

Vancouver Centre of Excellence



Research on Immigration and Integration in the Metropolis

Working Paper Series

No. 01-14

Asian Immigrants to the Pacific Northwest:
Canadian and American Experiences Compared

Carl Mosk

May 2001

RIIM

Research on Immigration and Integration in the Metropolis

The Vancouver Centre is funded by grants from the Social Sciences and Humanities Research Council of Canada, Citizenship & Immigration Canada, Simon Fraser University, the University of British Columbia and the University of Victoria. We also wish to acknowledge the financial support of the Metropolis partner agencies:

- Health Canada
- Human Resources Development Canada
- Department of Canadian Heritage
- Department of the Solicitor General of Canada
- Status of Women Canada
- Canada Mortgage and Housing Corporation
- Correctional Service of Canada
- Immigration & Refugee Board

Views expressed in this manuscript are those of the author(s) alone. For more information contact the Co-Directors of the Centre, Dr. Don DeVoretz, Department of Economics, SFU (e-mail: devoretz@sfu.ca) or Dr. David Ley, Department of Geography, UBC (e-mail: davidley@unixg.ubc.ca).

**Asian Immigrants to the Pacific Northwest:
Canadian and American Experiences Compared**¹

A Paper to be Presented to the Session on
International Migration – Micro
at the IUSSP General Population Conference
Salvador de Bahia, Brazil
18-24 August, 2001

by

Carl Mosk

Department of Economics
University of Victoria
PO Box 3050
Victoria, B.C.
Canada V8W 3P5

e-mail: baberruth@uvic.ca

homepage: <http://web.uvic.ca/econ/mosk-hp.html>

¹ The research for this paper was funded by a grant from the Centre of Excellence: Migration hosted by Simon Fraser University, the University of British Columbia and the University of Victoria (the Centre's program is also known by the acronym RIIM and by the term Metropolis Project, and is ultimately funded by the Canadian government). I am grateful to Dong Chen and Lauren Dong who worked as my research assistants on this project.

Abstract: Driving Asian immigration to the Pacific Northwest is Asia's expanding trade presence, pioneered by Japan. Being demographically closed, Japan was not a model for Asian emigration, but its emphasis on human resource development has proven revolutionary. Indeed, the Human Development Index (HDI) of Asian source countries is associated with the performance of emigrant Asian ethnic groups. For instance, investment in education heavily shapes ethnic achievement. This is true in both British Columbia and Washington State, where the determinants of economic achievement are virtually identical.

Key Words: Asian immigration, human development index, Japan, trade.

Part I: The New Asian Migration to North America is Fundamentally Different from the Earlier Migration Flow

In this paper we are concerned with the fate of individuals. In particular, we are interested in the economic performance of individuals who are members of specific Asian ethnic communities in the Pacific Northwest, in the province of British Columbia and the State of Washington.

However, individuals do not operate in a vacuum. They are affected by their relatives, their friends, their ethnic identifications, and by the histories and cultural mores of their ethnicities.

Shaping the performance of members of an ethnic group within any society are the characteristics – past and present – of the source country for the immigrants who originally started the ethnic group, and who may continue to contribute to its growth. It is also conditioned by the society in which it is located. Both source country and country of destination matter. Viewed as cohesive social entities, ethnic groups prosper or languish due to the quality of the interaction of source and destination communities and source and destination countries.

For this reason, history matters. The history of the ethnic community matters; the history of the source nation matters; the history of the destination nation matters; and so does the history of the interaction between the two.

Thus I launch this paper with history. I would hardly claim that this history is comprehensive. But I do believe grasping selective features of history matters for an understanding of the contemporary performance of ethnic groups in North America. Hence I stake out several sets of propositions about Asian immigration to North America and to the Pacific Northwest. These propositions concern the relationship between international trade and international migration; the difference between the role of the United Kingdom in promoting industrialization, trade and migration within the Atlantic region and the role of Japan in promoting industrialization, trade and migration within the Pacific region; and the implications of these two propositions for diversity in the European migration flows of the 19th, and first seven decades of the 20th, centuries and for diversity in the Asia migration flows of the 19th and 20th centuries.

I. A Trade is a crucial driving force in shaping migration flows, but the timing of trade and migration surges varies with the source of the migration

There is an important relationship between trade and migration over the course of the period 1850-2000.² For many countries, and for many sub-periods of the period 1850-2000, international trade and international migration go together hand in hand. In particular for countries like the United States and Canada there is an association between the proportion of trade taking place between the country and a particular region of the world, and the proportion of migrants to that country coming from the same region of the world. Exchanging merchandise through trade accompanies exchanging population through international migration.

What underpins this association? Among other factors the following seem especially important: the transportation infrastructure promoting trade between countries also tends to support migration between countries (ships that carried both migrants and goods in the pre-1920 period offer a classic example); immigrants earned funds that they remitted back to their home countries and these funds were often used to purchase goods from the country of settlement; chain migration occurred, promoting networks for selling and distributing goods; immigrants often invested in projects that yielded outputs that they shipped back to their home countries; and most important, international trade and international migration are but two aspects of the international diplomacy of a country. Negotiations over trade and commerce were, and are, often tied in with negotiations over migration.

These arguments help us to make sense of the steep climb in migration from Asia to North America after the mid-1960s. Prior to the 1960s migration from Asia to the United States and Canada was relatively inconsequential, and was strictly hemmed in and limited by a series of

² I discuss the relationship between trade and migration for the United Kingdom, Canada, Australia, the United States and Japan in Mosk (2001c). In this presentation, I establish that there is a strong association – in technical econometric jargon cointegration – between time series in the following rates: the ratio of trade (imports plus exports) to gross domestic product and the ratio of international migration (emigration or immigration depending on the country) to domestic resident population; the growth rate of real trade (nominal trade deflated by a price index) for, and emigration from (or immigration to) the country; and the proportion of trade between any two countries and the proportion of migration coming into, or going out of, one country to or from the other. In other words, economic integration in the sense of trade often seems to go hand in hand with demographic integration in the sense of migration flows. However, the associations do not always hold true. The fact that they do not always hold is as important as the fact that they do hold in many cases.

gentlemen's agreements, head tax, and ethnically defined exclusion policies.³ As can be seen from Charts 1 and 2, Asian immigrants constituted a miniscule proportion of all immigrants to the United States and Canada, and growth rates for immigration from Asia strongly fluctuated.⁴ [Ed. note: Charts are located at the end of the text.]

Throughout this period trade with Asia was growing – due especially to the emergence of Japan as a mighty industrial and trading country – but was not particularly impressive in comparison to Europe's share of world trade. For instance, in 1928, Asia's share of world imports was around 13.6%, and its share of world exports was around 15.5%. Ten years later, Asia's share of world imports was 13.7%, and its share of world exports had actually slightly fallen, to 15.2%. But in the wake of Japan's massive industrial expansion during the period 1955-70, Asia's proportion of world trade began to soar as more and more Asian countries followed Japan's path towards industrialization. For instance in 1984, Asia's share of world imports had jumped to around 19%; and its share of world exports had climbed to 21%. In 1994, Asia's share of world imports was approximately 24% and its share of world imports was around 27%.

As Asia came to matter more in international markets, its influence as a region, and the bargaining power of specific countries within it, soared. From a long run point of view, this is the reason the United States, Canada and Australia opened up to immigration from Asia. Immigration policy was integral to the foreign and commercial policy of these countries. As Asia's presence in international markets soared, its political leverage with three main countries of settlement dramatically improved.

Additional graphical evidence supporting this thesis appears in Charts 3, 4, 5 and 6. As Chart 3 shows, as trade between Europe and the United States has fallen, so has Europe as a source region for American immigration. Conversely, as Chart 4 demonstrates, the expansion of American trade with Asia, eventually fueled a massive increase in Asian migration to the United States. Charts 5 and 6 address the same issue for the Americas. Chart 5 shows that the Americas

³ For detailed histories of the immigration policies of Canada and the United States, especially in terms of the immigration from Asia, see Arnold, Minocha and Fawcett (1987); Briggs (1984, 1992); Davie (1949); Fawcett and Cariño (1987); Hui (1995); Lam and Richmond (1995); Light (1985); Liu (1995); Meissner, Hormats, Walker and Ogata (1993); Muller and Espenshade (1985); Ong, Fujita and Chin (1976); Wickberg (1994); and Young and Reid (1938).

⁴ I do not give sources for the Charts 1-12 or for Tables 1-3 on the charts or tables. The sources are as follows: Leacy (1983), Mitchell (1978), Statistics Canada (various years), United Nations. Department for Economic and Social Information and Policy Analysis. Statistical Division (1993); United States. Department of Commerce. Bureau of the Census (1975, various years); and Urquhart and Buckley (1965). For the figures on Asia's growing role in world trade discussed in the text, I relied upon General Agreement on Tariffs and Trade (1993); League of Nations (1942), and World Trade Organization (1995).

follow the same pattern established for Europe and Asia. Immigration from Canada, although important – especially in the late 19th century and between the two world wars – was not the main factor fueling the surge in American origin immigration to the United States. Rather it was Mexico that emerged, first as a major source of immigration, and then later on as a major player in the United State's trade.

It should be evident from this discussion that bilateral trade and migration patterns at the regional level are not mimicked by bilateral trade and migration patterns at the national level. For instance because Canada enjoys a per capita standard of living comparable to the United States, it is not a major supplier of migrants to the United States. But it is a major supplier of raw materials and manufactures to the United States. Conversely, the proportion of Mexican migration to the United States still exceeds Mexico's proportion in United States trade, although the later is rapidly catching up with the former.

I.B Japan's role in the economic development of Asia and in promoting of trans-Pacific migration was markedly different from the United Kingdom's role in promoting trans-Atlantic migration and Atlantic region industrialization.

During the 19th century the United Kingdom dominated industrial activity and capital formation in the Atlantic region. The United Kingdom was the workshop of the world throughout the first seven decades of the 1800's. The factory system, the harnessing of steam power, the development of the puddling process in iron and steel manufacturing, the introduction of the flying shuttle, the water frame and the mule were all English innovations. Moreover, English investors poured funds into building railroads and steamships, not only for domestic use but also for use in North America and other countries of British settlement. To be sure, during the final three decades of the 19th century, the United States and Germany emerged as major challengers to English – after the American clipper ships gave way to steamships on the Atlantic – in Atlantic shipping.

The United Kingdom also dominated European emigration to countries of European settlement. As can be seen from Table 1, emigration from the United Kingdom was the predominant emigration stream out of Europe prior to the 1880s, and it continued to dominate European emigration during the period between the World Wars. True, emigration from Germany, Italy, Scandinavia and Eastern Europe became increasingly important after 1870. Nevertheless, the United Kingdom provided many of the engineers, entrepreneurs and farmers – in short the skills – promoting growth in the United States, Canada and Australia. Technology

diffused throughout areas of English settlement partly because English emigration was so pervasive. For this reason English remained entrenched as the dominant language in most areas of European settlement. The most prominent exceptions were in Central and South America where the official tongues are either Spanish or Portuguese.

Table 1: Japanese Immigration to the United States as a Percentage of Asian Immigration to the United States and British Emigration as a Percentage of All European Emigration, 1851-1970

Years/Period	Emigration from the United Kingdom and Ireland as a Percentage of All European Emigration	Japanese Immigration to the United States as a Percentage of all Asian Immigration to the United States
1851-1910		
1851-60	60.5%	0%
1861-70	56.0	0.28
1871-80	57.1	0.17
1881-90	41.9	22.8
1891-1900	31.7	32.5
1901-10	27.7	49.5
1851-1910 (Entire Period)	38.9	17.5
1911-70		
1911-20	33.2%	51.0%
1921-30	31.7	27.5
1931-40	21.4	12.4
1941-50	33.2	4.5
1951-60	29.5	30.5
1961-70	n.e.	12.9
1911-60 (UK and Ireland)	31.4	
1911-70 (Japan)		23.1

n.e.: Not estimated.

Japan – like the United Kingdom an island archipelago lying off the coastline of Eurasia – played a role similar to England in terms of being an industrial innovator within its geographic region.⁵ Just as the United Kingdom became the center for innovation in the Atlantic economy, so Japan became the center of innovation for the Pacific region. To be sure, the emergence of the United States as a huge economic and military power with a prominent Pacific Ocean coast (and a presence in Hawaii and the Philippines), countered to a degree the growing dominance of Japan

⁵ On industrial innovation in Japan, see Mosk (2001a).

in the economic affairs of Asia and the Far East. Nevertheless, it was and is Japan, not the United States, which has provided the main model for economic development throughout most of Asia.⁶

Japan has been crucial to Asian development because of Japan's emphasis on balanced infrastructure development: investment in physical (roads, ports, electrical power generation and delivery, railroads), human capital enhancing (schools, public health), and financial (banks) infrastructure took place simultaneously. Moreover surges of balanced infrastructure investment laid the groundwork for surges in industrial activity that in turn created the demand and supply conditions encouraging further spurts in investment in infrastructure. In addition, the fact Japanese government has played an important facilitating role, both in developing infrastructure and in interacting with the business community through a mixture of trade and industrial policies, has been important to other Asian countries. In short, Japan's emphasis on balanced infrastructure development and on government as a coordinating and facilitating agent for economic development has made it a model for Asian economic development.

However, unlike England, Japan has not been a model for migration across the Pacific to North America. As Chart 1 shows, Asian migration to North America was miniscule prior to the 1960s. And, as Table 1 demonstrates, Japanese dominated the small Asian migration streams for only a short period. Indeed, Japanese migration to North America in the post-1960 period is of little significance. Chart 7 makes this point. This pattern stands in marked contrast to the United Kingdom's experience with migration to countries of settlement. The United Kingdom was dominant in diffusing technology and skills, in promoting investment in infrastructure, and in supplying migrants. It was also the source of the language that held sway over North America.

It is possible to sum up this contrast between the United Kingdom and Japan in terms of a single concept: degree of openness. Using this concept we can say that the Japanese model of economic development and demographic interaction with the world outside has been relatively "closed." Relatively few Japanese have settled abroad. Rather than send out people, Japan sends out goods. As Chart 8 shows this closed pattern began to become increasingly entrenched during the period between the World Wars. By contrast, United Kingdom development was relatively "open" throughout the 18th, 19th and 20th centuries.

To assert that Japan has been relatively closed and England relatively open is not to interpret the difference between the two countries solely in terms of factors shaping the domestic logic of development in the two countries. Indeed, immigration laws like that of the United States

⁶ I develop this argument in more detail in Mosk (2001b).

in 1924, effectively barred Japanese from entering the country. Thus Japan has not necessarily been closed through the choice of the Japanese government and its population alone. Choices made in other countries have played a role. The reasons for Japan being relatively closed and England relatively open are steeped in the historical logic of settlement of the frontier areas of the globe after 1800. The history of international affairs, and of the interaction of countries, matters.

