Explanation of Initial Destination Choices of Skilled Immigrants from Hong Kong, China and Taiwan to Canada: 1983-1999 香港、中國和台灣的加拿大技術移民 初始目的地的選擇: 1983-1999 年

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Abstract

The main purpose of this paper is to explain the initial destination choices of the skilled immigrants from Hong Kong, China, and Taiwan who landed in Canada in 1983-1999, based on an application of a multinomial logit model to the micro data of Citizenship and Immigration Canada. Our findings strongly support the human capital investment theory and the ethnic enclave theory. We also found some indications of the increasing importance of transnationalism and the attempts at using Quebec as a stepping stone to settle down in other parts of Canada as landed immigrants. We infer that the heavy concentration of these immigrants in Ontario and British Columbia will persist, and that in the rest of Canada, only Alberta has some chance of increasing significantly its share of these immigrants.

Key Words: Canadian immigrants, China, Hong Kong, Taiwan, destination choices

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摘 要

本研究針對加拿大移民局微觀數據進行多項邏輯分析 (Multinomial Logit Analysis),解析 1983 至 1999 年來自香港、中國大 陸和台灣的加拿大技術移民其初始目的地的選擇問題。我們的結果強 有力地支持了人力資本投資理論(Human Capital Investment Theory) 和種族凝聚理論(Ethnic Enclave Theory)。亦同時指出了跨國理論 (Transnationalism)的日益重要性以及以魁北克省作為踏腳石而獲取加 拿大移民身份的現象。由此我們可以進一步推論,未來這些技術移民 會持續高度聚集於安大略和不列顛哥倫比亞省,而在其它省份當中, 只有阿爾伯塔省有可能會有顯著增長。

關鍵字:加拿大移民、中國大陸、香港、台灣、目的地選擇

I. INTRODUCTION

Immigrants are an important part of the Canadian population. According to the 1996 population census, the first-generation immigrants represented 17.4% of the Canadian population, compared with 9.3% for the United States in the same year (CIC, 2001a, p. 3). Reflecting the substantial increase of immigrants since the late 1980s, as many as 2,131,400 (or 43%) of the 4,971,100 immigrants enumerated in the 1996 census landed in Canada since 1981 (CIC, 2001a, p. 8). In recent years, net immigration has been more important than natural growth in contributing to the growth of the Canadian population.¹ The immigrants who landed in 2001 amounted to 250,346 persons, which exceeded the ceiling (225,000) of the planned intake of immigrants for that year (CIC, 2002, p. 4). In the 2001 population census, there were as many as 5,448,480 immigrants, accounting for 18.5% of the Canadian population (Statistics Canada, 2003a). According to the News Flashes published by Metropolis (www.international.metropolis.net), Citizenship and Immigration Minister announced on February 8, 2001 that the planned annual admission level was to be further increased towards 235,000 immigrants by 2002. It is clear that immigrant population will become an increasingly important part of the Canadian society.

Immigrants are very unevenly distributed in Canada, resulting in different impacts in different areas of the country. According to the 2001 population census,

¹ Between July 1, 2000 and June 30, 2001, Canada received 252,088 immigrants and sent out 65,483 emigrants, implying a net gain of 186,605 immigrants (www.statcan.ca). Since the corresponding natural increase amounted to only 102,715 persons, immigration contributed 64% of Canada's population growth in this period. The data cited here are from Tables 051-0001 and 051-0004 of CANSIM II, updated on July 16, 2002. CANSIM is a large set of time series data system created and managed by Statistics Canada. CANSIM II is the new version, whereas CANSIM I is the older version.

as many as 3,030,075 immigrants (or 55.6% of the total) resided in Ontario, where they represented 27.1% of the provincial population. In the meantime, there were only 8,030 immigrants (or 0.1% of the total) in Newfoundland, where they represented only 1.6% of the provincial population.

The very uneven distribution of immigrants in Canada is determined by their initial destination choices and their post-immigration relocations. Leaving the study of their post-immigration relocations to another paper (Liaw and Xu, 2002), this paper focuses on their destination choices at the time of getting their landed immigrant status.

For various reasons, immigrants' initial destination choices in Canada have changed substantially through different stages of the country's history. Their initial destination choices have responded to differential economic needs in Canada, to changes in government policies, and to major events in the rest of the world (Passaris, 1984). Due to the shortage of skilled farmers from Western Europe to populate the Prairies, the Canadian government encouraged a large number of Eastern Europeans to come into the country in the early decades of the 20th century. This change in immigration policy coincided with the desire of Eastern European immigrants to reside in Manitoba, Saskatchewan and Alberta where familiar landscape and occupation could be found (Newbold, Chambers, and Liaw, 1992). Following the hiatus of immigration in the depression of the 1930s and the isolation of Eastern Europe into the communist block after World War II, the rapid industrial expansion in Canada in the 1950s and 1960s stimulated, and was in turn facilitated by, large inflows of Southern European immigrants who settled mostly in the large metropolitan areas and major industrial cities of Ontario and Quebec. In the late1960s, a fundamental shift in immigration policy away from the traditional preference for European immigrants led to more diversified immigrant flows (Green

and Green, 1995). The introduction of the "point system" in 1967, which assigned higher priorities to applicants with better education and desirable skills, initiated a new trend of relatively large inflows of skilled immigrants from Asia and other parts of the world. The political and economic turmoil in Southeast Asia following the military disengagement of the United States also helped to generate a large increase of immigrants from Southeast Asia, arriving in Canada in the early 1980s as refugees. With different backgrounds and motives, the new immigrants have displayed rather different destination choice patterns at landing in Canada. For example, immigrants from China, Hong Kong and Taiwan, benefiting from preexisting large ethnic Chinese enclaves, showed relatively strong preference for Ontario and British Columbia, whereas Cambodian immigrants, having a prolonged French colonial background, were more likely to choose Quebec as the destination. By contrast, Vietnamese immigrants, being subject to the strong influences of refugee settlement programs and sponsorship agencies, displayed a rather dispersed destination choice pattern.

The knowledge on the patterns and determinants of the initial destination choices made by the immigrants from different origins is useful for tackling various immigration issues. First, it is needed for efficient deliveries of services to the new immigrants (Bartel, 1989). Second, it can be helpful for anticipating and avoiding conflicts among people of different cultural traditions and socioeconomic circumstances. Third, it can throw some lights on the possibility of adjusting immigration policies to help enhance the quantity and quality of human resources in less well-off areas and to facilitate a more balanced economic development across provinces (CIC, 2001b).

The initial destination choices of the immigrants of the Chinese ethnic background are of particular significance, because they represent the largest component of Canada's recent immigrants and display very different preferences for different destinations. Between 1991-2001 China became the most important source country of immigrants to Canada while Hong Kong and Taiwan were the 4th and 7th major origins (Statistics Canada, 2003b). The immigrants from these three sources (197,360 from China, 118,385 from Hong Kong and 53,755 from Taiwan) accounted for 20.2% of the total immigrants to Canada during this period (Statistics Canada, 2003b). The great influx of Chinese immigrants has made Chinese one of Canada's fastest growing ethnic populations. As the largest visible minority group in Canada, 860,000 Chinese accounted for 3% of the total national population and 26.9% of all visible minorities in 1996 (Luk, 1999), making Chinese the third most common language in Canada, next to English and French (Wang, 1999). By 2001, the size of the Chinese ethnic group increased further to 1,029,400 (Statistics Canada, 2003b).

The main purpose of this paper is to explain the initial destination choices of skilled immigrants from Hong Kong, China, and Taiwan who landed in Canada between January 1, 1983 and March 31, 1999. The destinations are specified as the ten provinces of Canada.² The places of origin are defined in terms of citizenship.³

² Without denying the usefulness of using metropolitan areas as the alternatives in the choice set (Bartel, 1989), we use provinces mainly because they are the most important sub-national political units for the formulation and implementation of government policies. For example, Quebec has its own set of immigration priorities that are different from those of the national government. "In the 1991 Canada-Quebec Accord, the governments of Canada and Quebec agreed to divide responsibilities for immigration to Quebec. The Government of Canada continues to determine national standards and objectives and to have responsibility for the family class and refugees. The Government of Quebec is responsible for linguistic, cultural and economic integration services for permanent residents, and has exclusive responsibility for the selection of independent immigrants." (CIC, 1996, p. 4)

 ³ Because Hong Kong is not a country, we define an immigrant's citizenship as Hong Kong, if the Country of Last Permanent Residence is coded as Hong Kong, and if the Country of Citizenship is coded as (1) United Kingdom & Colonies, (2) British, (3) British Dependent Territories, or (4) British Nationals Overseas Citizens.

