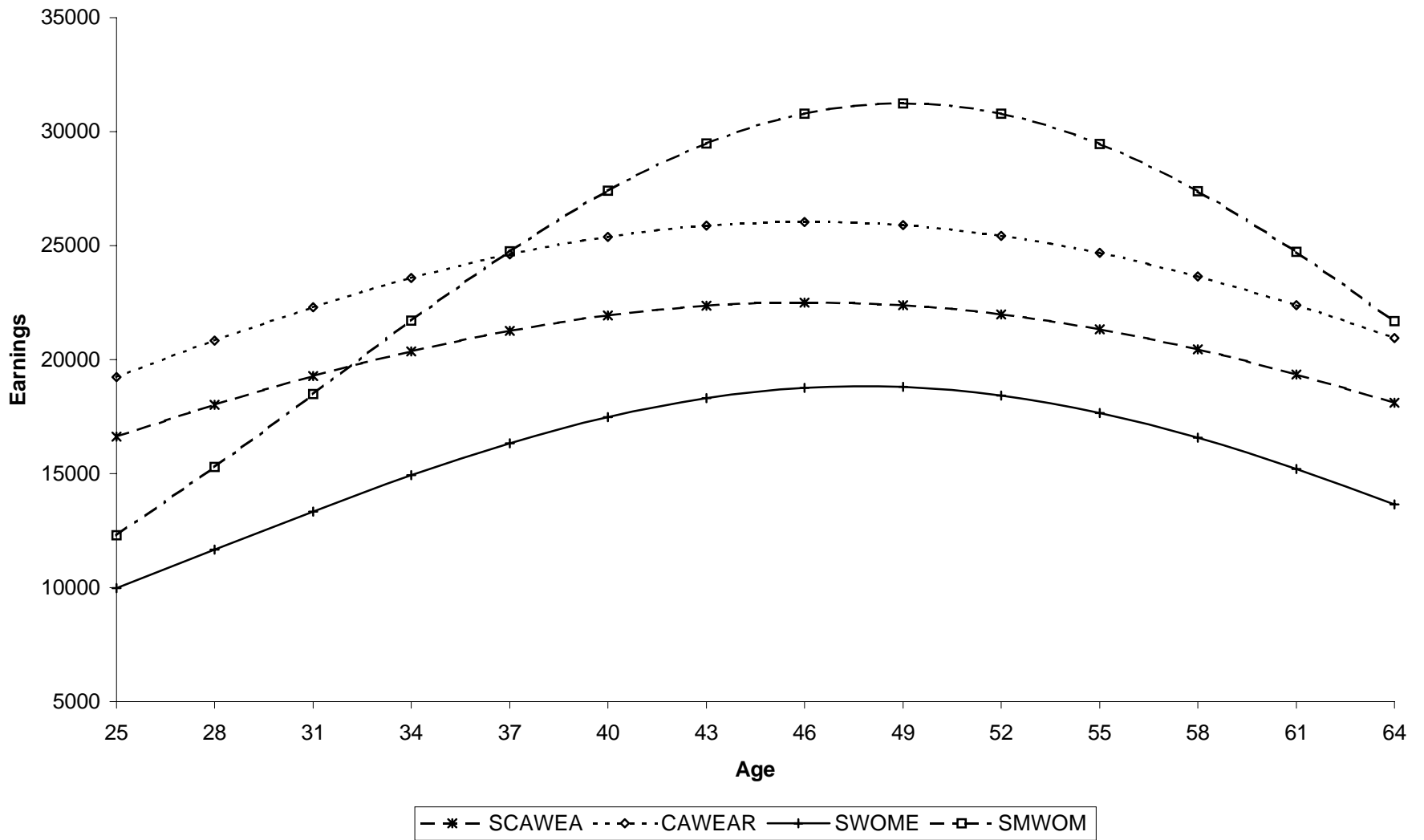


Figure 5: Mean Log Earnings Gap

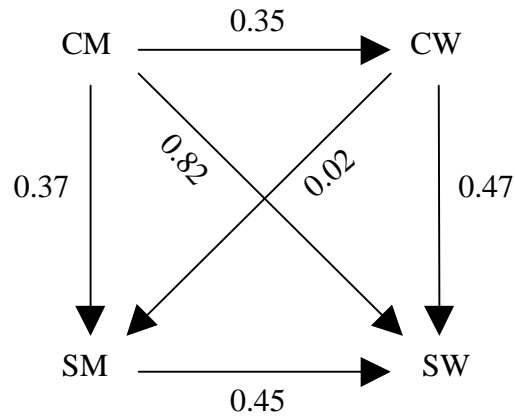
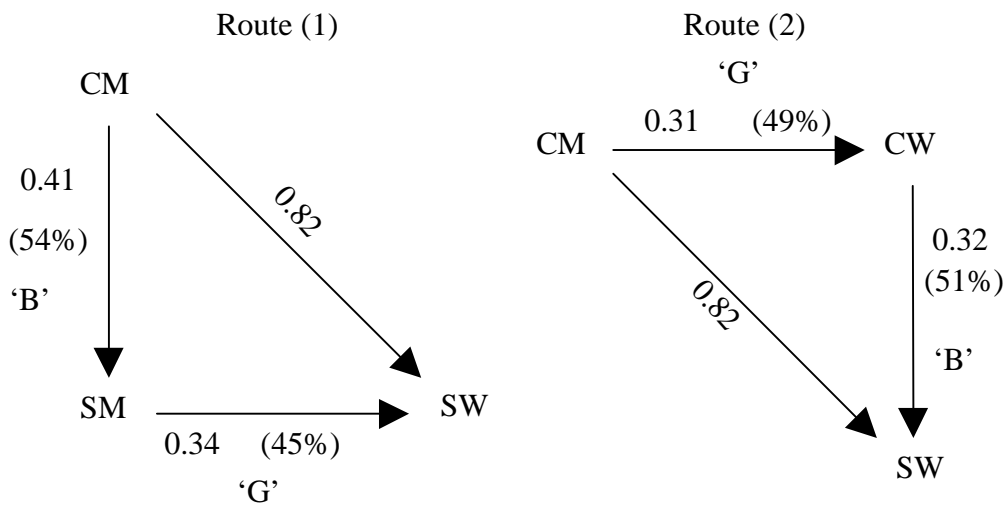


Figure 6: Gender and Birth Place Effects on Southern Asia Born Women's Earnings



'B' = Birth Place Effect;	'G' = Gender Effect;
CM = Canada Born Men;	SM = Southern Asia Born Men;
CW = Canada Born Women;	SW = Southern Asia Born Women

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