I.C The relationship between industrial core and periphery in post-war Asia is different from the relationship between industrial core and periphery in pre-1914 Europe

As argued in the previous section, the United Kingdom pioneered an open approach to economic and demographic interaction with the outside world during the 19th century. It emphasized free trade and it encouraged, or at least countenanced, emigration of skilled individuals. This open approach was not always adopted by the countries of European settlement during the period prior to 1914. In addition emphasizing openness was not necessarily the watchword of countries of continental Europe. Both the United States and Germany imposed massive tariffs to protect their nascent industrial sector.

Thus as countries of the non-industrial periphery closed the gap with the original core country – as the United States, Germany and France caught up with the United Kingdom – England’s emphasis on openness was modified in important ways. Indeed, England was a source for technology, skills, capital and population for the Atlantic economy. But it was not necessarily a model for economic development throughout the Atlantic economy. The core was more open than the periphery.

By contrast in the case of Asia, the original core – Japan – was more closed than the periphery to which industrialization eventually spread. As already noted in the pre-1960 Japanese did not tend to go abroad to settle in distant lands. After 1960, Japanese have tended to go abroad with slightly greater frequency. But their motivation has largely been to live abroad for short periods of time, and not for permanent settlement. This can be seen from Chart 9. Moreover, as can be seen from Tables 2 and 3, Japanese who are permanently living abroad are concentrated in South America. After the United States and Canada imposed restrictions on immigration to their shores (around 1907), Japanese began to settle in Sao Paulo (Brazil) in growing numbers. As the numbers in Table 3 indicate, and as is demonstrated by Chart 10, these Japanese populations living in South America have been dropping precipitously since the early 1970s. Many have returned to Japan where the standard of living is substantially above that in South America

(contrast this pattern with that for North America shown in Chart 11). In short, in terms of permanent emigration, Japan is becoming more closed, not less closed.

Table 2: Percentage of Japanese Living Abroad by Region, 1960-95

Year(s)	Asia	Oceania	North America	South America	Europe	Africa
All Japanese Living Abroad						
1960	1.8%	0.3%	19.8%	76.6%	1.2	0.04
1970	6.3	0.9	20.9	64.9	5.2	0.9
1973-4	9.4	1.0	30.0	49.4	8.6	1.3
1975-9	12.5	1.1	30.9	44.1	9.5	1.7
1980-4	15.0	1.6	32.6	36.6	12.3	1.7
1985-9	13.8	2.4	38.3	28.1	15.9	1.3
1990-4	15.8	4.0	42.2	18.7	18.4	0.8
1995	19.5	4.6	40.6	16.0	18.1	1.1
Permanent (Expatriate) Residents of Other Countries						
1973-4	2.5	0.1	27.5	69.1	0.3	0.001
1975-9	2.6	0.2	28.9	67.6	0.7	0.002
1980-4	2.8	0.4	31.2	63.9	1.7	0.01
1985-9	3.1	1.5	35.2	56.4	3.8	0.1
1990-4	3.2	4.0	40.2	46.3	6.2	0.1
1995	3.0	5.5	43.2	41.1	7.1	0.1
Temporarily Resident in Other Countries						
1973-4	24.5	3.1	35.5	6.4	26.8	4.0
1975-9	28.2	2.4	34.1	6.5	23.7	4.5
1980-4	29.4	3.0	34.2	4.6	24.7	3.7
1985-9	23.4	3.2	41.0	3.0	26.7	2.4
1990-4	23.6	4.0	43.4	1.7	25.9	1.2
1995	29.0	4.1	39.1	1.5	24.4	1.6

Note: North America includes the Central American countries; before 1994, the USSR (and former USSR) is not included in the figures for Europe. Otherwise, Europe includes Eastern and Western Europe.

The other type of emigration from Japan is closely linked to Japan's trade. Perusal of the figures on Japanese trade and Japanese who are temporarily living abroad reveal that Japanese tend to reside in regions where Japan carries on trade. Where Japan does carry on trade – North America, Oceania, Asia and Europe – Japanese tend to reside for business.

Table 3: Indices of Japanese Living Abroad, Total And by Region, 1955-1995 (1975-9 = 100)

Year(s)	Total	Asia	Oceania	North America	South America	Europe	Africa
All Japanese Living Abroad							
1955	51.4	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1960	61.3	10.3	16.6	39.3	100.4	8.4	2.0
1970	67.9	39.6	59.7	46.1	94.2	39.9	45.7
1973-4	94.2	82.2	94.8	91.8	99.4	91.2	86.8
1975-9	105.9	121.9	111.1	106.2	99.4	114.6	131.0
1980-4	117.3	160.5	185.9	124.6	91.7	162.7	147.8
1985-9	135.3	174.4	326.6	169.3	80.0	242.6	121.6
1990-4	169.5	253.1	652.7	229.5	68.0	349.4	104.1
1995	185.6	332.5	825.7	246.3	63.4	377.6	129.2
Permanent (Expatriate) Residents of Other Countries							
1973-4	98.7	98.4	67.2	95.1	100.1	69.0	66.7
1975-9	99.5	100.9	127.4	100.5	98.7	159.0	226.7
1980-4	96.8	105.9	128.8	105.9	90.6	382.7	1057.3
1985-9	95.9	114.6	927.7	118.2	79.2	851.8	4629.3
1990-4	98.9	124.1	2510.6	139.0	67.4	1395.5	7412.0
1995	103.4	127.7	3571.1	155.0	62.7	1693.8	10246.7
Temporarily Resident in Other Countries							
1973-4	85.6	79.2	97.9	86.7	84.9	92.0	86.8
1975-9	118.0	125.7	109.3	115.0	114.6	113.2	131.0
1980-4	155.9	170.3	175.2	153.4	112.2	155.4	147.3
1985-9	209.7	185.2	259.2	247.7	94.6	222.5	119.1
1990-4	302.6	276.4	444.5	368.9	79.6	314.8	100.1
1995	340.8	369.5	518.1	386.8	78.1	334.1	123.6

Note: The underlying annual figures for the period 1975-95 are five year moving averages. The figures for 1973-4 are based on averages of the figures for 1973 and 1974. The figures for 1955, 1960 and 1970 are annual figures. The value of the moving average for 1975-9 is used as the denominator of the index.

One way to think about Japan's relative demographic closure is in terms of the accidents of history. Japanese emigration started to pick up steam in the early 20th century, just before the period when waves of southern and eastern European immigrants to the United States and Canada encouraged the authorities in North America to impose restrictions on immigration. Then, during the period between the World Wars, international migration slowed to a crawl everywhere because of soaring unemployment in most countries of settlement. After the surge in Japan's global trade "forced" the countries of settlement to open up their immigration to non-Europeans (the United States and Canada in the mid-1960s and Australia in the 1970s), Japan had largely closed the gap between itself and the West in terms of standard of living (see Chart 12). Thus due to the historical contours of its economic development, Japan has been relatively closed.

Now as indicated earlier other Asian countries have tended to follow Japan's pattern of balanced infrastructure investment. South East Asian countries have not followed the pattern as

closely as those in North East Asia, but the pattern has become quite widely diffused throughout the region. In Tables 4 and 5 I give some figures relevant to this point. However none of these countries has been as closed as Japan was and is. Why? Two reasons spring to mind. First, being a relatively large country in terms of population, Japan could exploit its own domestic market for economies of scale in production and for economies of scope in distribution. Smaller countries – see the population figures in Table 4 – are unable to do this. They have to rely on foreign markets to a greater degree than Japan did or does. Second, during the very time when their economic development has been getting underway, they have faced a more open emigration regime. In short, the due to the dictates of population size and the international migration regime, the follower countries of Asia are more open than Japan, the original core of the region, was or is.

In short, in the case of the Atlantic economy before 1914, the original core – the United Kingdom – was relatively open, and the periphery was less open. In the case of the Asia-Pacific region during the 20th century, the original core – Japan – was relatively closed, and the periphery was less closed. In the case of the earlier European immigration, the core country dominated the migration to North America. In the case of the new Asian immigration, the core country plays a relatively minor role in the migration to North America.

Table 4 Population, Per Capita Income and Components of Aggregate Demand

Panel A: Population (P), Population Density (D), Population per sq. Kilometer, and GNP per Capita Calculated with Exchange Rates (GNP per head, exchange) and with Purchasing Power Parity (GNP, PPP), US Dollars

Region & Country	Population & Density		Per Capita GNP (US Dollars)			
	P (million)	D	Exchange		PPP	
			Level	Rank	Level	Rank
Northeast Asia						
Japan	127	336	32,230	6	24,041	14
Korea, Rep	47	475	8,490	51	14,637	49
China						
Hong Kong	7	6,946	23,520	20	20,939	26
China	1,250	134	780	140	3,291	128
Southeast Asia						
Singapore	3	5,283	29,610	9	27,024	7
Malaysia	23	69	3,400	82	7,963	72
Indonesia	207	114	580	150	2,439	143
Philippines	77	258	1,020	131	3,815	118
Thailand	62	121	1,960	102	5,599	90

Table 4 Continued.../

Table 4 [Continued]

Panel B: Percentage of GDP in Gross Domestic Investment (GDI), Percentage in Gross Domestic Savings (GDS), and Percentage in Exports of Goods and Services (EXP); Also Ratio of Total Trade to GDP (Trade/GDP Ratio); Domestic Credit Provided by the Banking Sector, Percentage of GNP (DOMCRED)

Region/ Country	GDI		GDS		EXP		Trade/GDP Ratio (1988)	DOMCRED	
	1990	1999	1990	1999	1990	1999		1990	1999
Northeast Asia									
Japan	32%	29%	33%	30%	11%	11%	11%	267%	142%
Korea, Rep	38	27	37	34	29%	42%	66	57	85
China									
Hong Kong	27%	25%	36%	30%	134%	132%	282%	156%	141%
China	35	40	38	42	18	22	n.a.	90	130
Southeast Asia									
Singapore	37%	33%	44%	52%	202%	n.a.	347%	62%	84%
Malaysia	34	32	36	45	76	124	109	78	161
Indonesia	31	14	33	24	26	54	42	46	61
Philippines	24	21	18	16	28	56	n.a.	23	64
Thailand	41	21	34	32	34	57	35	91	126

Notes: n.a. (not available).

Sources: World Bank (1993a): page 39; and World Bank (2000): Various Tables.

Table 5: Indicators of Human Capital Enhancing Infrastructure Investment

Panel A: Demographic and Health Characteristics.

Prevalence of Child Malnutrition (Percentage of Children Under Age 5 Malnourished), Life Expectancy at Age 0 (e^0), Urbanization (Percentage of the Population Urban), Access to Sanitation in Urban Areas (URBANSAN), and the Total Fertility Rate (TFR)

Region & Country	Child Malnutrition (1992-98)	e^0 (1998)		Urbanization (%)		URBANSAN	TFR	
		Males	Females	1980	1999		1980	1998
Northeast Asia								
Japan	n.a. (0)	77	84	76%	79%	n.a. (100)	1.8	1.4
Korea, Rep	n.a. (0)	69	76	57	81	100%	2.6	1.6
China								
Hong Kong	n.a.. (0)	76	82	92	100	n.a. (100)	2.0	1.1
China	16%	68	72	20	32	58%	2.5	1.9
Southeast Asia								
Singapore	n.a. (0)	75	79	100%	100%	100%	1.7	1.5
Malaysia	20%	70	75	42	57	100	4.2	3.1
Indonesia	34	52	64	22	40	73	4.3	2.7
Philippines	30	67	71	38	58	88	4.8	3.6
Thailand	n.a.	70	75	17	21	98	3.5	1.9

Table 5 Continued.../

Table 5 [Continued]

Panel B: Education (Enrolment Rates for Primary and Secondary Schooling, Percentages Enrolled of Relevant Age Group), Human Development Index (HDI, Level and Rank)^a, and Calorie Intake per Capita per Day.

Region & Country	Net Enrolment Rates				HDI		Calorie Intake per Capita	
	Primary		Secondary		Level	Rank	1965	1989
	1980	1997	1980	1997				
Northeast Asia								
Japan	100%	100%	93%	100%	0.940	8	2,668	2,956
Korea, Rep	100	100	76	100	0.894	30	2,178	2,852
China								
Hong Kong	98%	91%	67%	69%	0.909	25	2,486	2,853
China	84%	100	63	70	n.a.	n.a.	1,929	2,639
Southeast Asia								
Singapore	100	91	66	76	0.896	28	2,285	3,198
Malaysia	97	98	97	100	0.834	60	1,929	2,639
Indonesia	89	99	42	56	0.679	96	1,791	2,750
Philippines	95	100	72	78	0.677	98	1,875	2,375
Thailand	92	88	25	48	0.838	59	2,138	2,316

n.a. Not available, or is likely to be negligible (in this case I have put a zero value in parenthesis), or is likely to be 100% (in which case I have put 100 in parenthesis).

I.D Diversity, distance and path dependence matter a great deal in Asian migration to North America

What are the implications of the arguments advanced above for the current performance of Asian ethnic groups in North America? Three implications seem especially important. History matters. Call this “path dependence.” The path that an ethnic group develops along depends on the history of its source country and of the receiving country. The fate of the Japanese in North America is a case in point. Secondly, the new immigrants swelling the post–1970 migration streams to North America face a much larger distance – in terms of cultural history, in terms of language, in terms of a different type of development pattern in core and periphery for their source region – than did the older migration streams in which Europeans predominated.

Thirdly, the new migration is more diverse. It is more diverse in terms of languages, especially in terms of languages that are “distant” from English. It is more diverse in terms of religious affiliation and cultural mores than were the European migration streams on the 19th and early 20th centuries. And it is more diverse in terms of the standard of living of the source countries. Consider the figures in Table 6. As can be gleaned from these numbers, the range in terms of per capita income between the core country of the source region and the follower countries supplying emigrants to North America is far greater in the Asian migration case than it

Table 6: Per Capita Income Relatives, Postwar Asia and North America and 19th Century Europe

Panel A: Income per Capita Relative to That of the United States; and Relative to that of Japan, 1970-1989 [Original Figures in US Dollars Either Based on Purchasing Power Parity or Upon Exchange Rates]

Relative to Per Capita Income of the United States = 100										
Years	Purchasing Power Parity Estimates						Exchange Rate Estimates			
	Japan	Canada	United Kingdom	Singapore	Philippines	Indonesia	China	Hong Kong	Korea	Vietnam
1970-79	62.7	92.4	64.2	39.4	11.8	6.4	2.2	29.4	9.0	1.7
1980-9	70.5	91.8	68.8	57.0	11.4	10.1	1.9	43.5	16.2	0.8
Relative to Per Capita Income of Japan = 100										
Years	Purchasing Power Parity Estimates						Exchange Rate Estimates			
	United Kingdom	Singapore	Malaysia	Thailand	Philippines	Indonesia	China	Hong Kong	Korea	Vietnam
1970-79	102.7	62.7	31.3	20.2	18.8	10.2	3.9	48.5	14.6	3.1
1980-9	97.6	80.8	36.9	20.3	16.1	14.3	2.4	52.5	19.2	1.0

Panel B: Multiplier for Per Capita GNP 1870/1970 (M), Implied Level of 1870 Per Capita Income in 1970-72 US Dollars Adjusted for Purchasing Power Parity (YPC1870), and Level of Per Capita Income Relative to that of the United Kingdom in 1870 = 100 (RPYPC1870) for Selected European Countries

Variable/Country	United Kingdom	Italy	Denmark	Norway	Sweden
M	2.7	4.9	6.4	6.4	12.5
YPC1870	1245.4	597.5	678.4	592.4	326.2
RPYPC1870	100.0	48.0	54.5	47.6	26.2

was the European case (compare the per capita incomes of various European countries relative to that of the United Kingdom circa 1870 with the per capita incomes of the other Asian countries relative to Japan in the 1970s and 1980s). The diversity in terms of source country standard of living was far less in the 19th and early 20th century case, than it is today.