The explanatory variables include both personal and place attributes: the former describe the properties of the choice-makers, whereas the latter describe the properties of the alternatives in the choice set. Our selection of the time period is based on the availability of data for both dependent and explanatory variables. Our restriction of the immigrants to skilled immigrants is due to that the initial destination choices of other classes of immigrants (family class, refugee class, and business class) are not expected to respond sensitively to the *changing* labor market conditions in different provinces and are hence not particularly suitable for our intention to test the validity of the human capital investment theory (Sjaastad, 1962). A methodological advantage of focusing on the immigrants from Hong Kong, China, and Taiwan is that they all belong to the Chinese ethnic group – a group that is coded separately in the micro data of the 1981, 1986, 1991 and 1996 censuses so that we can create a common ethnic variable to assess the strength of the ethnic enclave theory (Portes, 1995).

The organization of the paper is as follows. The data and statistical model are described in section 2. Explanatory factors are specified in section 3. The empirical findings are presented in section 4. Finally, the main points are summarized in section 5.

II. DATA AND STATISTICAL MODEL

The data for this research come mainly from three sources: (1) the LIDS (Landing Information Data System) from CIC, which contains all individual records of the immigrants who landed in the period between January 1, 1980 and March 31, 1999; (2) the PUMFs (Public Use Microdata Files) of the 1981, 1986, 1991, and 1996 population censuses; and (3) the time series data in CANSIM (see footnote 1). Restricted by the availability of data on explanatory variables, our explanatory

analysis does not cover the immigrants who landed between January 1, 1980 and December 31, 1982. In total, there were 97,778 skilled immigrants from Hong Kong, China and Taiwan who landed in Canada between January 1, 1983 and March 31, 1999.

To explain the initial destination choices of the skilled immigrants, we use the following multinomial logit model:

$$p(j|s,t) = \exp(b'x(s,t,j)) / \sum_{k=1}^{10} (\exp(b'x(s,t,k)))$$
(1)

where p(j|s,t) is the probability that an immigrant with personal attributes *s* who lands in year *t* will choose province *j* as the destination; x(s,t,j) is a column-vector of observable explanatory variables; and *b*' is a row-vector of unknown coefficients.

To estimate the unknown coefficients, we first cross-tabulate all the skilled immigrants according to the following dimensions: (1) gender (male, female); (2) educational attainment⁴; (3) occupation (managerial, engineering, clerical, and other); (4) intended destination (the ten provinces of Canada); (5) source by citizenship (Hong Kong, China, Taiwan); and (6) year of landing (from 1983 to 1999). Assuming that the choices of all immigrants in the same cell of this multidimensional tabulation depend on the same p(j|s,t), we estimate the unknown coefficients in equation (1) by the maximum quasi-likelihood method (McCullagh, 1983), which is implemented by the Newton-Raphson algorithm.

Based on the likelihood criterion, the relative importance of an explanatory

⁴ Educational attainment has the following 8 levels: (1)0 to 9 years of schooling, (2) 10 to 12 years of schooling, (3) some university (13 years or more), (4) Trade Certificate, (5) Non-university Certificate, (6) Bachelor's Degree, (7) Master's Degree, (8) Doctorate.

variable is to be judged by its t-ratio (i.e. its estimated coefficient divided by the corresponding asymptotic standard error). Since our sample size (97,778 observations) is very large, the t-ratio can be considered as the standard normal variate so that a value with a magnitude of at least 2.0 can be taken as evidence of a significant relationship.

The goodness of fit of a given specification of the model is to be measured by:

$$Rho-square = 1 - L_g/L_o$$
(2)

where L_g is the maximum log of quasi-likelihood of the given specification, and L_o is the maximum log of quasi-likelihood of the corresponding null model (i.e. the model with *b'=*0). It is important to note that the ceiling of Rho-square is much less than 1.0 so that a value of 0.2 may indicate a very good fit (McFadden 1974).⁵

III. SPECIFICATION OF THE EXPLANATORY FACTORS

There are three existing theories that can be used as a basis for guiding the specification of the explanatory factors. First, the *human capital investment theory* assumes that migrants, either internal or international, migrate as a consequence of maximizing the present value of their future income stream (Sjaastad, 1962; Todaro, 1985; Massey *et al.*, 1993). It implies that immigrants are more likely to choose destinations where the labor market offers better economic opportunities, and that as the spatial pattern of economic opportunities in the national labor market changes, the initial destination choices will also change. Second, the *ethnic enclave theory*

⁵ Although the value of weighted R-square tends to be much larger than that of Rho-square, we chose Rho-square over weighted R-square, because we found that the former is more sensitive to changes in the combinations of explanatory variables (Liaw and Frey, 1998).

assumes that relatives and co-ethnic community can provide valuable benefits to newly arrived immigrants in many ways (Portes, 1995). It is expected that the personal networks of family, kinship, and friendship ties at destination can assist in initial settlement, provide information on employment opportunities, and ease the assimilation process into the host society (Massey *et al.*, 1993; Portes, 1997).⁶ In the co-ethnic community, there is the possibility of getting a job in an ethnic enterprise that does not require the ability to speak the language of the host country, and the availability of various services in familiar ethnic language (Li, 1992; Wang, 1999). This theory implies that immigrants tend to choose a destination with a large co-ethnic population, even if the area has a low average income or a high unemployment rate.⁷ The theory also implies that the destination choice pattern tends to be relative stable or even become more stable through time so that it may be quite insensitive to changes in the relative economic strength of different regions. Third, the transnationalism theory assumes that new immigrants can take advantage of the marked improvement in communications and transportation in recent decades to maintain on-going involvements in both origin and destination communities (Portes, 1996). These involvements allow the immigrants to make good use of differential opportunities spread across national borders for economic advancement and social recognition (Light *et al.*, 1994). The theory implies that immigrants tend to be more attracted to places that have convenient airline connections with the place of origin, especially those with the possibility of non-stop flights. In addition to these three theories, we may add the *beat-the-system hypothesis* that assumes that immigration regulations tend to be restrictive, and that immigrants can circumvent the restrictive

⁶ Of course, over-dependence on ethnic community can hinder the assimilation into the mainstream society, especially when the immigrants do not make a serious effort to become familiar with the language of the host society.

⁷ For a theoretical discussion about the possibility that when the co-ethnic community becomes very large, it will tend to disgorge rather than absorb the new immigrants, see Stark (1991, pp. 32-35).

regulations by writing down on their application form a location of relatively easy entry as their "intended" destination, and then moving to another location that fits their real preference. For example, a potential immigrant in Hong Kong may take a short course on French language to get a language certificate and then write down a city in Quebec as the intended destination on his application form. He can then enhance his chance of getting a landed immigrant status by submitting his application with the language certificate to the immigration branch of Quebec government, rather than to an office under the jurisdiction of Citizenship and Immigration Canada. The importance of this method of getting a landed immigrant status is suggested by the expansion of the "immigration industry" (Massey *et al.*, 1993), including agencies that help to set up an investment plan for a well-off applicant whose main purpose is to send his children to study in Canadian universities without the need to pay the rather high tuition fees set for foreign students.

Leaving the detailed definitions in the Appendix, we are now ready to specify the explanatory factors. Note that the values of the explanatory factors are lagged by one year in our model, because we assume that it takes about one year to get an immigrant visa after the preparation of an application.

Based on the human capital investment theory, we select the following four explanatory factors to represent the influence of the labor market condition of province j on the immigrants landing in year t: (1) wage, defined as the median real wage of province j in year (t-1); (2) employment share in 1981, defined as province j's percentage share of the total employment of the ten provinces in 1981; (3) increase in employment share, defined as province j's percentage share of total employment in year (t-1) minus province j's percentage share of the total employment in 1981; and (4) engineering share, defined as the percentage share of the employment of province j in year (t-1) by the occupations of engineering, natural

sciences, and mathematics. The reason for using *employment share in 1981* as an explanatory factor for all landing years is that this factor is considered as a proxy for the relative amount of employment opportunities created by the turnovers of jobs in the provincial labor market in the reference year. We assume that the greater the employment share, the greater the number of turnovers, and that the greater the number of turnovers, the greater the diversity of the resulting job openings, which enhances the probability of finding a job by reducing the mismatch between demand and supply. The additional abundance of job opportunities of a landing year in question over that of the reference year is then represented by increase in *employment share*⁸. The use of *engineering share* as an explanatory factor is for representing the potential attraction of the immigrants with engineering and natural science backgrounds by a destination with a high proportion of employment that matches their backgrounds. Thus, it will be introduced into the model only as an interaction with a dummy variable that assumes the value of 1 for immigrants who have the matching occupational backgrounds. The effects of these economic variables are expected to be positive.