Now as noted above, path dependence is important. One reason why is important is that the experience of the receiving countries in terms of mix of Asian immigrant groups varies with the historical circumstances of the receiving countries. For instance, Canada as a former member of the British empire and a present member of the British commonwealth maintains a “special” relationship with the mother country, England, and with other commonwealth nations. For this reason, Canada has always been more “British” than was the United States that enjoyed greater diversity in its immigration throughout the 19th and 20th centuries. Migration from Hong Kong and India (former members of the British empire) was and is very important in the Canadian case. In the case of the United States, the Philippines and Vietnam loom large for historical reasons. Moreover, prior to falling under direct United States control, Hawaii was a major destination for Japanese and Chinese emigrants in the late 19th century. Thus many Japanese and Chinese did make their ways into the United States through Hawaii. In short, immigrants from South Asia and Hong Kong are disproportionately represented in Canadian ethnic Asian communities. And in the case of the United States, migrants from Japan, China, the Philippines and Vietnam are especially salient.⁷

In short, due to path dependence the ethnic mixture of the Asian ethnic communities differs between the United States and Canada. The composition of the communities reflects selectivity. In light of the point I made earlier about diversity in the nature of the source countries (especially in terms of diversity in the standard of living of the source countries), this selectivity matters. It matters because depending on the nature of nations selected, the Asian communities in the receiving countries are either weighted towards “high” or “low” standard of living source countries.

⁷ On the experience of various Asian immigrant ethnic groups, see Froschauer (1998), Hui (1995), Light (1985), Moriyama (1985), Shimpō (1995), Wickberg (1994) and Young and Reid (1938). On the experience of European immigrants, see Baines (1985), Emmer (1992), Ljungmark (1992), and Tinker (1995). For figures on the proportions of Asian immigrants coming to the province of British Columbia see Kralt (1986), and for those coming to the State of Washington see Ong, Fujita and Chin (1976).

Table 7: Post-Secondary Schooling Amongst the Population Aged 20-64 with Positive Income: Washington State, 1980 and 1990 [Entire Population and Selected Asian Ethnic Groups]

Percentages with Some Post-Secondary Schooling Entire Population and Various Asian Ethnic Groups in the State of Washington, in the Greater Seattle SMSA (Sea) and in the State of Washington Outside of the Greater Seattle SMSA [Non-Sea], 1980, 1990, and Absolute Gain or Loss in % between 1980 and 1990 (1980/90)

Males												
Year(s)	Entire Population			Chinese			Korean			Japanese		
	State	Sea	Non-Sea	State	Sea	Non-Sea	State	Sea	Non-Sea	State	Sea	Non-Sea
1980	50.3%	57.2%	45.7%	70.9%	70.2%	73.0%	65.0%	72.6%	52.8%	74.9%	77.2%	69.9%
1990	60.0	67.9	54.4	70.5	70.8	70.0	64.4	69.3	50.0	83.0	87.8	74.1
1980/90	+9.7	+10.7	+8.7	-0.4	+0.6	-3.0	-0.6	-3.3	-2.8	+8.1	+10.6	+4.4
Years (s)	Filipino			Vietnamese			Other Asian			Taiwanese		
	State	Sea	Non-Sea	State	Sea	Non-Sea	State	Sea	Non-Sea	State	Sea	Non-Sea
1980	61.7%	66.5%	53.2%	54.1%	58.3%	50.0%	56.4%	45.5%	67.3%	n.a.	n.a.	n.a.
1990	64.5	67.4	59.1	62.9	67.3	52.9	44.4	49.0	40.0	83.3	84.6	80.0
1980/90	+2.8	+0.9	+5.9	+8.8	+9.0	+2.9	—	—	---	—	—	---

Table 7 [Continued]

Females												
Year(s)	Entire Population			Chinese			Korean			Japanese		
	State	Sea	Non-Sea	State	Sea	Non-Sea	State	Sea	Non-Sea	State	Sea	Non-Sea
1980	44.5%	50.5%	40.3%	53.7%	56.2%	46.9%	32.6%	50.5%	20.4%	52.0%	56.7%	45.4%
1990	57.3	65.3	52.2	67.0	65.1	72.4	36.4	50.0	26.0	66.4	74.9	54.2
1980/90	+12.8	+14.8	+11.9	+13.3	+8.9	+25.5	+3.8	-0.5	+5.6	+14.4	+18.2	+8.8
Years(s)	Filipino			Vietnamese			Other Asian			Taiwanese		
	State	Sea	Non-Sea	State	Sea	Non-Sea	State	Sea	Non-Sea	State	Sea	Non-Sea
1980	59.3%	63.7%	51.8%	37.4%	40.0%	34.7%	36.9%	41.8%	32.8%	n.a.	n.a.	n.a.
1990	59.9	66.3	51.5	42.9	46.9	35.7	30.8	35.8	26.6	71.2	80.8	47.6
1980/90	+0.6	+2.6	-0.3	+5.5	+6.9	+1.0	---	---	---	—	—	---

Notes: n.a. = not available.

— = not computed.

The ethnic composition of the “Other Asian” group changed between 1980 and 1990. For instance, in 1980 Taiwanese were part of the group. In 1990, Taiwanese constitute a separate ethnic group in the census, and “Other Asian” no longer includes them. For this reason, I do not compute changes in the percentage of Taiwanese or Other Asians getting some post-secondary schooling between 1980 and 1990.

Table 8: Post-Secondary Schooling Amongst the Population Aged 20-64 with Positive Income: British Columbia, 1981 and 1991 [Entire Population and Selected Asian Ethnic Groups]

Percentages with Some Post-Secondary Schooling: Entire Population and the Various Asian Ethnic Groups in the Province of British Columbia, in the Greater Vancouver CMA (Van) and in the Province of British Columbia Outside of the Greater Vancouver CMA (Non-Van), 1981, 1991 and Absolute Gain or Loss in % between 1981 and 1991 (1981/91)

Year(s)	Males						Females					
	Entire Population			Chinese			Entire Population			Chinese		
	Province	Van	Non-Van	Province	Van	Non-Van	Province	Van	Non-Van	Province	Van	Non-Van
1981	49.7%	55.8%	44.3%	56.8%	58.8%	43.8%	45.3%	49.1%	41.9%	41.7%	41.3%	44.2%
1991	56.8	62.5	50.9	65.1	65.6	59.0	56.0	59.2	52.5	56.0	56.8	44.3
1981/91	+7.1	+6.7	+6.6	+8.3	+6.3	+15.2	+10.7	+10.1	+10.6	+14.3	+15.5	+0.1
1991 Only: South Asians, Filipinos, Vietnamese, and Other Eastern/Southeastern Asian												
Gender	South Asian			Filipino			Vietnamese			Other Eastern/Southeastern Asian		
	Province	Van	Non-Van	Province	Van	Non-Van	Province	Van	Non-Van	Province	Van	Non-Van
Male	50.4%	53.8%	39.3%	84.1%	84.0%	84.2%	27.5%	25.4%	38.5%	73.6%	76.1%	64.1%
Female	41.3	43.2	35.3	75.8	76.4	72.4	31.3	30.1	40.0	67.1	67.5	64.8

Table 9: Human Development Index (HDI) and Gender-Related Development Index (GDI) for Regions of Asia, for Selected Asian Countries, and for North America, 1975-1998

Region/Country	HDI Index				GDI Index ^(a)			
	1998 Value	1998 Rank	1975 Value	Change 1975/1998	1998 Level	1998 Rank	Adult Literacy Females (%)	Adult Literacy Males (%)
East Asia								
East Asia	0.716	n.a.	n.a.	n.a.	0.710	n.a.	75.5%	91.1%
East Asia (excluding China)	0.849	n.a.	n.a.	n.a.	0.846	n.a.	95.1	98.6
Japan	0.925	9	0.849	0.076	0.916	9	99.0	99.0
Korea (ROK)	0.854	31	0.684	0.170	0.847	30	95.9	99.0
Hong Kong	0.872	26	0.753	0.119	0.864	26	89.1	96.3
China	0.706	99	0.518	0.188	0.700	79	74.6	90.7
South-East Asia and the Pacific								
South-East Asia & the Pacific	0.691	n.a.	n.a.	n.a.	0.688	n.a.	85.0	92.4
Philippines	0.744	77	0.648	0.096	0.739	64	94.6	95.1
Vietnam	0.671	108	n.a.	n.a.	0.668	108	90.6	95.3
South Asia								
South Asia	0.560	n.a.	n.a.	n.a.	0.542	n.a.	42.3	65.7
South Asia (excluding India)	0.550	n.a.	n.a.	n.a.	0.533	n.a.	38.8	61.7
India	0.563	128	0.405	0.159	0.545	128	43.5	67.1
Pakistan	0.522	135	0.352	0.170	0.489	135	28.9	58.0
North America								
Canada	0.935	1	0.865	0.070	0.932	1	99.0	99.0
United States	0.929	3	0.862	0.067	0.927	4	99.0	99.0

Notes: n.a. : Not available.

(a) Adult literacy refers to individuals aged 15 and older.

Sources: United Nations. Development Programme (2000): Various tables.

Comparing Tables 7 and 8 with Table 9 shows that there is a relationship between the HDI of the source country and the investments by the ethnic community in higher education. The greater is the HDI of the source country, the greater are investments in higher education in both jurisdictions of the Pacific Northwest. This proposition is especially true for males. There are some exceptions to this rule however. Filipinos invest heavily in post-secondary education, especially in British Columbia, but the HDI for the Philippines is not especially high. Vietnamese in the State of Washington invest heavily in post-secondary education but Vietnam has a low HDI (the British Columbia figures are consistent with the HDI for Vietnam however).

There are some interesting disparities by gender. In both jurisdictions men invest more heavily than women, and in both jurisdictions the gap between men and women shrinks over time. Asian groups whose source countries have high levels of the HDI generally have investment levels for both males and females that exceed those for the general population. But, in the case of Koreans in Washington for instance, Korean men invest heavily in post-secondary education (at rates substantially in excess of those for the general population), but Korean women do not invest heavily (their rates fall below those of the general population).

II.C The Gender-Related Development Index (GDI) of the Source Countries is Weakly Related to the Educational Investment of Females in the Ethnic Groups

Is there a strong carryover of gender specific investments in the source country to the behavior of ethnic groups in the receiving countries? The United Nations calculates a Gender-Related Development Index (GDI), and so we relate this to the gender specific patterns for the various ethnic groups. The GDI figures appear in Table 9.

The values of the GDI are only weakly correlated with female specific investments in the Pacific Northwest. For instance Korea has a high level for the GDI – its rank is 30 – but the level of investment of Korean women in higher education in the State of Washington is low. In the case of the Philippines, the GDI is fairly low. But investment in post-secondary education by Filipinos is high in both Washington and British Columbia, especially in British Columbia.

These results provide qualified support for the view propounded by Borjas (1993), and of Sweetman and Dicks (1999), that national origin is of great importance to determining economic outcomes of ethnic groups and immigrants. However, as noted above, there are important exceptions to the rule emphasizing source country. Perhaps the view of Baker and Benjamin

(1997), according to which immigrant families invest selectively in the education of family members because they find themselves severely constrained financially, helps account for some of the figures, like those for the Koreans in the State of Washington. But the evidence for Filipinos does not seem to be consistent with this view.

II.D Determinants of Individual Income are Virtually Identical in Both British Columbia and Washington

It has been demonstrated that source country influences outcomes. We have also touched on evidence suggesting that receiving country influences outcomes, at least in some cases. Reflecting its linkages to the United Kingdom that is more collectivist than the United States, Canada has a more generous social safety net than does the United States. For instance, Card and Freeman (1993: 15) show that the percentage of GNP going to transfer programs – need-based transfers, unemployment insurance and child programs (including tax credits and family allowances) – in 1990 was around 4.7% in Canada and around 1.7% in the United States. Because Canada is more generous in providing social assistance to those less well off, marginal tax rates are higher in Canada than they are in the United States. These higher tax rates and more generous benefits for the less well off presumably influence work incentives. Can we detect a strong affect in the “earnings functions” that associate income for individuals with their education, age, gender and language ability?

We address this question with the findings given in Table 10. The results speak for themselves. The earnings equations are virtually identical in both countries. Admittedly, no formal test is used to corroborate this. However, perusal of the coefficient estimates demonstrates that the structure of the determinations of earnings is pretty much the same in both British Columbia and Washington.

Table 10: Income and Its Determinants in the Pacific Northwest: Education, Ethnicity, Age, Gender and Command of English in the Province of British Columbia and the State of Washington, Circa 1980 and 1990

Panel A: Province of British Columbia, 1981 and 1991

Type of Variable	Variable	1981	1991	1981 and 1991 Pooled
Constant	Constant	2.23 (2.99) *	-.91 (-1.67) ***	0.60 (1.37)
Education ^a	Sch 2	0.21 (8.30) *	0.24 (10.49) *	0.23 (13.53) *
	Sch 3	0.42 (15.61) *	0.44 (18.72) *	0.43 (24.67) *
	Sch 4	0.44 (18.61) *	0.53 (24.15) *	0.50 (30.99) *
Age	Age	0.57 (6.97) *	0.87 (14.84) *	0.72 (15.29) *
	Age ²	-1.84 (-5.80) *	-2.92 (-12.89) *	-2.41 (-13.07) *
	Age ³	27.24 (5.14) *	44.50 (11.83) *	36.45 (11.87) *
	Age ⁴	-1546.8 (-4.8) *	-2564.8 (-11.35) *	-2097.2 (-11.35)
Gender	Male =1; Female = 0	0.95 (74.87) *	0.68 (79.90) *	0.77 (108.9) *
Command of English	Lan = 1 if fluent in English; Lan = 0 if not	0.29 (4.07) *	0.30 (6.61) *	0.30 (8.01) *
Ethnicity	Chinese	-.02 (-0.76)	-0.12 (-5.72) *	-0.19 (-5.05) *
	Filipino	n.a.	-0.21 (-4.76) *	n.a.
	Vietnamese	n.a.	-0.13 (-1.73) ***	n.a.
	Indonesian & other Asia	n.a.	-0.09 (-2.23) *	n.a.
Census Year = 1991	Cen 91 = 1 if year is 1991; = 0 if not	n.a.	n.a.	-.08 (-10.89) *
R ²	R ²	0.21	0.18	0.19

Panel B: State of Washington, 1980 and 1990

Type of Variable	Variable	1980	1990	1980 and 1990 Pooled
Constant	Constant	0.53 (1.40)	-3.00 (-8.43) *	-0.81 (-3.14) *
Education ^a	Sch 2	0.24 (13.33) *	0.31 (15.23) *	0.27 (19.72) *
	Sch 3	0.50 (31.02) *	0.60 (32.13) *	0.54 (44.24) *
	Sch 4	0.61 (37.54) *	0.86 (46.99) *	0.73 (60.54) *
Age	Age	0.67 (16.62) *	1.01 (26.43) *	0.80 (28.88) *
	Age ²	-2.27 (-14.29) *	-3.44 (-23.14) *	-2.70 (-24.93) *
	Age ³	34.95 (13.21) *	52.43 (21.24) *	41.20 (22.88) *
	Age ⁴	-2048.8 (-12.86) *	-2994.7 (-20.20) *	-2378.7 (-21.96) *
Gender	Male = 1; Female = 0	0.97 (149.13) *	0.76 (136.18) *	0.85 (200.52) *
Command of English	Lan = 1 if Fluent in English; Lan = 0 if not	0.50 (6.20) *	0.41 (8.73) *	0.47 (11.73) *
Ethnicity	Chinese	-0.11 (-2.28) *	-0.05 (-1.15)	-0.07 (-2.25) *
	Japanese	0.01 (0.26)	0.09 (2.60) *	0.06 (2.22) *
	Korean	-0.39 (-5.63) *	-0.17 (-3.93) *	-0.25 (-6.70) *
	Filipino	0.14 (0.39)	0.16 (0.57)	0.01 (0.61)
	Vietnamese	-0.49 (-5.91) *	-0.11 (-2.31) **	-0.23 (-5.40) *
	Indonesian & Other Asian	-0.37 (-3.69) *	-0.18 (-3.75) *	-0.24 (-5.49) *
Census Year = 1990	Cen 90 = 1 if Year is 1990; = 0 if not	n.a.	n.a.	-0.19 (-21.75)*
R ²	R ²	0.26	0.23	0.24

Panel C: Province of British Columbia and State of Washington
Pooled, 1980/81 and 1990/91

Type of Variable	Variable	1980/81	1990/91	1980/81 and 1990/91 Pooled
Constant	Constant	1.08 (3.22)*	-2.18 (-2.76) *	-0.26 (-1.17) *
Education ^a	Sch 2	0.24 (16.88) *	0.30 (19.86) *	0.27 (25.82) *
	Sch 3	0.49 (35.78) *	0.53 (36.79) *	0.51 (51.18) *
	Sch 4	0.57 (42.84) *	0.74 (53.40) *	0.67 (69.34) *
Age	Age	0.66 (18.01) *	0.97 (30.18) *	0.78 (32.68) *
	Age ²	-2.19 (-15.38) *	-3.27 (-26.31) *	-2.63 (-28.10) *
	Age ³	33.45 (14.10) *	49.86 (24.13) *	39.96 (25.69) *
	Age ⁴	-1948 (-14) *	-2852 (-23) *	-2302 (-25) *
Gender	Male = 1; Female = 0	0.97 (166.90) *	0.74 (157.64) *	0.83 (277.95) *
Command of English	Lan = 1 if fluent in English; Lan = 0 if not	0.40 (7.28) *	0.34 (10.24) *	0.38 (13.59) *
Ethnicity	Chinese	-0.03 (-1.44)	-0.09 (-5.25) *	-0.07 (-4.89) *
	Filipino	n.a.	-0.07 (-2.81) *	n.a.
	Vietnamese	n.a.	-0.11 (-2.64) *	n.a.
	Indonesian & Other Asia	n.a.	-0.16 (-5.24) *	n.a.
Census Year = 1990/91	Cen 90/91 = 1 if year is 1990/91; = 0 otherwise	n.a.	n.a.	-0.09 (-24.69) *
Washington	Wash = 1 if district is State of Washington; = 0 if not	-0.22 (-31.55) *	-0.21 (-41.62) *	-0.22 (-51.66) *
R ²	R ²	0.25	0.23	0.23

Notes: The dependent variable in all regressions is the natural logarithm of individual income. In the case of all censuses, the sample is restricted to individuals with positive income. In the case of British Columbia only, income figures are in 1990 Canadian dollars. In the case of Washington only, income figures are in 1990 US dollars. For the regressions pooling both districts, income figures are in 1990 Canadian dollars (with the exchange rate used to convert US dollars to Canadian dollars). For all coefficient estimates, t-statistics are given in parentheses.

n.a. = not applicable. * - significant at the 1% level; ** - significant at the 5% level; *** - significant at the 10% level (two-tailed tests).

a. Sch 2 = Completed grades 9-13 and not next level; Sch 3 = high school certificate or equivalent certificate; Sch 4 – some post-secondary education.

Table 11: Income Distribution in the Province of British Columbia, 1991 Individuals with Positive Income in Two Age Groups and for Selected Asian Ethnic Groups

Panel A: Population Aged 30-49

Population/ Ethnic Group	Males					Females				
	Percentage in Income Class (Canadian Dollars)				Skewness	Percentage in Income Class (Canadian Dollars)				Skewness
	Below 5,000	5,000- 19,999	20,000- 49,999	50,000 & Over		Below 5,000	5,000 – 19,999	20,000 – 49,999	50,000 & Over	
Entire Population	3.6%	17.4%	54.8%	24.2%	0.076	13.1%	39.4%	42.6%	4.9%	0.166
Chinese	5.5	24.4	53.1	17.0	0.130	13.1	42.6	39.6	4.8	0.174
Filipino	7.6	23.6	66.0	2.8	-0.002	12.3	40.5	44.1	3.2	0.226
Vietnamese	2.1	39.6	47.9	10.4	0.251	13.2	73.7	10.5	2.6	0.047
South Asian	3.5	21.2	60.9	14.4	n.e.	10.1	55.9	31.4	2.6	n.e.
Other Eastern/ Southeastern Origins	5.4	23.1	46.9	24.5	n.e.	12.7	38.7	44.7	4.0	n.e.

Panel B: Population Aged 50 and Over

Population/ Ethnic Group	Males					Females				
	Percentage in Income Class (Canadian Dollars)				Skewness	Percentage in Income Class (Canadian Dollars)				Skewness
	Below 5,000	5,000 – 19,999	20,000 – 49,999	50,000 & Over		Below 5,000	5,000 – 19,999	20,000 – 49,999	50,000 & Over	
Entire Population	4.4%	23.4%	48.0%	24.2%	0.141	17.3%	44.0%	34.0%	4.7%	0.242
Chinese	7.7	33.8	45.0	13.5	0.184	14.9	46.8	34.0	4.3	0.243
Filipino	17.7	23.5	52.9	5.9	0.062	19.6	35.7	41.1	3.6	0.193
Vietnamese	0.0	42.9	42.9	14.3	0.086	0.0	100.0	0.0	0.0	-0.065
South Asian	4.6	42.5	39.2	13.7	n.e.	14.4	63.8	18.1	3.8	n.e.
Other Eastern/ Southeastern Origins	4.1	25.7	47.3	23.0	n.e.	10.7	42.9	41.7	4.8	n.e.

Table 12: Income Distribution in the State of Washington, 1990 Individuals with Positive Income in Two Age Groups and for Selected Asian Ethnic Groups

Population Aged 30-49

	Males					Females				
	Percentage in Income Class (US Dollars)				Skewness	Percentage in Income Class (US Dollars)				Skewness
	Below 5,000	5,000 – 19,999	20,000 – 49,999	50,000 & Over		Below 5,000	5,000 – 19,999	20,000 – 49,999	50,000 & Over	
Entire Population	4.3%	22.2%	57.2%	16.4%	0.145	16.9%	45.7%	34.6%	2.8%	0.189
Chinese	4.0	26.0	49.3	20.6	0.201	13.2	38.7	42.2	5.9	0.159
Japanese	4.1	13.9	58.4	23.7	0.142	13.7	34.9	45.7	5.8	0.181
Korean	5.3	31.8	47.7	15.2	0.184	18.1	55.9	24.0	2.0	0.243
Taiwanese	0.0	40.0	40.0	20.0	0.153	19.4	33.3	44.4	2.8	0.038
Filipino	3.6	31.2	58.0	7.2	-0.015	10.8	48.0	39.2	2.0	0.077
Vietnamese	7.8	31.4	52.0	8.8	0.127	9.3	62.8	25.6	2.3	0.143
Other Asian	9.0	56.7	29.1	5.2	n.e.	22.6	57.1	19.1	1.2	n.e.

Panel B: Population Aged 50 and Over

Population/ Ethnic Group	Males					Females				
	Percentage in Income Class (US Dollars)				Skewness	Percentage in Income Class (US Dollars)				Skewness
	Below 5,000	5,000 – 19,999	20,000 – 49,999	50,000 & Over		Below 5,000	5,000 – 19,999	20,000 – 49,999	50,000 & Over	
Entire Population	4.3%	23.3%	49.6%	22.8%	0.173	22.7%	45.6%	28.7%	2.9%	0.298
Chinese	12.3	38.4	30.1	19.2	0.289	16.0	48.0	34.0	2.0	0.255
Japanese	4.5	16.4	44.8	34.3	0.133	16.7	49.3	31.9	2.1	0.290
Korean	12.5	41.1	35.7	10.7	0.305	18.6	66.1	13.6	1.7	0.244
Taiwanese	33.3	16.7	33.3	16.7	0.205	40.0	40.0	20.0	0.0	0.510
Filipino	2.3	38.6	51.1	8.0	0.125	16.8	50.5	29.0	3.7	0.193
Vietnamese	13.0	30.4	43.5	13.0	0.110	24.0	60.0	12.0	4.0	0.271
Other Asian	15.6	46.9	34.4	3.1	n.e.	38.7	54.8	6.5	0.0	n.e.

What about differences between the Asian ethnic groups? The United States census – especially the 1990 census – allows us to create dummy variables for a fairly wide range of ethnic groups. As can be seen there are relatively strong negative affects associated with Asian ethnicity. But can we say that this reflects discrimination directed at Asian minorities?⁹ This is doubtful: for instance the coefficient for Japanese ethnicity is positive. Perhaps, the coefficients reflect the economic costs of depending on other members of ones own ethnic group for assistance in finding jobs. But is not at all clear that the coefficients, which are in any case small, demonstrate that there is systemic discrimination against certain “visible” minority groups. Perhaps, because the Japanese ethnic community in the State of Washington is an older community with deeper roots in community affairs, persons of Japanese ancestry have a broader network to draw upon.

II.E The Asian Ethnic Communities with Longer Histories in the Pacific Northwest Appear to Perform Better Economically

The importance of getting a higher education is amply demonstrated by the positive coefficients on the educational variables entered into the earnings functions that were discussed in the previous section. With this in mind, recall that investment in education varies substantially across the Asian ethnic groups and is broadly associated with the Human Development Index of the source country.

What impact does this have on the incomes generated by the various ethnic groups?

This question is addressed with Tables 11 and 12. As can be seen there is a greater tendency for the groups invested less in education to cluster in the lowest two income classes (out of four income classes). This point holds for both males and females. Since the ethnic groups with longer histories appear to invest more heavily in education they do better economically.

Generally speaking, a curve relating the level of income to the proportion generating that income is skewed to the right. The right hand tail of the distribution stretches out, reflecting the fact the decreasing number of very wealthy individuals in most populations. Positive skewness is one measure of inequality of income and achievement.

⁹ On possible discrimination against Asian ethnic groups in the United States, see United States. Commission on Civil Rights (1980). On the so-called “double negative” affect of discrimination against being Asian and being female in the Canadian labor market, see Shamsuddin (1997).

With this in mind, consider the population aged 50 and over. As can be seen income distribution in the State of Washington is slightly more skewed to right than it is in the province of British Columbia. Given the more generous social safety net and the more onerous taxes of British Columbia, this is not surprising. What is surprising is that the income distributions of the Asian ethnic groups tend to be more skewed than are the distributions of the entire populations. This holds in both jurisdictions.

I say this result concerning skewed distributions is surprising because Asia is widely known for having relatively egalitarian income distributions. This egalitarian tendency does not appear to hold for the ethnic groups in either British Columbia or Washington. The one prominent exception to this proposition is the Filipino ethnic group.

My suspicion is that Asian income distributions are relatively equal because of the high densities of population in Asian countries – farmers can easily commute to factories thereby generating two sources of income – and because of protectionist measures propping up the incomes of marginal groups. Absent these institutional supports, the propensity to get a higher education, which widely varies across individuals, is a major factor shaping the skewness of earnings outcomes. Overall the evidence suggests that the income distribution of Asian ethnic groups in the Pacific Northwest depends upon the distribution of educational achievement among the groups.

II.F Conclusions

The new Asian immigration sweeping the Pacific Northwest of North America has its roots in Asia's expanding global trade presence. Japan has served as an important model of Asia's expansion. However, Japan, being relatively closed demographically, has not served as a model for Asian migration to North America.

In the new Asian immigration diversity in terms of standard of living of source countries is very important. Underlying this diversity is diversity in infrastructure: physical, human capital enhancing and financial infrastructure. In particular, the Human Development Index (HDI) is strongly associated with the standard of living in the source countries.

This is important for the performance of the Asian immigrant community in North America, and in the Pacific Northwest in particular. There is an association between the HDI of source Asian countries, and investments in education of the corresponding Asian ethnic groups,

in both British Columbia and Washington State. Indeed, because investments in education seem to be fundamental to the economic achievement of individuals in all of the Asian ethnic groups, we can say that there is a direct association between the standard of living of the source country and the standard of living of the ethnic community in the Pacific Northwest.

This said it is apparent that much compression takes place as international migration occurs. The gap between Asian countries in terms of standard of living is far greater than the gap in standard of living of the various Asian ethnic communities in the Pacific Northwest.

Still, one cannot escape history, either the history of the source country or the history of the ethnic community in North America. This point should not be forgotten in analyzing the experience of international migration at both the individual and aggregate levels.