Based on the ethnic enclave theory, we represent the attraction of the relatives and co-ethnic community in province j to the immigrants landing in year t by *share* of *Chinese ethnics*, which is defined as the percentage share of the population of

⁸ We use this explanatory factor for the following reasons. First, we assume that the *relative* employment opportunities of a province is better reflected by the increase in its *share* of national employment than by the growth rate of its employment *size*. Second, we assume that relative to *internal migrants* within Canada who have been shown to be highly sensitive to short-run fluctuations in employment opportunities (Newbold and Liaw, 1994), *immigrants* tend to be less sensitive to such fluctuations and rely more on their general impressions about the long-term employment prospects in potential destinations. Thus, we use the increase in employment share over a fixed reference year rather than over the previous year. At an early stage of our data analysis, we used *employment growth rate*, instead of *change in employment share*, in our model, and found that the former had little explanatory power.

Chinese ethnic origin in year (t-1) by province *j*. Its effects on the immigrants from all three sources are expected to be positive.

According to the transnationalism theory, the Vancouver area of British Columbia is most likely to be considered by the immigrants from the Far East as the best destination for maintaining the status of "transnationals", because of the convenience for flying back and forth between Canada and the place of origin. Thus, to assess the relevance of this theory, we use the dummy variable *British Columbia*, which assumes the value of 1 if the potential destination is British Columbia. It is expected to have a positive effect.

Since our examination of the post-landing relocations of immigrants (Liaw and Xu, 2002) reveals that the immigrants from Hong Kong who landed in Quebec had a particularly strong tendency to make post-landing out-migration to the rest of Canada, we suspect that in line with the beat-the-system hypothesis, the immigrants from Hong Kong, and perhaps those from China and Taiwan as well, might have used the province of Quebec as a stepping stone for ultimately settling down in other parts of Canada as landed immigrants. As a surrogate for being such a stepping stone, we introduce the dummy variable *Quebec*, which assumes the value of 1 if the potential destination is Quebec. It is expected to have a positive effect– at least for immigrants from Hong Kong.

We also introduce into our model the dummy variable *Alberta*, which assumes the value of 1 if the potential destination is Alberta. The use of this dummy variable is motivated by the fact that Alberta is the only province in Canada that does not impose provincial sales tax. Since the residents of Hong Kong, China, and Taiwan are used to paying relatively low taxes, the high levels of taxation in most part of Canada could discourage some of the immigrants from these origins (Ley,

2000). Thus, Alberta's lack of provincial sales tax may be perceived by the potential immigrants as an advantage. Its effect on destination choice is expected to be positive.

Since the place attributes defined above can have selective effects on the immigrants with different personal attributes, we let them interact with various dummy variables representing the personal attributes of the immigrants.

Guided by the above theories and previous empirical findings (e.g. Liaw and Frey, 1998), we have tried various combinations of the potentially useful explanatory variables in the destination choice model. We define the *best model* as the specification in which the coefficients of all explanatory variables have signs that are substantively meaningful and statistically significant. To help evaluate the relative importance of a subset of explanatory variables (e.g. conventional labor market variables) against another subset (e.g. variables representing the effects of co-ethnic attraction), we delete each of the subsets in turn from the best model and then compare the resulting decreases in Rho-square: the greater the decrease, the more important the deleted subset of variables.

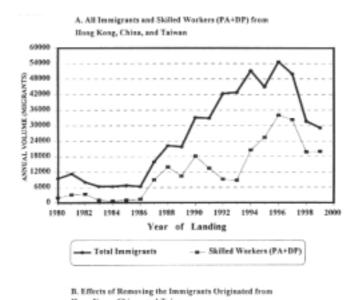
IV. EMPIRICAL FINDINGS

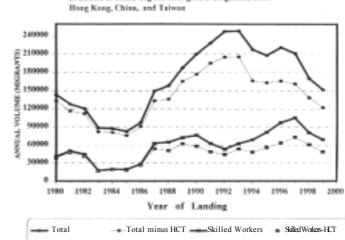
1. Overall Inflows, Compositions and Choice Proportions

Before presenting the results of our multivariate analysis, it is useful to show some salient features of the patterns of the overall inflow and origin-specific inflows of immigrants, as well as their compositions and destination choices. The importance of Hong Kong, China and Taiwan as sources of immigrants is shown in Figure 1. We see that the combined numbers of immigrants from these three sources, both skilled and all classes combined, increased substantially since 1987 (Panel A) and represented larger proportions of the immigrants from all sources since 1987 (Panels B and C). For skilled immigrants and their dependents, the combined contribution of Hong Kong, China, and Taiwan increased from about 5% in the early 1980s to about 30% in the mid-1990s (Panel C). For total immigrants, the combined contribution of these three sources increased from about 7% in the early 1980s to about 23% in the mid-1990s.

It is useful to note that although the combined number of *total* immigrants from these three sources continued to increase to a maximum of 54,000 in 1996, the combined number of *skilled* immigrants plus their dependents from these sources declined markedly in the early 1990s (from 18,000 in 1990 to 9,000 in 1993). This finding suggests that among all classes of immigrants, the skilled immigrants were most responsive to the negative effect of a downturn of the Canadian economy. A referee pointed out that an additional reason for this decline could be the retention effect of the prosperous economies in the sending areas during the same period.

Panel D of Figure 1 shows the interesting fact that the sharp increase in the intake of skilled immigrants (plus their dependents) from the very low level of the early 1980s started at different times for these three sources: it started in 1987 for Hong Kong, in 1990 for China, and in 1995 for Taiwan. The upturn for Hong Kong in 1987 was triggered by fear of the communist takeover following the disappointing outcome of the British government's negotiation with the Chinese government in the mid-1980s. The sharp increase for China in 1990 was triggered by the Tienanmen



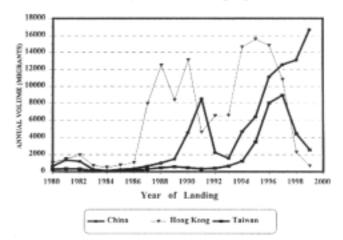


Note: The annual values are defined as of January 1 to December 31. For 1999, since the actual data only cover the period from January 1 to March 31, we multiply the actual data by 4 to get the estimated annual volume, PA represents Principal Applicants, and DP stands for Dependents. Place of origin is defined in terms of citizenship. Data Source: Landing Information Data System (LIDS)

Figure 1 The Importance of Hong Kong, China and Taiwan as Sources of Immigrants



D. Skilled Workers (PA+DP) from China, Hong Kong and Taiwan



- Note: The annual values are defined as of January 1 to December 31. For 1999, since the actual data only cover the period from January 1 to March 31, we multiply the actual data by 4 to get the estimated annual volume, PA represents Principal Applicants, and DP stands for Dependents. Place of origin is defined in terms of citizenship. Data Source: Landing Information Data System (LIDS)
- Figure 1 The Importance of Hong Kong, China and Taiwan as Sources of Immigrants (Cont.)

Square event of 1989.⁹ The sharp rise in the intake of skilled immigrants from Taiwan in 1995 was probably induced by the increased awareness of Canada as a destination, following a sharp increase of business-class immigrants from Taiwan since the late 1980s.

After reaching a high level, the intakes of skilled immigrants from both Hong Kong and China declined substantially in the recession years of the early 1990s. Since the return of Hong Kong to China in 1997, the skilled immigrants from Hong Kong plummeted, whereas those from China continued to increase through the late 1990s. The decline in the intake of skilled immigrants from these three sources after 1997 followed the overall pattern of skilled immigrants permitted to land in Canada in the late 1990s (Panels B and D).

Among the 97,778 skilled immigrants who landed in 1983-1999 from Hong Kong, China and Taiwan, there were 48,911 (50%) from Hong Kong, 37,473 (38%) from China, and 11,394 (12%) from Taiwan. Those from China and Taiwan were much better educated than those from Hong Kong: the proportion with at least a Bachelor's degree is 75% for China, 67% for Taiwan, and only 33% for Hong Kong (Table 1). As a consequence of this large difference in educational attainment, as high as 49% of those from China and 35% of those from Taiwan were in the occupational category of engineering, natural sciences and mathematics, compared with only 16% of those from Hong Kong (Table 2). By contrast, those from Hong Kong were much more likely (23%) to be in clerical and related occupations than are those from Taiwan (13%) and China (4%). Since most of the skilled immigrants from China originally came to Canada as students, it is not surprising that only 5% of

⁹ After the Tienanmen Square event, the foreign students from China who were studying at Canadian universities were allowed to apply for landed immigrant status by the Canadian government. Many of them were granted the status in 1990.