Bibliography

- Arnold, F. U. Minocha, and J. Fawcett. 1987. The Changing Face of Asian Immigration to the United States. In *Pacific Bridges: The New Immigration from Asia and the Pacific Islands*, ed. J. Fawcett and B. Cariño, 105–52. New York: Center for Migration Studies.
- Baker, M. and D. Benjamin. 1997. The Role of the Family in Immigrants' Labor-Market Activity: An Evaluation of Alternative Explanations. *American Economic Review* 87 (4): 705–27
- Baines, D. 1985. *Migration in a Mature Economy: Emigration and Internal Migration in England and Wales, 1861-1900*. Cambridge: Cambridge University Press.
- Borjas, G. 1993. Immigration Policy, National Origin, and Immigrant Skills: A Comparison of Canada and the United States. In *Small Differences That Matter: Labor Markets and Income Maintenance in Canada and the United States*, ed. D. Card and R. Freeman, 21-43. Chicago: The University of Chicago Press.
- Briggs, V. 1984. *Immigration Policy and the American Labor Force*. Baltimore: The Johns Hopkins University Press.
- . 1992. *Mass Immigration and the National Interest*. Armonk, N.Y.: M.E. Sharpe.
- Card, D., and R. Freeman. 1993. Introduction. In *Small Differences That Matter: Labor Markets and Income Maintenance in Canada and the United States*, ed. D. Card and R. Freeman, 1–19. Chicago: The University of Chicago Press.
- Castles, S., and M. Miller. 1998. *The Age of Migration: International Population Movements in the Modern World*. New York: The Guilford Press.
- Cohen, R. 1995. Introduction. In *The Cambridge Survey of World Migration*, ed. R. Cohen, 1–10. New York: Cambridge University Press.
- Davie, M. 1949. *World Immigration: With Special Reference to the United States*. New York: The Macmillan Company.
- Emmer, P. 1992. European Expansion and Migration: The European Colonial Past and Intercontinental Migration; An Overview. In *European Expansion and Migration: Essays on the Intercontinental Migration from Africa, Asia, and Europe*, ed. P. Emmer and M. Mörner, 1–12. New York: Berg Publishers Inc.
- Fawcett, J., and B. Cariño. 1987. International Migration and Pacific Basin Development. In *Pacific Bridges: The New Immigration from Asia and the Pacific Islands*, ed. J. Fawcett and R. Cariño. New York: Center for Migration Studies.
- Froschauer, K. 1998. *East Asian Immigrant Entrepreneurs in Vancouver: Provincial Preference and Ethnic Strategy*. RIIM Working Paper #98-01
- General Agreement on Tariffs and Trade. 1993. *International Trade 1993*. Statistics Geneva: GATT
- Hui, O. 1995. *Chinese Indentured Labour: Coolies and Colonies*. in *The Cambridge Survey of World Migration*, ed. R. Cohen, 51–56. New York: Cambridge University Press.
- International Bank for Reconstruction and Development (World Bank). Various Years. *World Development Report*. New York: Oxford University Press for the World Bank. [Note: I secured data from the *World Development Report, 2000/2001* from the following webpage of the World Bank, www.worldbank.org/poverty/wdrpoverty/]

- Kralt, J. 1986. *Atlas of Residential Concentration for the Census Metropolitan Area of Vancouver*. Ottawa: Multiculturalism Canada.
- Kritz, M. 1987. The Global Picture of Contemporary Immigration Patterns. In Cariño. *Pacific Bridges: The New Immigration from Asia and the Pacific Islands*, ed. J. Fawcett and R. Cariño, 29–52. New York: Center for Migration Studies.
- Lam, L., and A. Richmond. 1995. Migration to Canada in the Post-war Period. In *The Cambridge Survey of World Migration*, ed. R. Cohen, 263–69. New York: Cambridge University Press.
- Leacy, F. H., ed. 1983. *Historical Statistics of Canada. Second Edition*. Ottawa: Statistics Canada.
- League of Nations. 1942. *The Network of World Trade*. Geneva: League of Nations.
- Light, I. 1985. Immigrant Entrepreneurs in America: Koreans in Los Angeles. In *Clamor at the Gates: The New American Immigration*, ed. N. Glazer, 161–78. San Francisco: Institute for Contemporary Studies.
- Liu, J. 1995. A Comparative View of Asian Immigration to the USA. In *The Cambridge Survey of World Migration*, ed. R. Cohen, 253–59. New York: Cambridge University Press.
- Ljungmark, L. 1992. The Push- and Pull- Factors Behind the Swedish Emigration to America, Canada, and Australia. In *European Expansion and Migration: Essays on the Intercontinental Migration from Africa, Asia, and Europe*, ed. P. Emmer and M. Mörner, 79–104. New York: Berg Publishers Inc.
- MacDonald, N. 1987. *Distant Neighbors: A Comparative History of Seattle and Vancouver*. Lincoln: University of Nebraska Press.
- Meissner, D., R. Hormats, A. Walker, and S. Ogata. 1993. *International Migration Challenges in a New Era*. New York: The Trilateral Commission.
- Mitchell, B.R. 1978. *European Historical Statistics 1750-1970*. New York: Columbia University Press.
- Moriyama, A. 1985. *Imingaisha: Japanese Emigration Companies and Hawaii, 1894-1908*. Honolulu: University of Hawaii Press.
- Mosk, C. 2001a. *Japanese Industrial History: Technology, Urbanization, and Economic Growth*. Armonk, N.Y.: M.E. Sharpe.
- . 2001b. Infrastructure Investment and Industrialization in Postwar Asia: How Relevant is Japan? Paper presented at the Henry M. Jackson School of International Studies, University of Washington, May.
- . 2001c. Trade and Migration: A Long-run View. Seminar presented to the Centre of Excellence: Immigration, Seminar Series, Simon Fraser University, May.
- Muller, T., and T. Espenshade. 1985. *The Fourth Wave: California's Newest Immigrants*. Washington, D.C.: The Urban Institute Press.
- Ong, P., J. Fujita, and S. Chin. 1976. *Asians in Washington: A Statistical Profile*. Olympia: State of Washington. Commission on Asian American Affairs.
- Shamsuddin, A. 1997. The Double-Negative Effect on the Earnings of Foreign-born Females in Canada. RIIM Working Paper #97-04.

- Shimpo, M. 1995. Indentured Immigrants from Japan. in *The Cambridge Survey of World Migration*, ed. R. Cohen, 48–50. New York: Cambridge University Press.
- Statistics Canada. Various Years. *Canada. Year Book* Ottawa: Statistics Canada.
- Sweetman, A., and G. Dicks. 1999. Education and Ethnicity in Canada: An Intergenerational Perspective. *The Journal of Human Resources* 34 (4): 668–96.
- Tinker, H. 1995. The British Colonies of Settlement. in *The Cambridge Survey of World Migration*, ed. R. Cohen, 14–20. New York: Cambridge University Press.
- United Nations. Department for Economic and Social Information and Policy Analysis. Statistical Division. 1993. *Trends in International Distribution of Gross World Product*. New York: United Nations.
- United Nations. Development Programme. 2000. *Human Development Report 2000* New York: Oxford University Press.
- United States. Commission on Civil Rights. 1980. *Success of Asian Americans: Fact or Fiction?* Washington, D.C.: Government Printing Office.
- United States. Department of Commerce. Bureau of the Census. Various Years. *Statistical Abstract of the United States*. Washington, D.C.: U.S. Government Printing Office.
- United States. Department of Commerce. Bureau of the Census 1975. *Historical Statistics of the United States. Colonial Times to the Present*. Washington, D.C.: U.S. Government Printing Office.
- Urquhart, M.C., and K. A. H. Buckley, ed. 1965. *Historical Statistics of Canada*. Toronto: Macmillan Company.
- Wickberg, E. 1994. The Chinese as Overseas Migrants. In *Migration: The Asian Experience*, ed. J. Brown and R. Foot, 12–37. Houndmills, Basingstoke, Hampshire: Macmillan.
- World Trade Organization. 1995. *International Trade: Trends and Statistics* Geneva: World Trade Organization.
- Young, C., and H. Reid. 1938. *The Japanese Canadians*. Toronto: University of Toronto Press.

**Chart 1: Percentage of Immigrants to Canada and the United States Who Are From Asia, 1903
1995 [Five Year Moving Averages]**

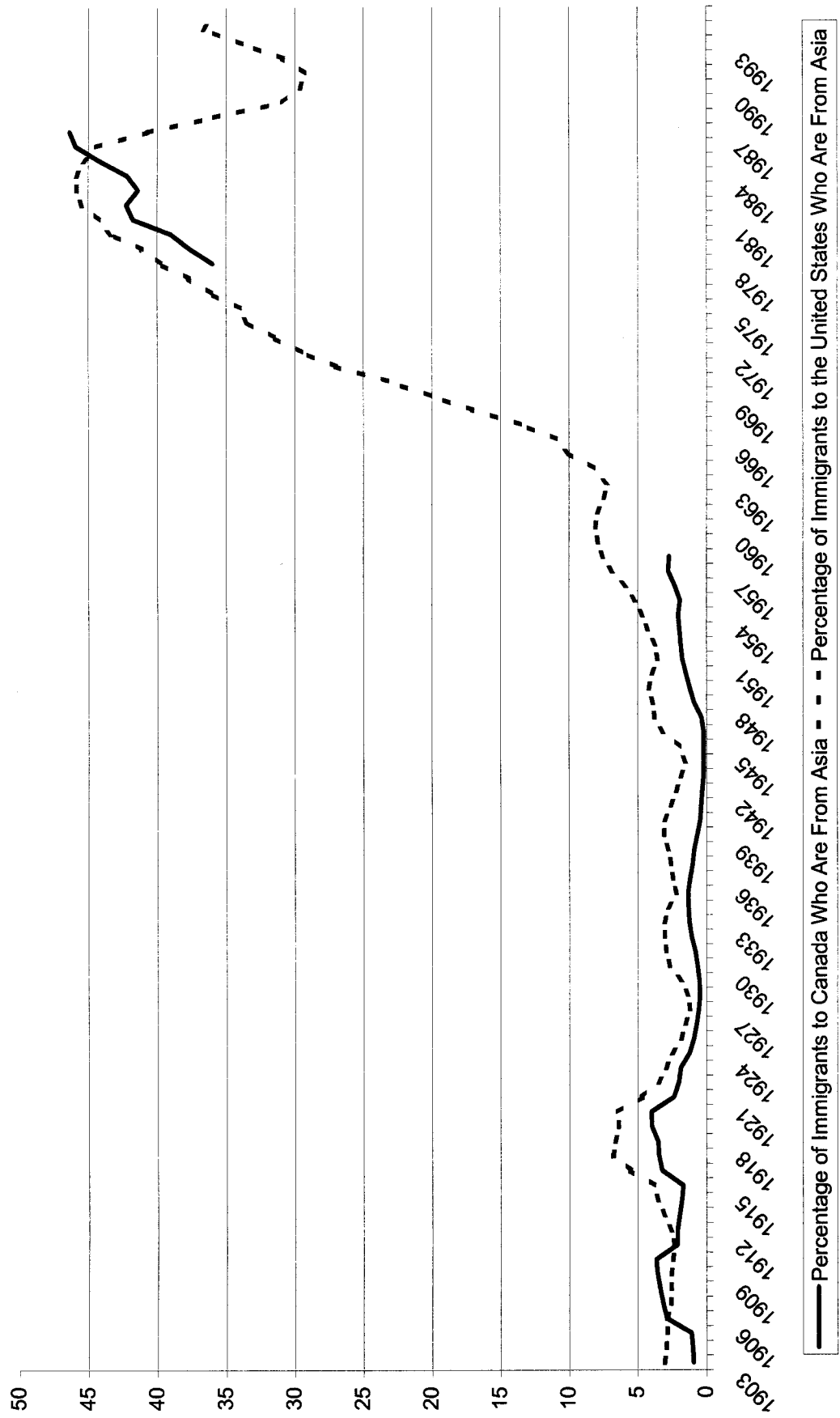


Chart 2: Growth Rate for Asian Immigration to Canada and the United States, 1903-1994
[Based Upon Five Year Moving Averages for Number of Asian Immigrants]

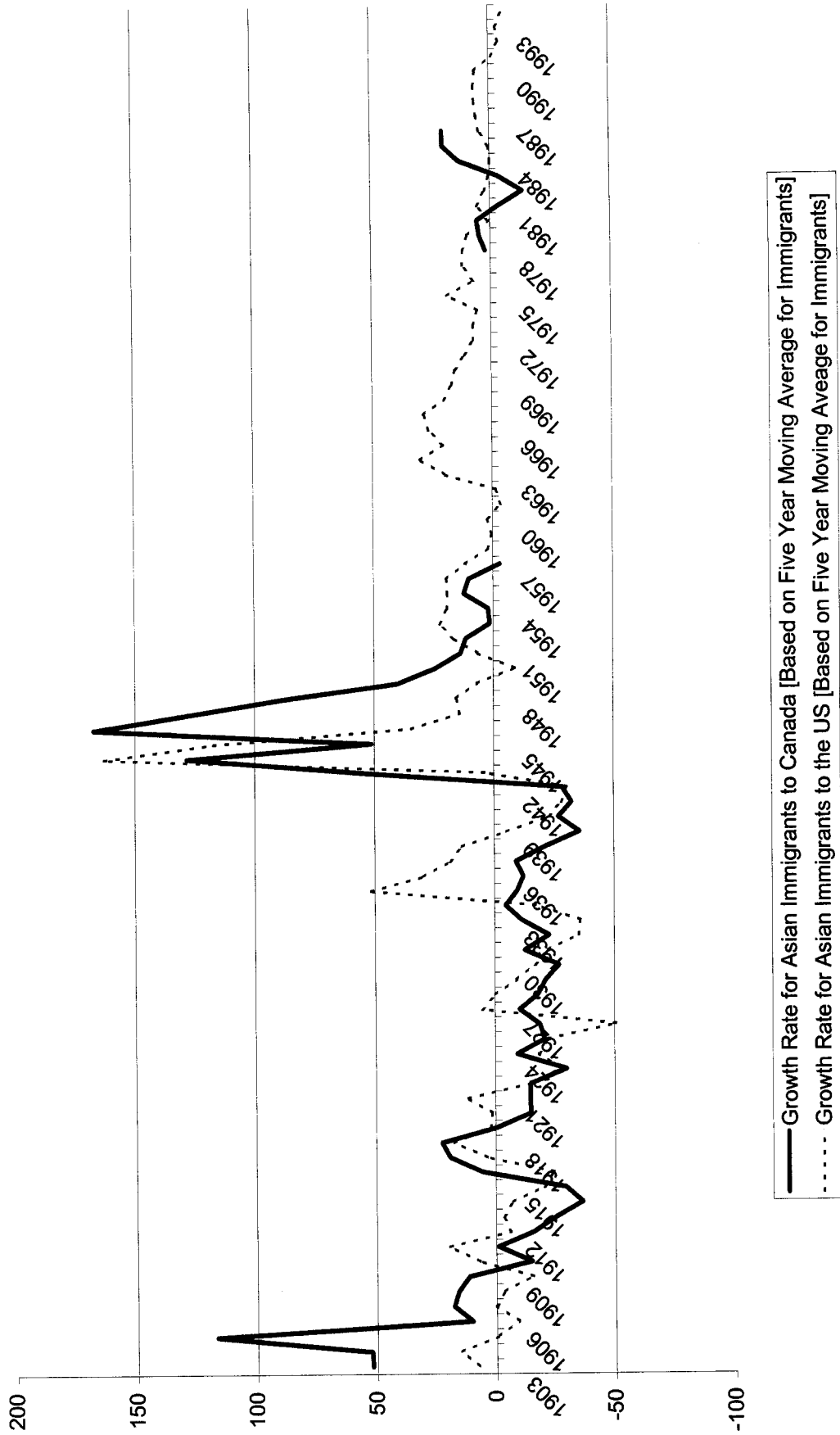


Chart 3: Trade with, and Immigration from, Europe: US, 1840-1990 [Five Year Moving Averages]