Table 1The Educational Composition of the 1983-1999Immigrants (Skilled
Workers: Principal Applicants) to Canada from Hong Kong, China and
Taiwan

Citizenship	0-9 Years of Schooling	Intermediate Level	Bachelor Degree and Above	Total Share	Total Volume
HONGKONG	2.32	64.25	33.44	50.02	48,911
CHINA	3.82	21.60	74.58	38.32	37,473
TAIWAN	0.90	31.74	67.36	11.65	11,394
Total Share	2.73	44.11	53.16	100.00	
Total Volume	2,668	43,132	51,978		97,778

Data Source: Landing Information Data System(LIDS)

Table 2 The Occupational Composition of the 1983-1999 Immigrants (Skilled
Workers: Principal Applicants) to Canada from Hong Kong, China and
Taiwan

	Managerial, Administrative and Relate	Occupations in Natural Sciences, Engineering and	Clerical and Related		Total	Total
Citizenship	Occupations	Mathematics	Occupations	Other	Share	Volume
HONGKONG	28.24	16.11	23.10	32.55	50.02	48,911
CHINA	4.56	49.25	3.58	42.62	38.32	37,473
TAIWAN	21.58	35.19	13.18	30.04	11.65	11,394
Total Share	18.39	31.03	14.46	36.12	100.00	
Total Volume	17,982	30,342	14,140	35,314		97,778

Data Source: Landing Information Data System(LIDS)

them are in the occupational category of managers and administrators, compared with 28% of those from Hong Kong and 22% of those from Taiwan. The large differences in both educational attainment and occupational composition among the three groups of skilled immigrants will be shown later in this section to have systematic effects on their different patterns of initial destination choices.

In several respects, the 1983-1999 overall destination choice pattern of the skilled immigrants from Hong Kong, China, and Taiwan was similar to those of (1) all skilled immigrants received by Canada and (2) all immigrants received by Canada, irrespective of class and origin (Table 3). First, Ontario was by far the most important destination: somewhat more than 50% of them chose Ontario as the initial destination, although Ontario's share of the national population was less than 40%. Second, extremely small proportions of them went to the Atlantic provinces¹⁰: less than 2% of them chose the Atlantic Region as the initial destination, although the region's share of national population was about 8%. Third, relative to their shares of the national population, the two agricultural provinces of Manitoba and Saskatchewan and the French-speaking province of Quebec attracted much less than their "fair" share of immigrants. Fourth, the proportion of immigrants who landed in Alberta was somewhat less than its share of the national population.

However, there were two marked differences in initial destination choice pattern between the skilled immigrants from Hong Kong, China, and Taiwan on the one hand and all immigrants on the other hand. First, the former were much more likely to go to British Columbia (30%) than were the latter (17%). Second, the former were much less likely to go to Quebec (5%) than were the latter (17%).

Among the skilled immigrants from Hong Kong, China, and Taiwan, those from Taiwan were by far most strongly attracted to British Columbia: as many as 63% of them went there, compared with 27% of those from Hong Kong and 23% of those from China (Figure 2). Our data suggest that this unusually high percentage was partly related to the fact that when the skilled immigrants from Taiwan started to

¹⁰ The Atlantic provinces include Newfoundland, Prince Edward Island, Nova Scotia, and New Brunswick.

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increase sharply, the economy of British Columbia was booming.¹¹

2. Multivariate Logit Analysis

To see how the initial destination choices of the skilled immigrants from Hong Kong, China, and Taiwan were jointly shaped by personal and provincial attributes, we now turn to the estimation results of the multinomial logit model. With the high value of Rho-square (0.5041), the best model fits the data very well (Table 4). The main findings are as follows.

In general, the skilled immigrants had a strong tendency to choose a destination with a relatively high wage level: the coefficient of *wage* turned out to be 3.638, which is associated with a very large t-ratio of 16.5 in the best model. The attraction of *wage* was particularly strong to those with the managerial and clerical occupations and relatively weak to those with engineering occupation. Its effect was somewhat stronger on females than on males and was the weakest on the least educated (those with less than 10 years of education). It is worth noting that even for the least educated, the coefficient of *wage* is still positive (3.638-1.432=2.206).

With respect to employment opportunities, we find that the skilled immigrants were prone to going to provinces with a relatively large labor market: the coefficient of *employment share in 1981* turned out to be a positive value (0.006), which is associated with a large t-ratio of 4.7. We also find that for most categories of skilled immigrants, the effect of *increase in employment share* was positive. By occupation, this effect was the strongest on those with managerial and clerical

¹¹ A referee suggested that the very high proportion of Taiwanese skilled workers who selected British Columbia as their initial destination might be more due to the attraction of the Taiwanese enclaves there. Unfortunately, we are unable to test this plausible idea, because the micro data of the censuses do not identify Taiwanese as a separate ethnic group.

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occupations, moderately strong on those with engineering occupation, and the weakest on those with "other" occupation. By place of origin, its effect was strongest on those from Taiwan and the weakest on those from China. For each place of origin, the less educated (i.e. those with neither a trade certificate nor a degree)¹² were less responsive to its effect. Actually, the coefficient of this factor turned out to be somewhat negative for the less educated immigrants from China (0.315 - 0.307 - 0.090 = -0.082). Finally, those with engineering occupation are found to be more prone to go to a province with a relatively large share of engineering jobs.

In sum, we have found substantial evidence that the initial destination choices of the skilled immigrants were highly consistent with the human capital investment theory: they were in general highly responsive to wage and employment incentives. Of particular interest is the relatively weak attraction of the least and less educated immigrants by higher wage level and greater increase in employment share. This finding suggests that as new employment opportunities shift from one high-income province to another high-income province, the initial destination choices of better-educated immigrants (i.e. those with a trade certificate or a Bachelor's degree) are more responsive to the change than are less-educated immigrants. In other words, better-educated immigrants are more effective in reducing the mismatch between the demand for and supply of labor in the changing spatial economy of Ironically, this finding also suggests that one way to make more Canada. immigrants go to low-income provinces is to lower the educational qualification of the new immigrants! An example would be an increased intake of immigrants with little formal education but useful skills (e.g. cooks or grocery store operators), who

¹² The less educated are represented by "Low ED (no certificate)" in Table 4. These are the immigrants in the lowest 3 levels of the 8 levels of educational attainment defined in footnote4.

can find an economic niche in low-income provinces. A starker example would be an increased intake of poorly-educated immigrants who are willing to do the tedious and dangerous work in the meat-packing plants of Manitoba.

With respect to the ethnic enclave theory, we find that the skilled immigrants from Hong Kong, Taiwan, and China were all very strongly attracted by the provinces with relatively large shares of the population of Chinese ethnic origin, although the attraction was somewhat weaker for those from China. For those from Hong Kong and Taiwan, the coefficient of *share of Chinese ethnics* (0.064) was associated with a very large t-ratio of 26.8 in the best model.

To the extent that British Columbia is the most suitable destination for those who aspired to be transnational immigrants, the importance of the transnationalism theory is confirmed in the best model for the skilled immigrants from Taiwan and Hong Kong. For those from Taiwan, the special attraction of British Columbia was already strong in the early 1980s and became stronger since 1988. For those from Hong Kong, the special attraction of British Columbia became evident since 1988. These findings suggest that transnationalism has become increasingly important. However, the estimation result has not revealed any evidence that the skilled immigrants from China were subject to the effect of transnationalism, presumably because in the period under study most of the skilled immigrants from China originally came to Canada as students in engineering and natural sciences and hence were more likely to become landed immigrants in a province with many engineering jobs (i.e. Ontario). Transnationalism may become more important for them when China becomes a more democratic and market-oriented society.

The best model also reveals some evidence supporting the beat-the-system hypothesis. For the skilled immigrants from Hong Kong and especially Taiwan, the

dummy variable representing the province of Quebec turned out to have positive coefficients. Our examination of the post-immigration relocations (Liaw and Xu, 2002) shows that among the immigrants from Hong Kong, about 20% to 30% of those landed between 1980 and 1985 left Quebec *by the end of the landing year*. This percentage was increased to about 40% to 60% for those landed in the early 1990s. In other words, an increasingly high proportion of the immigrants from Hong Kong who landed in Quebec left it within a time span of less than one year. Because the data on post-immigration relocations do not explicitly identify Taiwan as a separate origin, we can only indirectly infer that some Taiwanese immigrants also used Quebec as an expedient initial destination for getting a landed immigrant status, although their real preferred destination was likely to be either British Columbia or Ontario.

The relative ease of getting a landed immigrant status via Quebec is rooted in the fact that the government of Quebec has been seriously concerned with its persistently declining share of Canada's population, which was partly due to its share of new immigrants being much less than its share of the national population. Since 1991, Quebec has been the only province in Canada that has had an exclusive responsibility for selecting skilled immigrants who best meet its immigration needs. Although the government of Quebec applies a selection scheme similar to the point system of Citizenship and Immigration Canada (CIC), it emphasizes French language ability and adds other conditions such as the number of previous trips to Quebec, kinship/friendship ties to Quebec, and the number of children of the applicant¹³. As a consequence, potential immigrants can enhance the probability of admission simply

¹³ For example, in the point system of CIC, the ability to use French language (usually being the 2nd official language) only accounts for 8 out of 100 points, whereas it accounts for 16 out of 90 points in the Quebec's immigration selection scheme. Furthermore, Quebec assigns more points (up to 8 points) to a potential immigrant who has more children, while CIC's point system has nothing to do with the number of children.

by meeting Quebec's specific conditions. For example, in order to increase the number of points for qualifying as a landed immigrant, a potential immigrant in Hong Kong can go to a French language school to pay for a certificate of French language training. In Montreal, a lucrative "immigration industry" has emerged to help applicants of various backgrounds to apply for a landed immigrant status via Quebec, charging several thousand dollars per application¹⁴.

The best model also shows that Quebec became relatively attractive to skilled immigrants in 1991, 1992, and 1993. We found out these effects first by examining the gap between the observed and predicted destination choice proportions of different provinces at an early stage of our investigation. These effects could be the short-term consequence of the 1991 official agreement between the governments of Canada and Quebec, which gave Quebec the exclusive power of selecting the Quebec-bound "economic immigrants" (including "skilled workers", "business immigrants", and "provincial/territorial nominees") (Belanger and Gilbert, 1999).

In the best model, the dummy variable representing Alberta as a potential destination turned out to have positive coefficients for the skilled immigrants from all three origins. This finding suggests that an important reason for Alberta's particular attraction to these immigrants is its lack of provincial sales tax, which reflects its strong economic potential based on its large reserves of energy resources. In addition to the benefit of zero provincial sales tax, its promising economic outlook

¹⁴ Ley (2000) provides a vivid description about the conducts of the agents in the "immigration industry" who profited from the business class immigrants in the follow way. "The availability of large capital pools in a poorly regulated environment created a feeding frenzy, driven by provincial competition and hungry lawyers, a very dirty program that brought out the worst in our legal and business group. There was so much money around, the Department was swamped and every area was litigious. Former Department employees were leaving to become immigration consultants" (pp. 41-42).

may also be attractive to the skilled immigrants. It is worth noting that Alberta's share of these immigrants was actually greater than that of Quebec (Table 3).

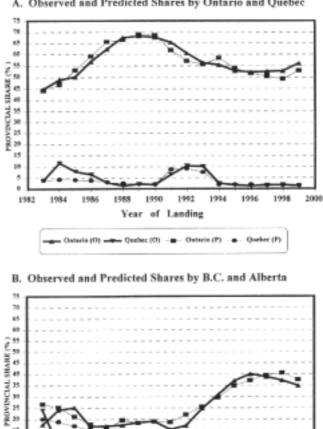
The relative explanatory powers of different subsets of explanatory variables are indicated by the values of the decrease in Rho-square at the bottom of Table 4. This indicator can substantially understate the explanatory power of a subset of variables that overlaps substantially with another subset. This is the case between the subset of variables representing effects of the labor market variables and the subset of variables representing the attractions of ethnic population. When the subset of labor market variables was deleted from the best model, the decrease in Rho-square turned out to be 0.0074, and the t-ratio associated with share of Chinese ethnics increased markedly from 26.8 to 117.0. When the subset representing the attractions of ethnic population was deleted from the best model, the decrease in Rho-square turned out to be 0.0038, and the t-ratios of several labor market variables jumped up substantially (e.g. the t-ratio associated with wage increased sharply from 16.5 to 55.3). These two results show that the two subsets of explanatory variables in question overlapped substantially in explanatory power. When the two subsets were deleted simultaneously from the best model, the resulting decrease in Rho-square turned out to be extremely large (0.4086), and the coefficients of several remaining variables became nonsensical. Thus, the labor market and ethnic attributes of the potential destinations helped to explain most of the variation in the initial destination choices of the skilled immigrants and to provide an essential context for revealing substantively meaningful effects of less powerful explanatory variables.

The finding that the joint explanatory power of the labor market and ethnic factors were extremely strong has an important implication: it will be very difficult to reduce the heavy concentrations of the immigrants from Hong Kong, China, and Taiwan in Ontario and/or British Columbia, because these two provinces have both

relatively strong economies and large Chinese communities.

How well does the best model predict the major features of the observed destination choice proportions? Figures 3, 4, and 5 show the similarities between the predicted and observed annual volumes and shares of skilled immigrants from each of the three origins heading for each of the four most important destinations (Ontario, British Columbia, Alberta, and Quebec). For most years, the predicted and observed volumes are nearly identical. The predicted and observed shares are quite similar for the immigrants from an origin during the years in which there were relatively large numbers of skilled immigrants coming from that origin.

In terms of the economic implications of the immigrants' destination choice behaviors, the most important feature in these figures is that the model does a very good job in accounting for the sharp increase in British Columbia's shares of the skilled immigrants from Hong Kong and Taiwan in the early 1990s (Panel B of Figure 3, and Panel B of Figure 5). Our estimation result suggests two important reasons for this increase. First, this increase was partly induced by the fact that British Columbia's share of Canada's employment increased sharply in the early 1990s, mainly at the expense of Ontario. This change in employment was in turn due to the fact that British Columbia benefited from increased economic connections with the Far East, whereas Ontario's economy was held back by a serious and prolonged recession in the early 1990s. Second, the increase in the share of skilled immigrants by British Columbia partly resulted from increasingly large proportion of immigrants who aspired to become "transnationals". It is the first of these two reasons that contains the encouraging implication that the skilled immigrants from Hong Kong and Taiwan responded sensitively in the "right" way to the changing employment opportunities among the provinces of Canada so that immigrants are less likely to be blamed for causing the unemployment of the native born.



A. Observed and Predicted Shares by Ontario and Quebec

B.C. (0) Alberts (0) - - B.C. (P) - Alberta (P) Note: The annual values are defined as of January 1 to December 31. For 1999, since the actual data only cover the period from January 1 to March 31, we multiply the actual data by 4 to get the estimated annual volume. The predicted values are generated by the logit model specified in the paper.

1990

1992

of Landing

1994

1996

1998

2000

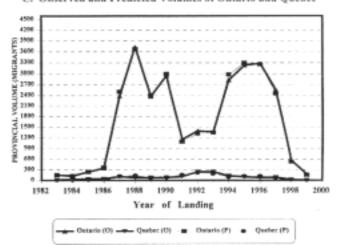
1984

1986

1988

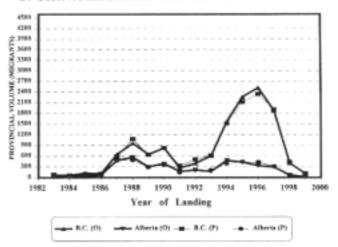
Year

Figure 3 The Annual Volumes and Shares of Immlgrants from Hong Kong by Major DestInation ProvInces: Skilled Workers (Principal Applicants)

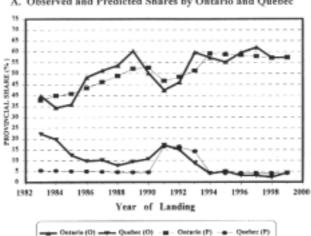


C. Observed and Predicted Volumes of Ontario and Quebec

D. Observed and Predicted Volumes of B.C. and Alberta

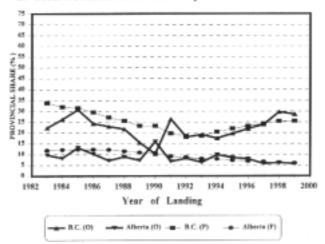


- Note: The annual values are defined as of January 1 to December 31. For 1999, since the actual data only cover the period from January 1 to March 31, we multiply the actual data by 4 to get the estimated annual volume. The predicted values are generated by the logit model specified in the paper.
- Figure 3 The Annual Volumes and Shares of Immlgrants from Hong Kong by Major Destination Provinces: Skilled Workers (Principal Applicants) (Cont.)



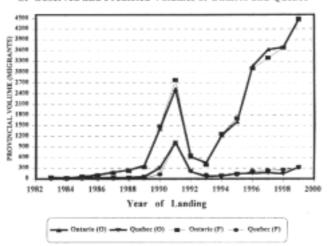
A. Observed and Predicted Shares by Ontario and Quebec





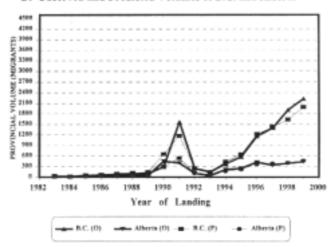
Note: The annual values are defined as of January 1 to December 31. For 1999, since the actual data only cover the period from January 1 to March 31, we multiply the actual data by 4 to get the estimated annual volume. The predicted values are generated by the logit model specified in the paper.