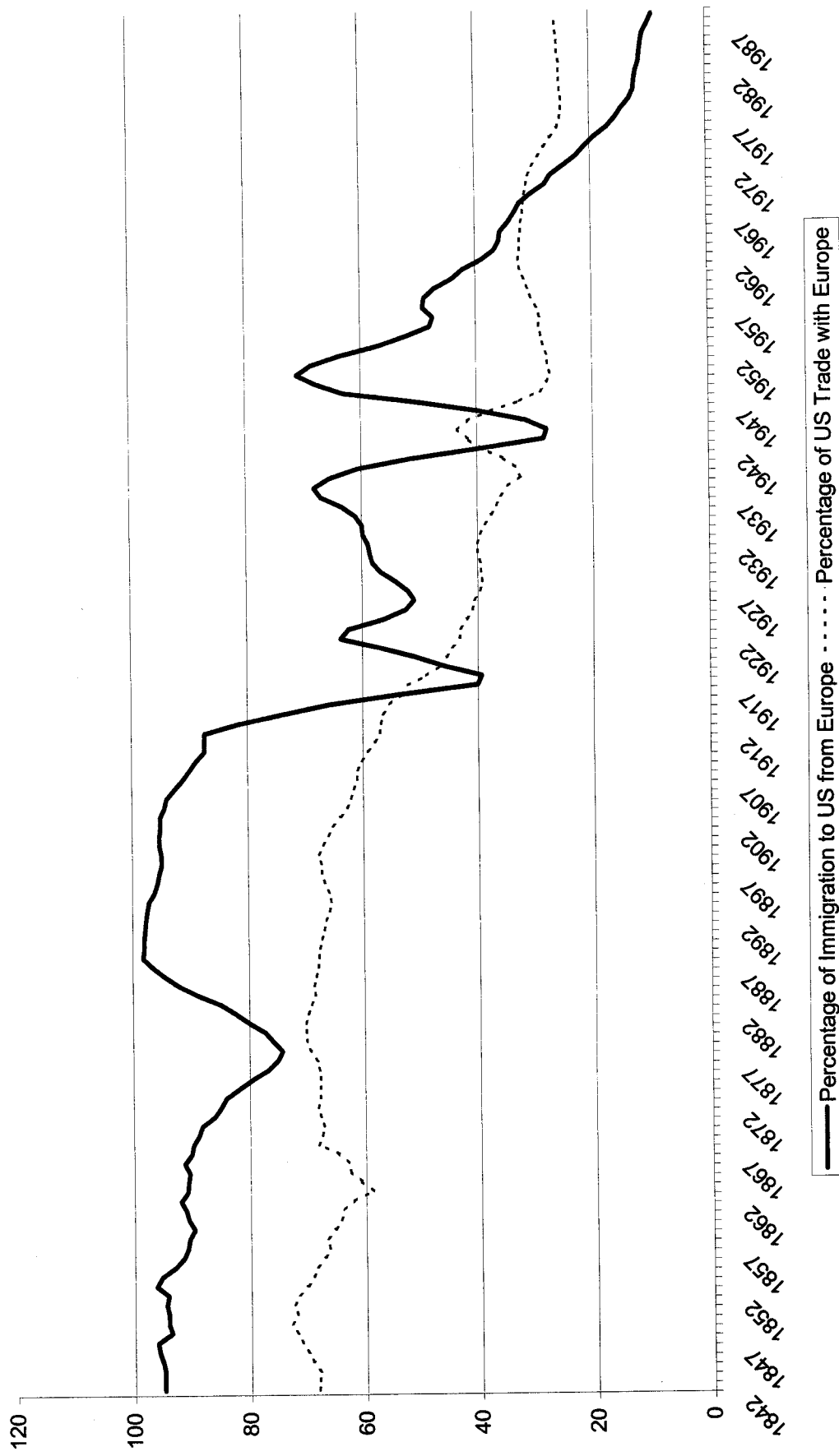


Chart 4: Trade with, and Immigration from, Asia: US, 1840-1990 [Five Year Moving Averages]

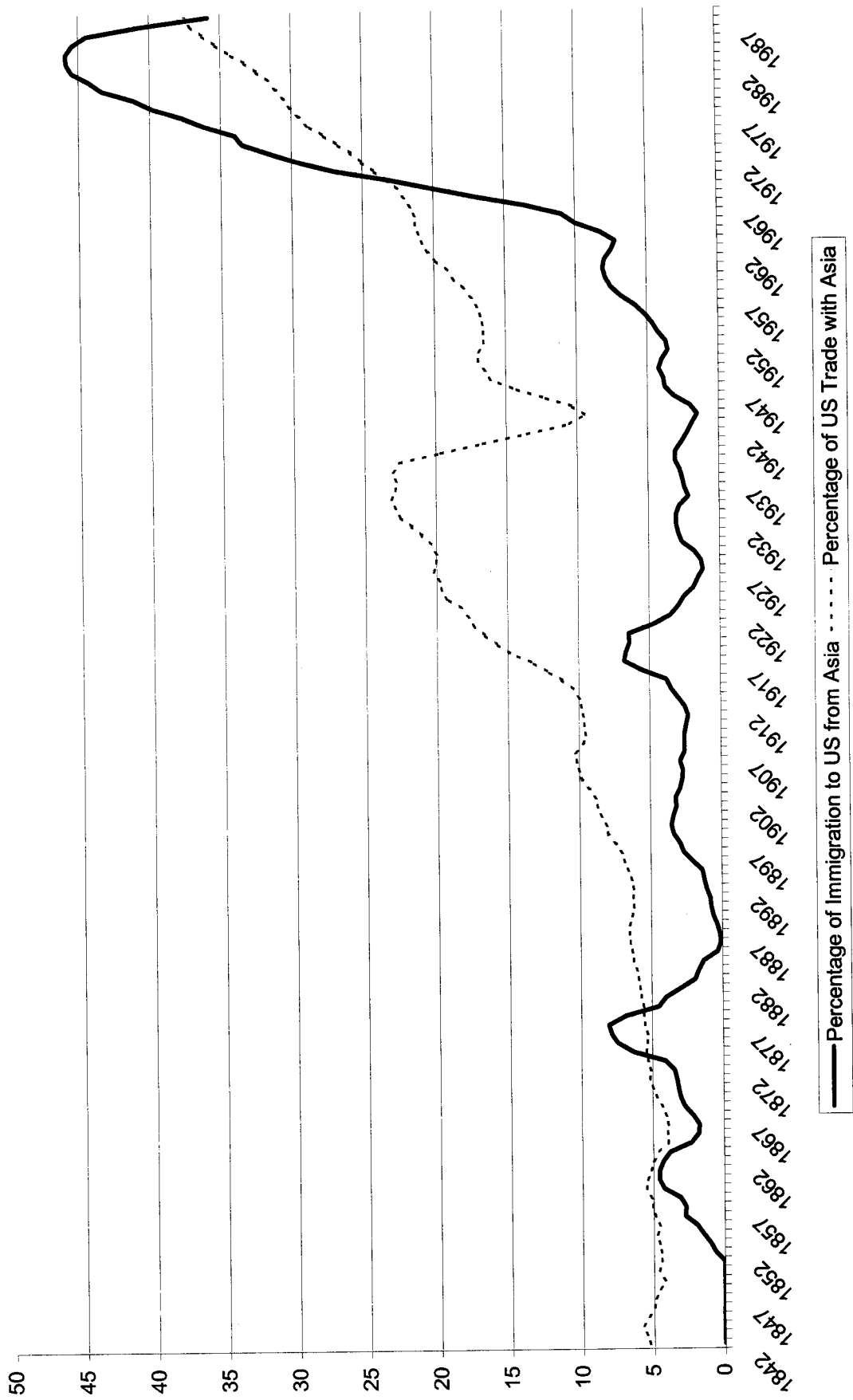


Chart 5: Trade with, and Immigration from, the Americas: US, 1840-1990 [Five Year Moving Averages]

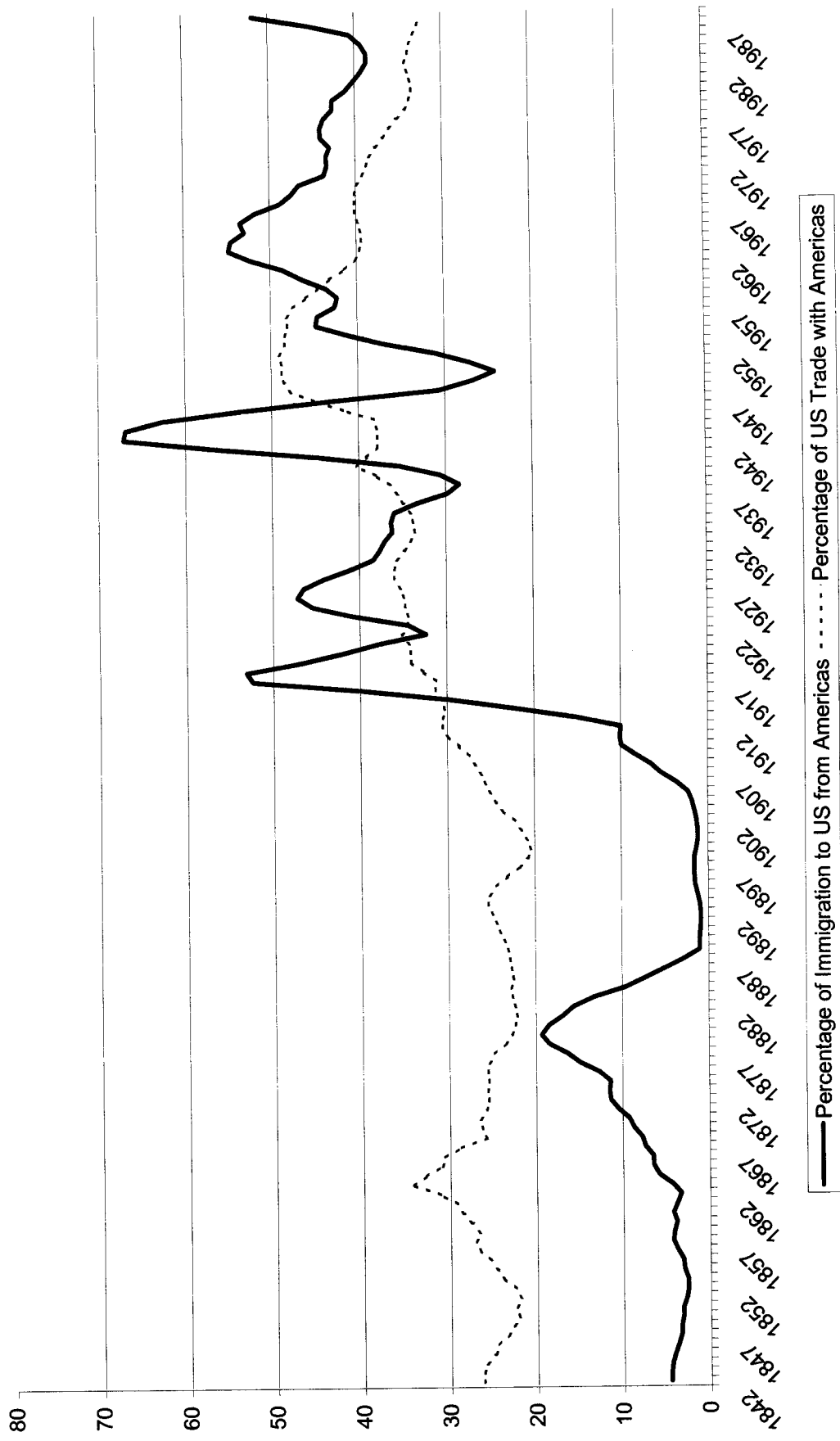


Chart 6: Trade with, and Immigration from, Mexico: US, 1840-1995 [Five Year Moving Averages]