Figure 4 The Annual Volumes and Shares of Immlgrants from China by Major Destination ProvInces: Skilled Workers (Principal Applicants)



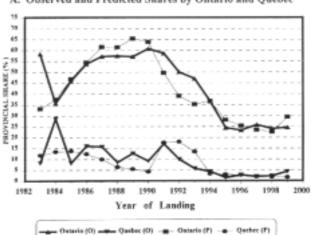
C. Observed and Predicted Volumes of Ontario and Quebec

D. Observed and Predicted Volumes of B.C. and Alberta



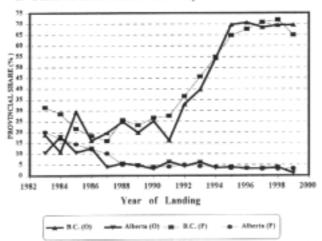
Note: The annual values are defined as of January 1 to December 31. For 1999, since the actual data only cover the period from January 1 to March 31, we multiply the actual data by 4 to get the estimated annual volume. The predicted values are generated by the logit model specified in the paper.

Figure 4 The Annual Volumes and Shares of Immlgrants from China by Major Destination ProvInces: Skilled Workers (Principal Applicants) (Cont.)



A. Observed and Predicted Shares by Ontario and Quebec





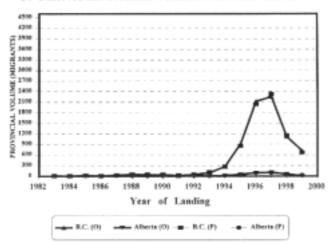
Note: The annual values are defined as of January 1 to December 31. For 1999, since the actual data only cover the period from January 1 to March 31, we multiply the actual data by 4 to get the estimated annual volume. The predicted values are generated by the logit model specified in the paper.

Figure 5 The Annual Volumes and Shares of Immigrants from Taiwan by Major Destination Provinces: Skilled Workers (Principal Applicants)



C. Observed and Predicted Volumes of Ontario and Quebec

D. Observed and Predicted Volumes of B.C. and Alberta



Note: The annual values are defined as of January 1 to December 31. For 1999, since the actual data only cover the period from January 1 to March 31, we multiply the actual data by 4 to get the estimated annual volume. The predicted values are generated by the logit model specified in the paper.

Figure 5 The Annual Volumes and Shares of Immigrants from Taiwan by Major Destination Provinces: Skilled Workers (Principal Applicants) (Cont.)

V. CONCLUSION

Guided mainly by a few theories, we have selected a set of explanatory factors to account successfully for the initial destination choices of the skilled immigrants from Hong Kong, China, and Taiwan. We found that the combination of labor market factors and the distribution of the population of Chinese ethnics in Canada explained a very large amount of variation in the destination choices. This finding indicates the usefulness of the human capital investment theory and the ethnic enclave theory. We also found that these two set of explanatory factors overlapped substantially in explanatory power. This finding makes a lot of sense in terms of the cumulative causation involved in the development of ethnic enclaves (Portes, 1995). It was the relatively strong economies of British Columbia and Ontario that attracted the early waves of Chinese immigrants who formed the basis for the emergence of Chinese enclaves since the late 19th century. The continued economic strength of these two provinces and the benefits offered by the Chinese enclaves there attracted more immigrants with Chinese cultural background. Thus, the strong preference of the skilled immigrants from Hong Kong, China, and Taiwan for Ontario and British Columbia is understandable and can be expected to continue into the foreseeable future

What is particularly interesting is the major shift in initial destination choice from Ontario to British Columbia made by the skilled immigrants from Hong Kong and Taiwan in the early 1990s. It reflected the sensitivity of the immigrants with university education from these two sources to the shift of employment opportunities from Ontario to British Columbia. This sensitivity is beneficial, because it helped reduce the likelihood of the immigrants being blamed as a cause of the unemployment of the native born, and because it contributed to the vitality and productivity of the Canadian economy. The shift in initial destination choice also reflected the increasing aspiration of the skilled immigrants to become transnationals and thus confirmed the relevance of the transnationalism theory.

In light of the very strong tendency of the immigrants from Hong Kong to make post-immigration out-migration soon after landing in Quebec (Liaw and Xu, 2002), our multivariate finding that the dummy variable *Quebec* had a positive impact on the initial destination choices of the skilled immigrants from Hong Kong and Taiwan suggests that some immigrants from these two sources have used Quebec as their stated destination to enhance their chance of getting the landed immigrant status, although they actually intended to go to Ontario or British Columbia. Thus, we have also found some support for the beat-the-system hypothesis.

With no provincial sales tax and a strong economic base, Alberta is found to receive more of these skilled immigrants than did Quebec. In our opinion, Alberta is the only province that has some chance of increasing significantly its share of these immigrants at the expense of Ontario and British Columbia.

Finally, our main finding suggests that the strong desire of federal, provincial, and many municipal governments to reduce the heavy concentrations of immigrants in the Toronto area of Ontario and the Vancouver area of British Columbia is rather difficult to realize in light of the strong preference for admitting very well educated immigrants under the current immigration policy, because the best educated immigrants turned out to be most prone to heading for the destinations with relatively good economic opportunities. The three levels of governments may coordinate their efforts in fine-tuning their selection and placement schemes so that some less educated immigrants with specific skills may be fitted to some economic niches in economically weaker provinces and municipalities. However, it is unlikely that Explanation of Initial Destination Choices of Skilled Immigrants from Hong Kong, China and Taiwan to Canada: 1983-1999

such schemes will have much effect on the big picture. Furthermore, the achievement of a more dispersed population distribution by lowering the educational qualification of new immigrants may not only reduce the long-term strength of the Canadian economy but also lead to the expansion of an underclass that is difficult to assimilate both economically and culturally.

Acknowledgments

We are grateful to (1) the Social Sciences and Humanities Research Council of Canada for its support of this research via Grant 410-99-1203, (2) Professors Valerie Preston and Ted Richmond for helping us obtain the permission to access the valuable LIDS data, and (3) the referees for their helpful comments.

References

- Bartel, A. P. (1989) Where do the new U.S. immigrants live? *Journal of Labor Economics*, 7:371-391.
- Belanger, A. and Gilbert, S. (1999) *Report on the Demographic Situation in Canada 1998-1999*, Cat. No.91-209-XPE, Ottawa: Statistics Canada.
- CIC (Citizenship and Immigration Canada) (1996) Canada's Immigration Law, Cat. No. MP23-65, Ottawa: Ministry of Supply and Services.
- CIC (Citizenship and Immigration Canada) (2000) The Interprovincial Migration of Immigrants to Canada, Cat. No. MP22-18/4-2000E, Ottawa: Communication Branch, CIC (http://www.cic.gc.ca/english/).
- CIC (Citizenship and Immigration Canada) (2001a) Canada's Recent Immigrants: A Comparative Portrait Based on the 1996 Census, Cat. No. MP22-20/1-2001E, Ottawa: Communication Branch, CIC (http://www.cic.gc.ca/english/).
- CIC (Citizenship and Immigration Canada) (2001b) Towards A More Balanced Geographic Distribution of Immigrants, Cat. No. C&I-51-109/2001E, Ottawa: Communication Branch, CIC (http://www.cic.gc.ca/english/).
- CIC (Citizenship and Immigration Canada) (2002) Facts and Figures, 2001: Immigration Overview, Cat. No. C&I-291-07-02E, Ottawa: Communication Branch, CIC (http://www.cic.gc.ca/english/).
- Green, A. G., and Green, D. A. (1995) Canadian immigration policy: The effectiveness of the point system and other instruments, *Canadian Journal of Economics*, XXVIII 4b: 1006-1041.
- Ley, D. (2000) Seeking homo economicus: The strange story of Canada's business immigration program, *RIIM* (Research on Immigration and Integration in the Metropolis), Vancouver Centre of Excellence, Working Paper Series, No. 00-02.
- Li, P. S. (1992) Ethnic enterprise in transition: Chinese business in Richmond, B. C., 1980-1990, *Canadian Ethnic Studies*, 24: 120-138.

- Liaw, K. L. and Frey, W. H. (1998) Destination choices of the 1985-90 young adult immigrants to the United States: Importance of race, educational attainment, and labour market forces, *International Journal of Population Geography*, 4: 49-61.
- Liaw, K. L. and Xu, Lei. (2002) Post-Landing Relocations of the Immigrants in Canada: 1980-1995, School of Geography and Geology, McMaster University, Hamilton, Ontario, L8S 4K1.
- Light, I., Sabagh, G., Bozorg mehr, M., and Der-Martirosian, C. (1994) Beyond the ethnic enclave hypothesis, *Social Problems*, 41 (1): 65-80.
- Luk, C. M. (1999) Ethnic succession in suburban Toronto: The case of the Chinese, Asian Migration: Pacific Rim Dynamics, 199-232, Interdisciplinary Group for Australian Studies (IGAS), National Taiwan University, Taipei, Taiwan.
- Massey, D. S., Arango, J., Hugo, G., Kouaouci, A., Pellegrino, A., and Taylor, J.E. (1993) Theories of international migration: A review and appraisal, *Population and Development Review*, 19: 431-468.
- McCullagh, P. (1983) Quasi-likelihood functions, The Annals of Statistics, 11: 59-67.
- McFadden (1974) Conditional logit analysis of qualitative choice behavior, 105-142, In P. Zarenbka (ed.), *Frontiers in Economics*, New York: Academic Press.
- Newbold, K. B., Chammbers, S. A., and Liaw, K. L. (1992) Effects of personal factors on the destination choice patterns of Canadian immigrants: An evaluation within a multivariate framework, *Journal of Population Studies*, 15: 77-101. Population Studies Center, National Taiwan University, Taipei, Taiwan.
- Newbold, K. B. and Liaw, K. L. (1994) Return and onward interprovincial migration through economic boom and bust in Canada, from 1976-81 to 1981-86, *Geographical Analysis*, 26 (3): 228-245.
- Passaris, C. (1984) The economic determinants of Canada's multicultural immigration, *International Migration*, 22 (2): 90-100.
- Portes, A. (1995) Economic sociology and the sociology of immigration: A conceptual overview, In A. Portes (ed.), *The Economic Sociology of Immigration*, 1-41, NY:

Russell Sage Foundation.

- Portes, A. (1996) Globalization from below: The rise of transnational communities, In W.
 P. Smith and R. P. Korczenwicz (eds.), *Latin America in the World Economy*, 151-168, CT: Greenwood Press.
- Portes, A. (1997) Immigration theory for a new century: Some problems and opportunities, *International Migration Review*, 31 (4): 799-825.
- Sjaastad, L. A. (1962) The costs and returns of human migration, *Journal of Political Economy*, 70S: 80-93.
- Stark, O. (1991) The Migration of Labor, Cambridge: Basil Blackwell.
- Statistics Canada (2003a) Immigrant Status (4) for Population, for Canada, Provinces and Territories, 1911 to 2001 Censuses - 20% Sample Data, Cat. No. 97F0009XCB01001, (http://www12.statcan.ca).
- Statistics Canada (2003b) 2001 Census: Analysis Series Canada's Ethnocultural Portrait: The Changing Mosaic.
- Statistics Canada (2002) CANSIM (Canadian Socio-Economic Information Management System), Tables 051-0001 and 051-0004.
- Todaro, M. P. (1985) Economic Development in the Third World, New York: Longman.
- Wang, S. (1999) Chinese commercial activity in Toronto CMA: New development patterns and impacts, Asian Migration: Pacific Rim Dynamics, 167-198, Interdisciplinary Group for Australian Studies (IGAS), National Taiwan University, Taipei, Taiwan.

Appendix

Detailed Definition of the Explanatory Variables in the Multinomial Logit Model

Median Real Wage For province j, the median real wage in a given year is computed in the following way. First, we find the median nominal wage of workers aged 15 and over in province j and a census year from the micro data of each of the 1981, 1986, 1991, and 1996 censuses. Secondly, we divide the resulting median nominal wages by the CPI (consumer price index) of province j in the corresponding census year to get the corresponding median real wage. Note that all values of the CPI have already been adjusted by the interprovincial variation in cost of living so that their common unit is one Canadian dollar in Ontario in 1992. Thirdly, we compute the median real wage of each of the non-census years between 1982 and 1998 by linear interpolation and extrapolation. Finally, we divide the median real wage of the same year.

Employment Share in 1981 For province j, this is the share of the total employment of the 10 provinces in 1981 by province j. The data on the employment sizes of the 10 provinces are downloaded from CANSIM. The unit is proportion. In addition to being used as a time-invariant explanatory variable in the model, this variable is also used as the reference for computing the values of the next variable.

Increase in Employment Share For province j in year t, this variable is the proxy for the change in employment opportunities of province j from 1981 to year t. It is defined as the change in the share of total employment by province j from 1981 to year t. The unit is percentage point.

Share of Chinese Ethnics For province j in each year, this variable is computed in the following way. First, the share of the total population of province j by the people of Chinese ethnic origin for each census year is calculated from the data of each of the 1981, 1986, 1991, and 1996 censuses. Secondly, this share for each of the non-census years from 1982 to 1998 is computed from the census figures by linear interpolation and extrapolation. The unit is percent.

Share of Engineers For province j in each year, this variable is computed in the following way. First, the share of the total employment of province j by those with occupations in engineering, natural sciences and mathematics in each census year is calculated from the data of each of the 1981, 1986, 1991, and 1996 censuses. Secondly, the share for each non-census year between 1982 and 1998 is computed from the census figures by linear interpolation or extrapolation. The unit is percent.

In the logit model, some of the above variables are multiplied by various dummy variables to create interaction terms, as shown in the following example. In order to see if the skilled immigrants from China were less likely to be attracted by co-ethnics than their Hong Kong and Taiwan counterparts, we firstly use the immigrants from Hong Kong and Taiwan as the reference group and define the dummy variable "China", which assumes the value of 1 if the immigrant in question is from China. We then create an interaction term by letting the dummy variable "China" interact with *Share of Chinese Ethnics*. In the best model (Table 4), the coefficient of *Share of Chinese Ethnics* turns out to be 0.064, whereas the coefficient of the interaction turns out to be -0.016. This finding implies that the effects of *Share of Chinese Ethnics* are represented by 0.064 for the skilled immigrants from Hong Kong and Taiwan, and by 0.048 (i.e. 0.064-0.016) for those from China.

		-										
Citizenship	Nfld	PEI	N.S.	N.B.	Que	Ont	Mani	Sask	Alta	B.C.	Total	Total
											Share	Volume
HONG KONG	0.07	0.01	0.26	0.13	3.04	58.72	1.29	0.85	8.36	27.28	50.02	48,911
CHINA	0.86	0.04	1.34	0.84	6.87	54.61	2.48	2.20	7.71	23.03	38.32	37,473
TAIWAN	0.05	0.03	0.12	0.12	3.41	28.73	0.33	0.26	3.66	63.28	11.65	11,394
Total Share	0.37	0.03	0.66	0.40	4.55	53.65	1.64	1.30	7.57	29.85	100.00	
Total Volume	362	25	641	393	4,451	52,457	1,599	1,270	7,397	29,183		97,778
All Citizenship: S.W.1	0.34	0.06	0.88	0.43	18.02	53.34	2.11	1.02	8.22	15.57	100.00	
All Citizenship2	0.28	0.09	1.09	0.43	16.60	51.78	2.74	1.27	8.58	17.12	100.00	

Table 3 The Volumes and Geographic Distributions of Skilled Immigrants by Citizenship and **Overall Immigrant Flow in 1983-1999**

Note: 1: skilled immigrants of all citizenship 2: total immigrants of all citizenship

Data Source: Landing Information Data System(LIDS)

Table 4 (Part 1)Estimation Results of the Logit Model for Explaining the Choices of DestinationProvinces by Canadian Immigrants with Citizenships of China, Hong Kong, and Taiwan:Landed in 1983 through 1999