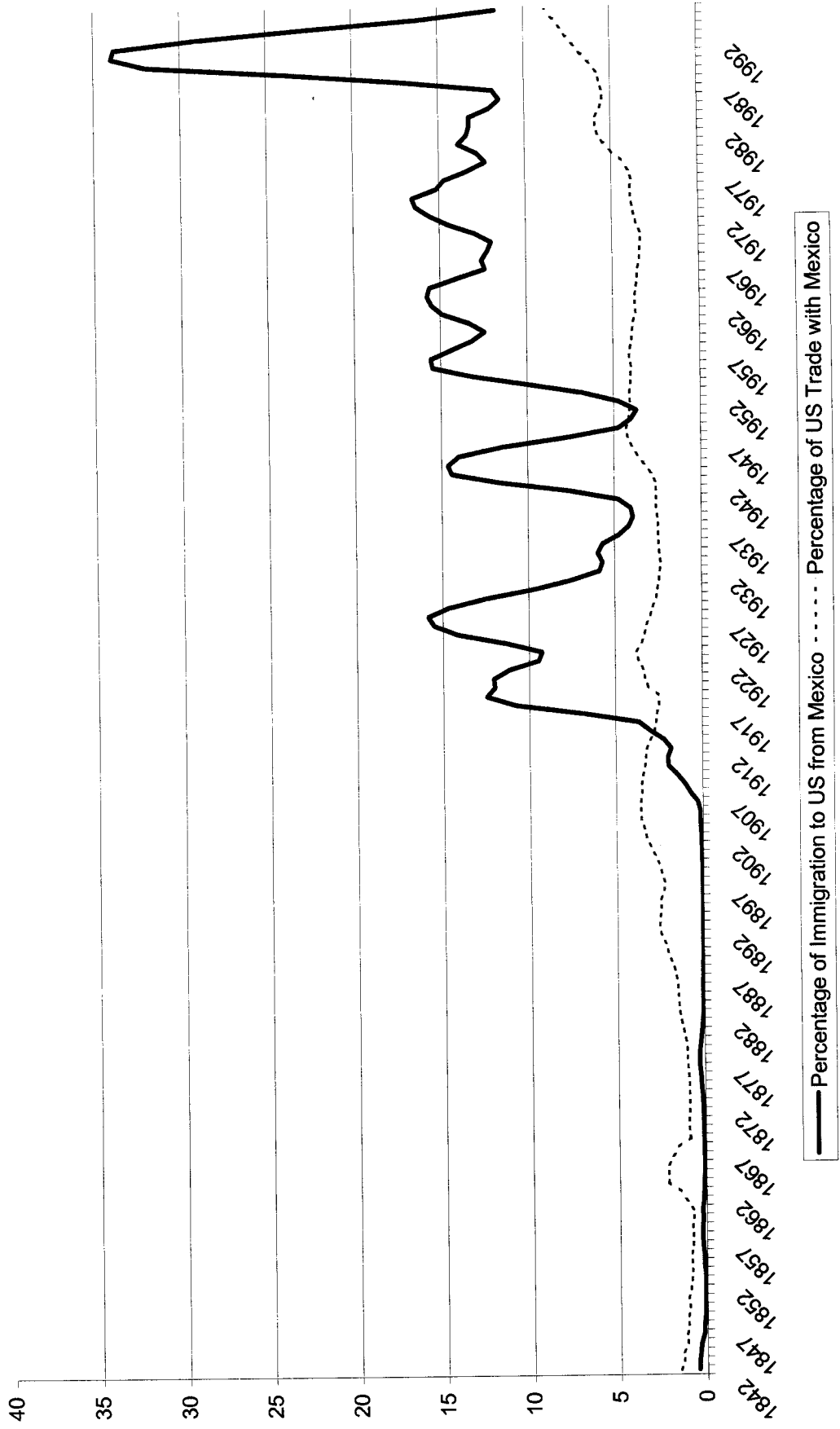
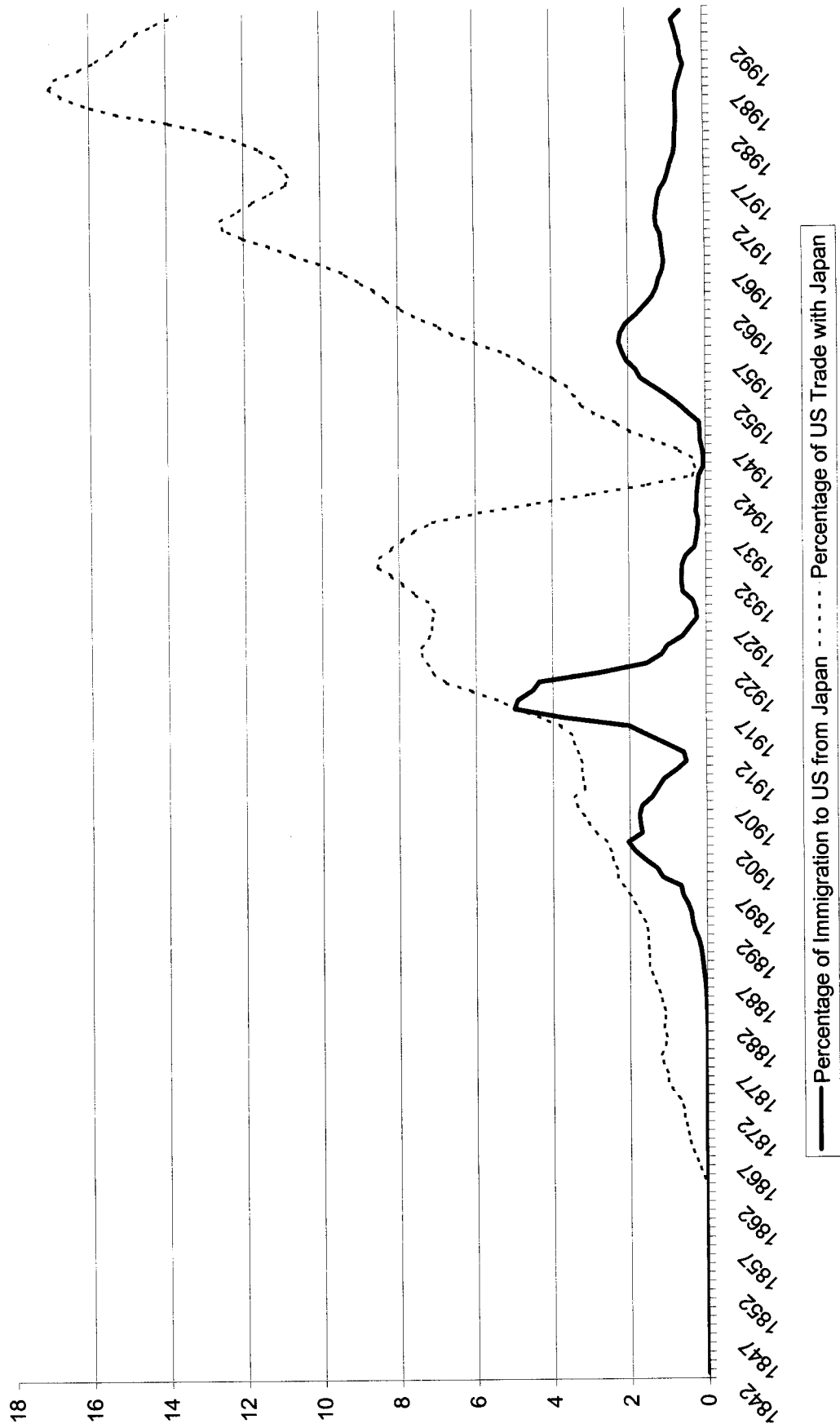


Chart 7: Trade with, and Immigration from, Japan: US, 1842-1995 [Five Year Moving Averages]



**Chart 8: Trade Ratio and Emigration Ratio for Japan (Including Emigration to the Empire),
1887-1936 [Five Year Moving Averages]**

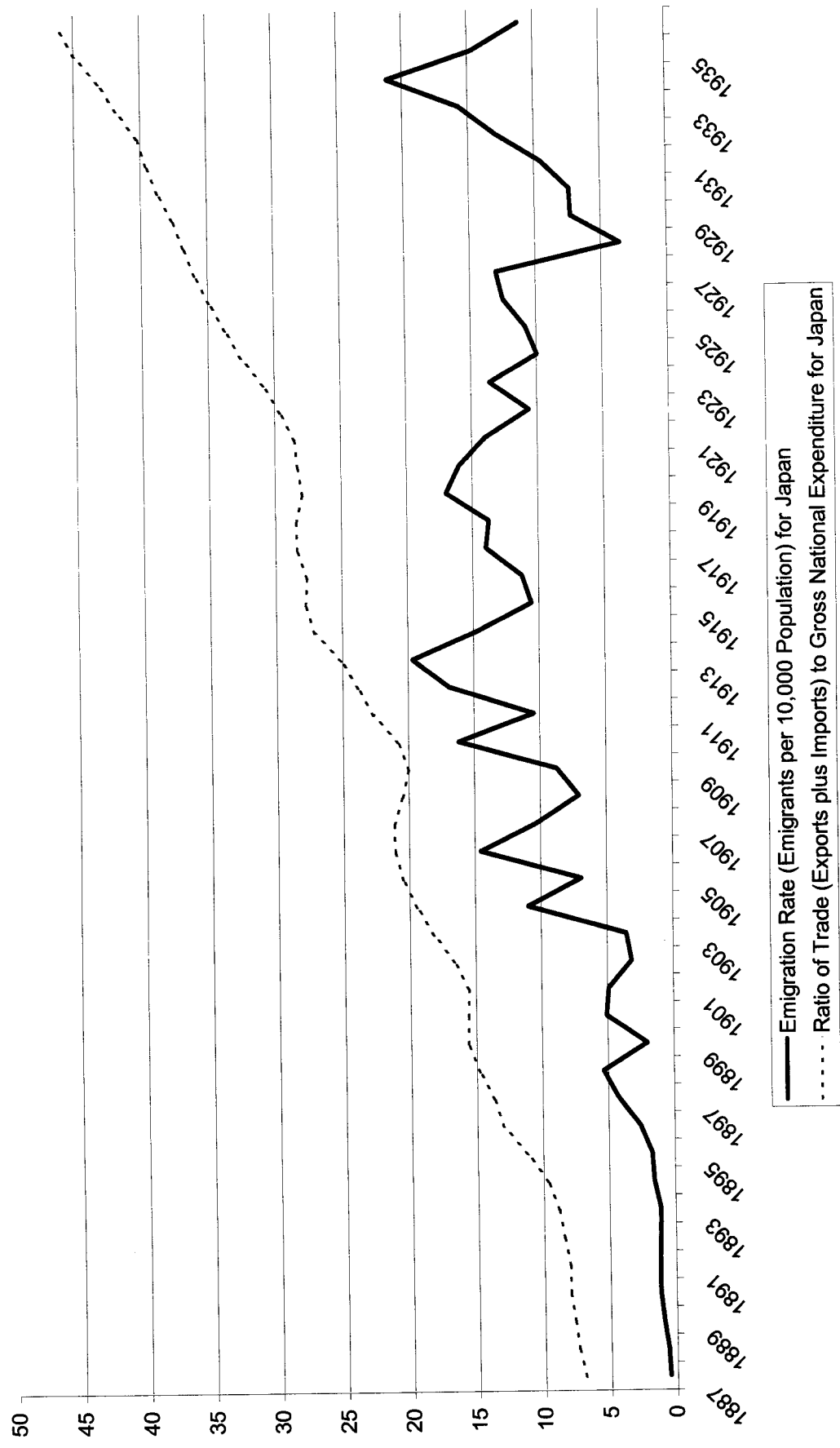


Chart 9: Permanent and Total Emigration Rates, and Trade Ratio, for Japan, 1975-1995 [Five Year Moving Averages]

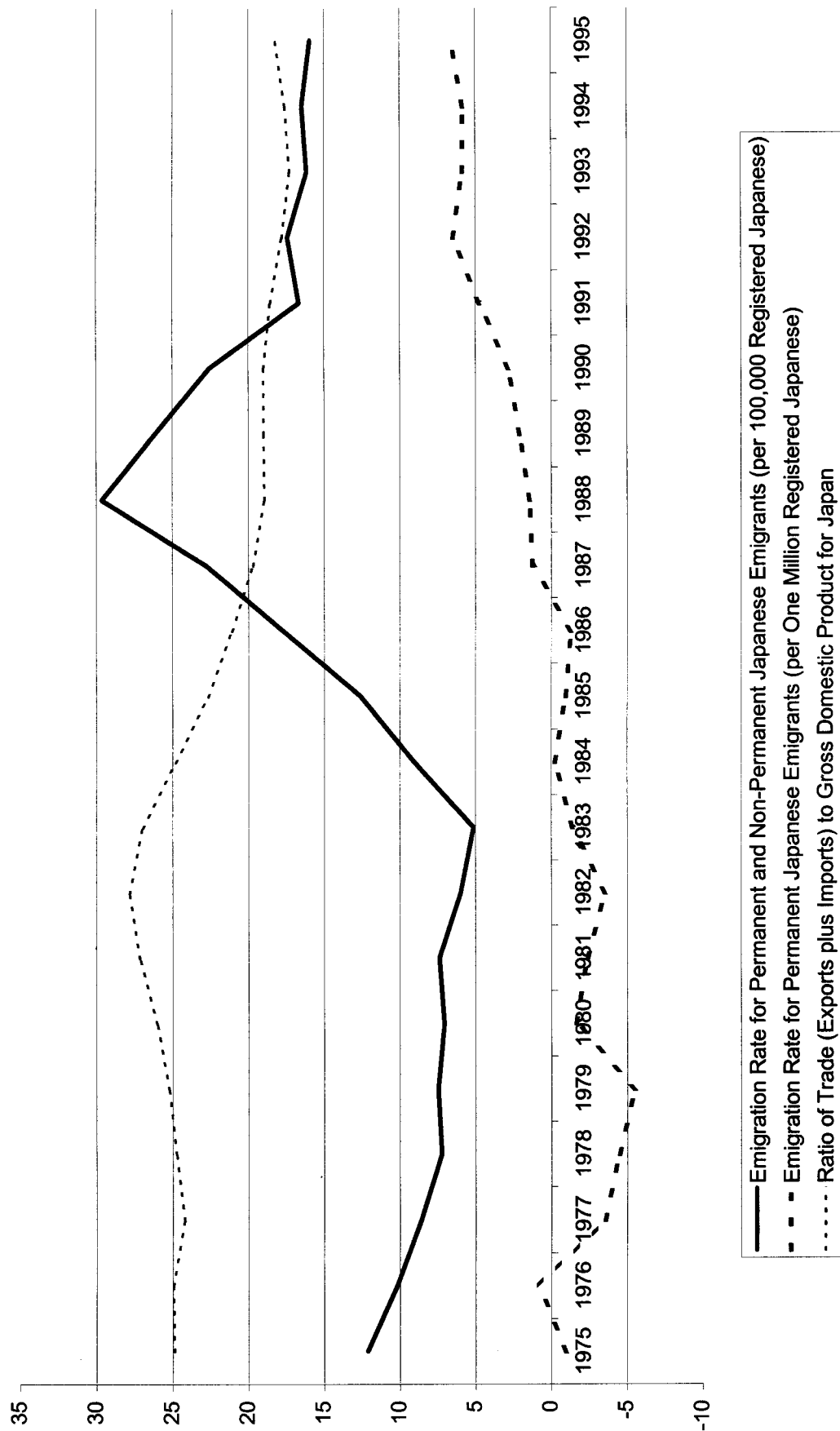


Chart 10: Japanese Permanently Living Abroad: Percentage Residing in South America and Proportion of Japan's Trade with South America

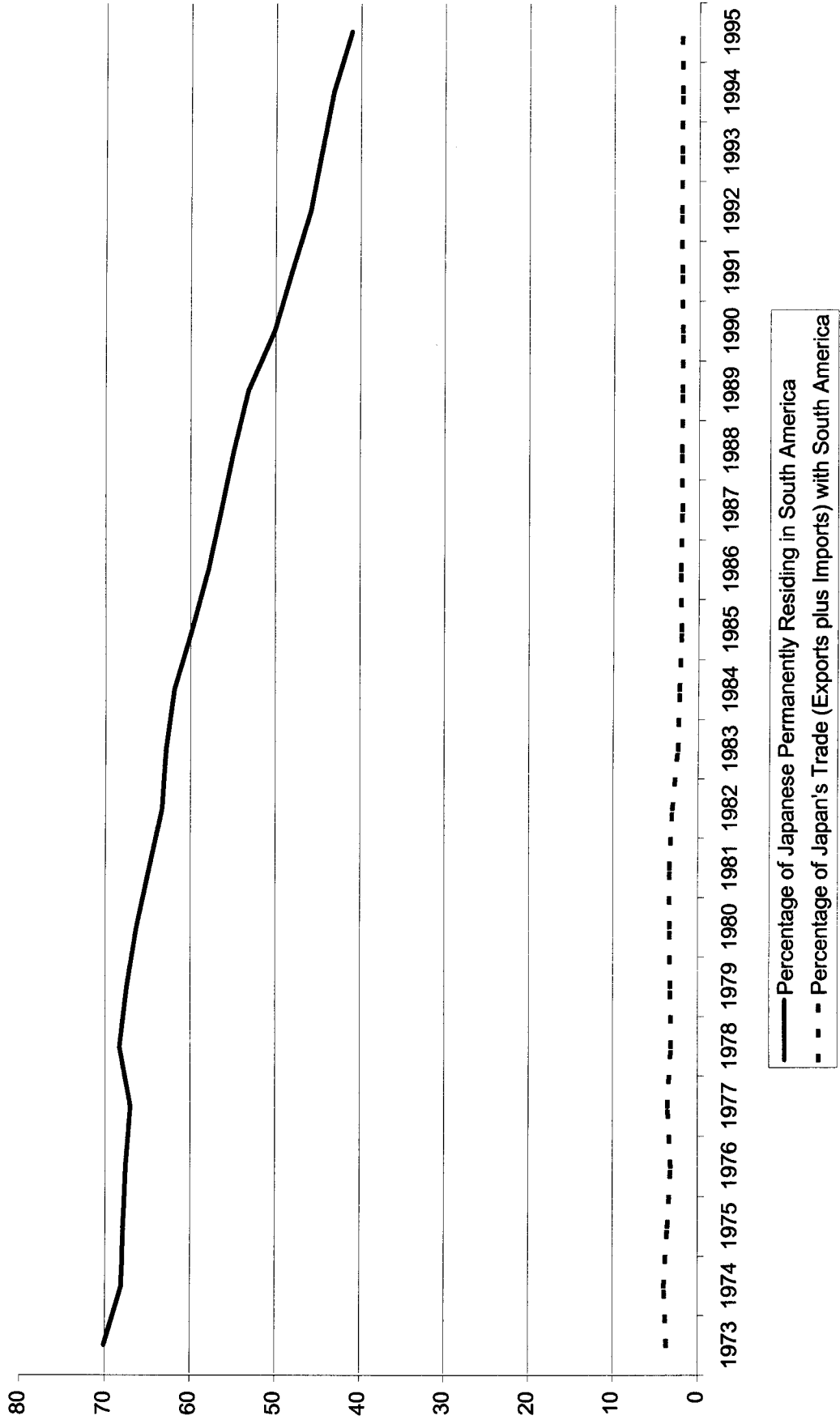


Chart 11: Japanese Permanently Living Abroad: Percentage Living in North America and Proportion of Japan's Trade with North America