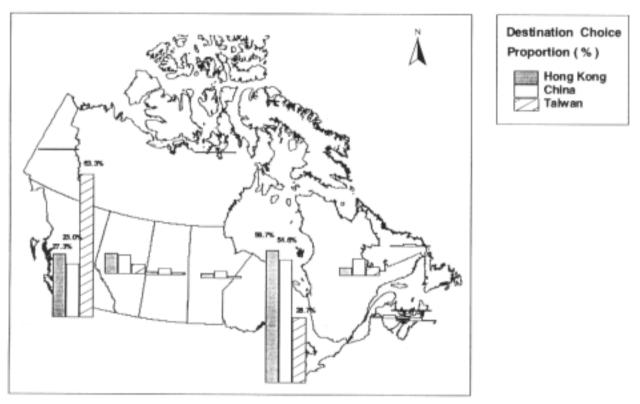
Explanatory Variable	Best Model		- Labor Market factors		- Ethnic Attraction		 Labor Market factors Ethnic Attraction 	
Explanatory variable	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio
1. LABOR MARKET FACTORS								
Wage	3.638	16.5			8.389	55.3		
Wage * Managerial	1.355	5.4			2.012	8.0		
Wage * Engineering	-0.871	-4.3			-1.977	-9.0		
Wage * Clerical	1.577	5.4			2.311	7.8		
Wage * Low Ed (0-9 years)	-1.432	-4.5			-1.671	-4.9		
Wage * Female	0.469	3.1			0.533	3.3		
Employment Share in 1981	0.006	4.7			0.029	33.6		
Increase in Emp. Share	0.315	15.9			0.506	27.4		
Increase in Emp. Share * Managerial	0.145	6.6			0.138	6.3		
Increase in Emp. Share * Engineering	0.089	4.0			0.219	9.8		
Increase in Emp. Share * Clerical	0.104	4.3			0.090	3.7		
Increase in Emp. Share * Taiwan	0.413	8.3			0.425	8.5		
Increase in Emp. Share * China	-0.307	-11.5			-0.257	-12.4		
Increase in Emp. Share * Hong Kong * Low Ed (no certificate)	-0.109	-5.4			-0.098	-4.9		
Increase in Emp. Share * China * Low Ed (no certificate)	-0.090	-3.2			-0.112	-4.1		
Increase in Emp. Share * Taiwan * Low Ed (no certificate)	-0.398	-6.0			-0.399	-6.1		
Share of Engineers * Engineering	0.011	11.2			0.013	12.4		
2. ETHNIC ATTRACTION	0.011	11.2			0.015	12.4		
Share of Chinese Ethnics	0.064	26.8	0.113	117.0				
Share of Chinese Ethnics * China	-0.016	-10.8	-0.033	-29.9				
3. TRANSNATIONALISM	-0.010	-10.8	-0.055	-29.9				
British Columbia * Taiwan	0.614	2.8	0.162	0.8	0.555	2.5	0.806	3.9
British Columbia * Taiwan * 1988-1999	0.962	4.3	1.969	9.8	0.870	3.8	1.961	9.5
British Columbia * Hong Kong * 1988-1999	0.442	15.8	0.727	36.6	0.302	11.5	1.194	69.1
4. BEAT-THE-SYSTEM EFFECT	0.442	15.0	0.727	30.0	0.302	11.5	1.194	09.1
Quebec * Hong Kong	0.504	7.7	0.965	16.5	-0.564	-11.5	-1.225	-27.8
Quebec * Taiwan	2.112	17.3	2.120	23.2	0.969	-11.5	-0.268	-27.8
5. EFFECT OF CANADA/QUEBEC AGREEMENT	2.112	17.5	2.120	23.2	0.909	0.0	-0.208	-5.1
	1 450	24.5	1 0 2 2	27.0	0.052	17.6	0 (10	10 (
Quebec * 1991	1.450	24.5	1.933	37.0	0.952	17.6	0.649	12.6
Quebec * 1992	1.461	17.5	1.845	22.5	1.088	13.3	0.928	11.2
Quebec * 1993	1.299	13.5	1.616	16.9	1.011	10.6	0.882	9.1
6. EFFECT OF ZERO SALES TAX	1 (2)	40.1	1 767	44.0	1.007	25.0	0.070	2.2
Alberta * Hong Kong	1.636	40.1	1.757	44.9	1.236	35.9	-0.060	-2.3
Alberta * Taiwan	1.953	19.2	1.791	20.8	1.503	15.4	-0.146	-1.8
Alberta * China	0.626	18.2	0.728	21.9	0.732	21.3	-0.261	-8.5
Rho-square	0.5			967	0.50		0.09	
Decrease in Rho-square from the Best Model			0.0	074	0.00	138	0.40	86

Data Source: Landing Information Data System (LIDS)

Public Use Microdata Files (PUMFs) of 1981, 1986, 1991, 1996 Canadian Population Census

Table 4 (Part)	2) Estimation Re	sults of the Logit	Model for Exp	laining the Cl	noices of Des	tination
Prov	inces by Canadian	Immigrants with	Citizenships of	f China, Hong	Kong, and	Taiwan:
Land	led in 1983 throu	igh 1999				

					- Beat-the-system		- Effect of Canada/		- Effect of Zero		
Explanatory Variable		Best Model		- Transnationalism		Effect		Quebec Agreement		Sales Tax	
	Coef.	t	Coef.	t	Coef.	t	Coef.	t	Coef.	t	
1. LABOR MARKET FACTORS	2 (20	165	1.000	21.2	4.671	22.6	4.0(2	23.1	5 2 (1	262	
Wage	3.638	16.5	4.666	21.2		22.6	4.962		5.261		
Wage * Managerial	1.355 -0.871	5.4 -4.3	2.094 -1.093	8.5 -5.4	1.459 -1.044	5.9 -5.1	1.370 -0.884	5.4 -4.3	1.259 -1.108	5.9 -5.9	
Wage * Engineering											
Wage * Clerical Wage * Low Ed (0-9 years)	1.577 -1.432	5.4 -4.5	2.430 -1.617	8.4 -5.1	1.736 -1.475	6.0 -4.6	1.622 -1.334	5.5 -4.2	1.500 -1.337	5.9 -4.5	
5	0.469	3.1	0.486	3.2	0.482	3.2	0.462	3.0	0.408	2.9	
Wage * Female Employment Share in 1981	0.469	3.1 4.7	-0.005	3.2 -4.6	0.482	3.2 10.4	0.462	3.0 15.1	0.408	2.9	
Increase in Emp. Share	0.315	15.9	0.461	23.5	0.352	17.8	0.318	16.0	0.252	13.1	
Increase in Emp. Share * Managerial	0.313	6.6	0.401	3.9	0.332	6.8	0.318	8.3	0.232	7.9	
Increase in Emp. Share * Engineering	0.089	4.0	0.051	2.3	0.110	4.9	0.178	8.0	0.1172	5.3	
Increase in Emp. Share * Clerical	0.104	4.0	0.031	1.6	0.110	4.9	0.146	6.1	0.125	5.2	
Increase in Emp. Share * Taiwan	0.413	8.3	1.449	27.3	0.110	2.6	0.442	8.8	0.367	8.5	
Increase in Emp. Share * China	-0.307	-11.5	-0.475	-18.4	-0.284	-10.8	-0.274	-10.3	-0.241	-9.4	
Increase in Emp. Share * Hong Kong * Low Ed (no certificate)		-5.4	-0.108	-5.3	-0.108	-5.4	-0.109	-5.4	-0.123	-5.9	
Increase in Emp. Share * China * Low Ed (no certificate)	-0.090	-3.2	-0.042	-1.5	-0.096	-3.5	-0.137	-4.9	-0.100	-3.5	
Increase in Emp. Share * Taiwan * Low Ed (no certificate)	-0.398	-6.0	-0.756	-10.9	-0.440	-6.0	-0.392	-6.0	-0.422	-6.2	
Share of Engineers * Engineering	0.011	11.2	0.014	13.9	0.011	11.0	0.010	9.9	0.011	11.4	
2. ETHNIC ATTRACTION											
Share of Chinese Ethnics	0.064	26.8	0.053	22.9	0.047	25.3	0.045	20.1	0.033	16.5	
Share of Chinese Ethnics * China	-0.016	-10.8	-0.002	-1.3	-0.010	-7.5	-0.018	-12.4	0.000	-0.3	
3. TRANSNATIONALISM											
British Columbia * Taiwan	0.614	2.8			-0.035	-0.2	0.731	3.4	0.011	0.1	
British Columbia * Taiwan * 1988-1999	0.962	4.3			1.628	7.5	0.906	4.0	1.346	6.1	
British Columbia * Hong Kong * 1988-1999	0.442	15.8			0.392	14.4	0.510	18.2	0.125	5.0	
4. BEAT-THE-SYSTEM EFFECT											
Quebec * Hong Kong	0.504	7.7	0.288	4.6			0.464	7.2	-0.490	-8.8	
Quebec * Taiwan	2.112	17.3	3.066	23.2			1.961	15.9	0.969	9.0	
5. EFFECT OF CANADA/QUEBEC AGREEMENT											
Quebec * 1991	1.450	24.5	1.600	27.2	1.361	23.1			1.143	19.9	
Quebec * 1992	1.461	17.5	1.530	18.3	1.486	17.7			1.255	15.1	
Quebec * 1993	1.299	13.5	1.327	13.8	1.399	14.6			1.131	11.8	
6. EFFECT OF ZERO SALES TAX											
Alberta * Hong Kong	1.636	40.1	1.382	38.3	1.456	42.8	1.567	38.7			
Alberta * Taiwan	1.953	19.2	2.315	22.0	1.312	14.3	1.926	18.9			
Alberta * China	0.626	18.2	0.627	18.1	0.650	18.9	0.497	14.7			
Rho-square	0.50)41			0.50		0.50		0.49		
Decrease in Rho-square from the Best Model					0.00	15	0.00	40	0.01	13	



Data Source: Landing Information Data System(LIDS)