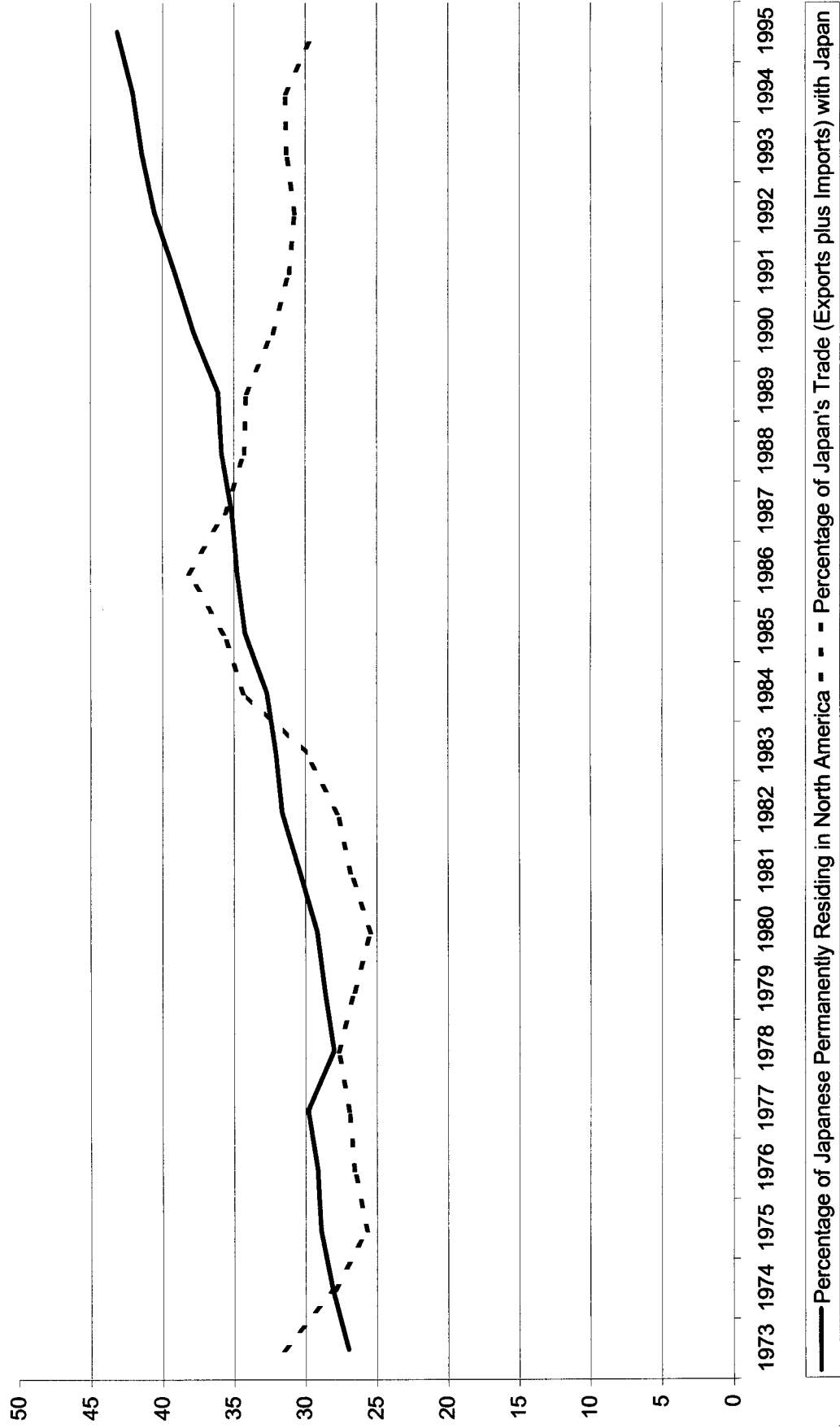
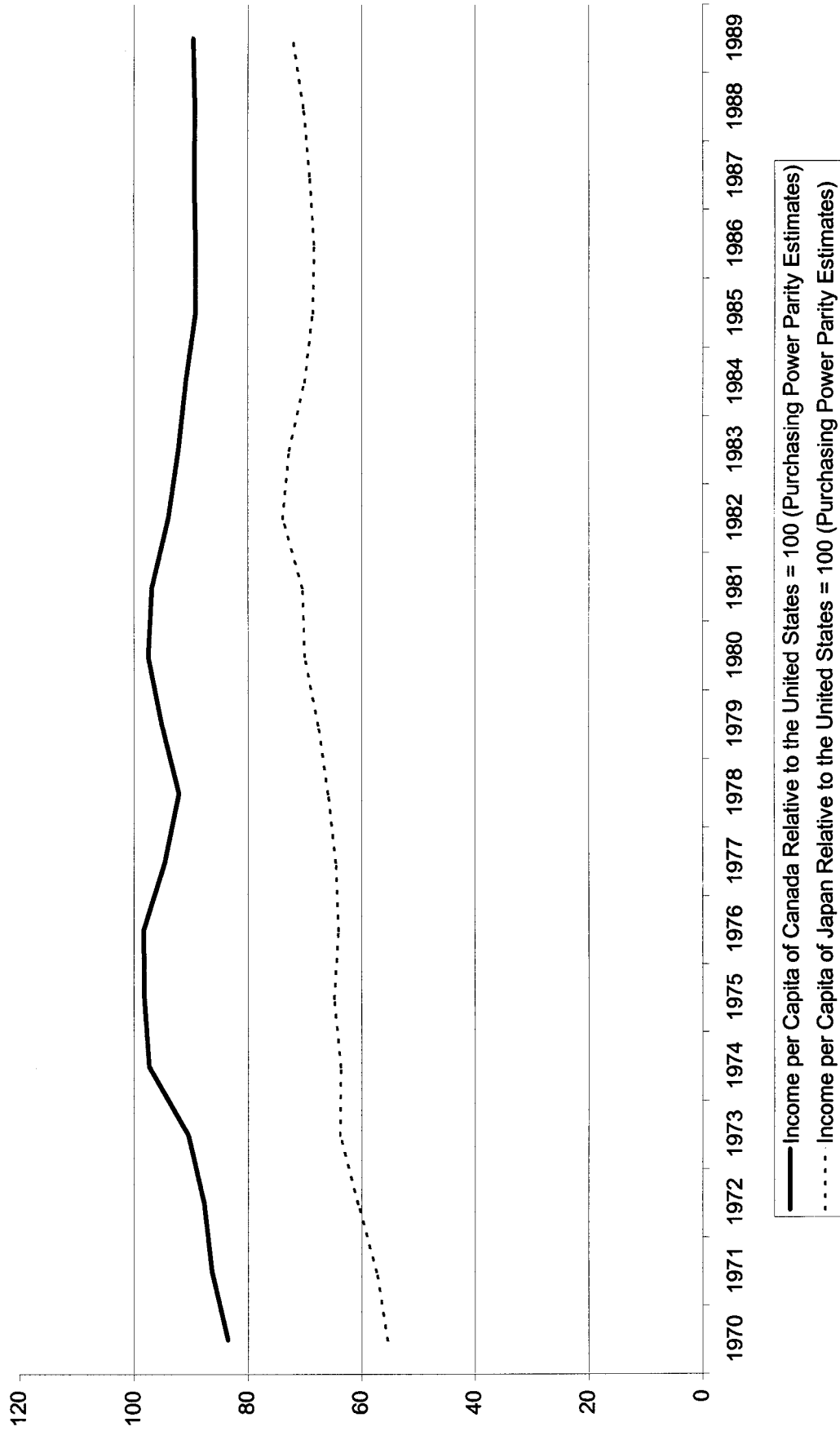


Chart 12: Income Per Capita of Canada and Japan Relative to that for the United States, 1970-1989 [Original Figures in US Dollars Adjusted for Purchasing Power Parity]



Working paper series from 2000

No.	Author(s)	Title	Date
00-01	J. Atsu Amegashie	A Political Economy Model of the Permissible Number of Immigrants	01/00
00-02	David Ley	Seeking <i>Homo Economicus</i> : The Strange Story of Canada's Immigration Program	05/00
00-03	Chieko Tanimura	Immigration of Nikkeijin to Ease the Japanese Aging Crisis	05/00
00-04	Eden Nicole Thompson	Immigrant Occupational Skill Outcomes and the Role of Region-Specific Human Capital	05/00
00-05	Christiane Werner	A Taste of Canada: An Analysis of Food Expenditure Patterns for Canadian-born and Foreign-born Consumers	05/00
00-06	Don DeVoretz and Chona Iturralde	Probability of Staying in Canada	08/00
00-07	Ravi Pendakur, Fernanda Mata, Stan Lee and Natalie Dole	Job Mobility and Promotion in the Federal Public Service. A Joint Project with Strategic Research and Analysis, Multiculturalism Program, Canadian Heritage and Research Directorate. Public Service Commission.	05/00
00-08	Barry R. Chiswick and Paul W. Miller	The Complementarity of Language and Other Human Capital: Immigrant Earnings in Canada	07/00
00-09	John E. Hayfron	The Housing Market Outcomes of Immigrants in Norway	08/00
00-10	Greg Cunningham, Daniel Hiebert and Brian Klinkenberg	Immigration and Greater Vancouver: A 1996 Census Atlas http://www.geog.ubc.ca/metropolis/atlas	09/00
00-11	Barry R. Chiswick	The Economics of illegal Migration for the Host Economy	09/00
00-12	Daniel Hiebert	The Social Geography of Immigration and Urbanization in Canada: A Review and Interpretation	09/00
00-13	Barry R. Chiswick and Paul W. Miller	A Model of Destination Language Acquisition: Application to Male Immigrants in Canada	09/00
00-14	Jamie Winders	Immigration to Vancouver: An Analytical Review	09/00
00-15	Daniel Hiebert	Cosmopolitanism at the Local Level: Immigrant Settlement and the Development of Transnational Neighbourhoods	09/00
00-16	David Prescott, David Wilton, Canan Dadayli and Aaron Dickson	Visits to Canada: The Role of Canada's Immigrant Populations	08/00
00-17	J. Atsu Amegashie and John E. Hayfron	Perception and Labour Supply: A Theoretical Analysis with and Application to Immigrants	10/00
00-18	Geraldine Pratt	Studying Immigrants in Focus Groups	12/00
00-19	Allesandra Casarico and Carlo Devillanova	Social Security and Migration with Endogenous Skill Upgrading	12/00
00-20	Don DeVoretz, Holger Hinte, Christiane Werner	Some Immigrant Language Lessons from Canada to Germany	10/00

RIIM

Research on Immigration and Integration in the Metropolis

The Vancouver Centre is funded by grants from the Social Sciences and Humanities Research Council of Canada, Citizenship & Immigration Canada, Simon Fraser University, the University of British Columbia and the University of Victoria. We also wish to acknowledge the financial support of the Metropolis partner agencies:

- Health Canada
- Human Resources Development Canada
- Department of Canadian Heritage
- Department of the Solicitor General of Canada
- Status of Women Canada
- Canada Mortgage and Housing Corporation
- Correctional Service of Canada
- Immigration & Refugee Board

Views expressed in this manuscript are those of the author(s) alone. For more information contact the Co-Directors of the Centre, Dr. Don DeVoretz, Department of Economics, SFU (e-mail: devoretz@sfu.ca) or Dr. David Ley, Department of Geography, UBC (e-mail: davidley@unixg.ubc.ca).

No.	Author(s)	Title	Date
00-21	Don DeVoretz	An Analysis of Turn-of-the-Century Canadian Immigration: 1891-1914	12/00
01-01	Shahrokh Shahabi-Azad	Immigrant Expenditure Patterns on Transportation	01/01
01-02	Johanna L. Waters	The Flexible Family? Recent Immigration and 'Astronaut' Households in Vancouver, British Columbia	01/01
01-03	David Ley, Peter Murphy, Kris Olds, Bill Randolph	Immigration and Housing in Gateway Cities: The Cases of Sydney and Vancouver	01/01
01-04	Gillian Creese, Robyn Dowling	Gendering Immigration: The Experience of Women in Sydney and Vancouver	01/01
01-05	David W. Edgington, Bronwyn Hanna, Thomas Hutton, Susan Thompson	Urban Governance, Multiculturalism and Citizenship in Sydney and Vancouver	01/01
01-06	Kevin Dunn, Minelle Mahtani	"Adjusting the Colour Bar": Media Representation of Ethnic Minorities under Australian and Canadian Multiculturalisms	01/01
01-07	Ian Burnley, Dan Hiebert	Emerging Patterns of Immigrant Settlement in Metropolitan Sydney and Vancouver: The Need for New Concepts and Models	01/01
01-08	Daniel Hiebert, David Ley	Assimilation, Cultural Pluralism and Social Exclusion Among Ethno-Cultural Groups in Vancouver	02/01
01-09	Harald Bauder	The Visible Minority Category and Urban Analysis	01/01
01-10	Johanna L. Waters	Migration Strategies and Transnational Families: Vancouver's Satellite Kids	01/01
01-11	Dominique M. Gross, Nicolas Schmitt	Do Birds of a Feather Flock Together? The Role of Cultural Clustering in Attracting New Immigrants	01/01
01-12	Diane Coulombe, William L. Roberts	The French-as-a-second-language Learning Experience of Anglophone and Allophone University Students	03/01
01-13	Galina Didukh	Health and Personal Care Consumption Patterns of Foreign-born and Canadian-born Consumers: 1984-1996	04/01

For information on papers previous to 2000, please see our Website

<http://www.riim.metropolis.net/research/policy>

Back issues of working papers are available for \$5 from

Vancouver Centre of Excellence: Immigration, WMX4653, Simon Fraser University, 8888 University Drive, Burnaby, B.C, Canada V5A 1S6. Tel: (604) 291-4575 Fax: (604) 291-5336

E-mail: riim@sfu.ca

<http://www.riim.metropolis.net/>