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**Asian Immigration to the West Coast of the United States: An Application of  
Theoretical Models of Migration to Residential Choice**

(This paper was also submitted in partial fulfillment for the requirements for the degree of Master of Arts at the University of Washington, under the guidance of Professors Pete Guest and Bill Lavelly.)

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Abstract

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This study examines how well economic and network theories of immigration explain the choice of SMSA destination among Asian immigrant groups. The study looks at the choice of SMSAs on the West Coast of the United States among four different Asian immigrant groups, comparing census data from 1980 and 1990.

There are two main goals that drive this study. The first is to compare how well different theoretical models of immigration can be applied to understanding what determines choice of destination within countries by immigrants. The second goal is to see if these models are consistent across different status groups.

Portes (1989) has argued that current immigration no longer can be pictured as low skill labor, but instead can be manual, professional, technical, or entrepreneurial. The choice of the four Asian groups; Asian Indian, Chinese, Korean, and Vietnamese, reflects an attempt to choose groups that represent a variety of status groups, as well as representing one of the fastest growing segments of the United States population.

The results suggest that neither economic nor network models alone adequately explain settlement choice of immigrants. The results instead support the gravity model of migration as the best predictive model of immigrant settlement patterns. This predictive power was seen across all immigrant groups

examined, suggesting destination characteristics are more important than socio-economic characteristics or immigration history of the immigrant groups.

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## CHAPTER 1: INTRODUCTION

The current debate in popular and academic circles concerning immigration and its effects on American society seems to be driven by two major forces: first, the increasing number of immigrants that are coming to the United States each year, and second, the changing composition of those arriving.

From the 1970's to the 1980's the number of immigrants arriving in the United States increased by approximately 60%, rising from a little under 4.5 million people total for the years 1971 through 1980, to around 7.3 million people for the succeeding ten years of 1981 through 1990. The annual number of immigrants continues to grow, with over 3.7 million already recorded for the first three years of the 1990's (Massey 1995).

Although these numbers are large, there have been other periods in American history with similar scales of mass immigration. From 1901 to 1930 immigration to the United States averaged over six million a decade, which represents a rate nearly double the current period, taking into account the smaller population at that time (Massey 1995).

What is different about the current situation is the composition of those coming to the United States. Whereas around 80% of the migrants during the 1901-1930 period came from Europe, immigrants from Latin America (50%) and Asia (35%) now compose 85% of the total immigrants. Part of this shift was due to the 1965 Amendment (to the 1952 Immigration and Nationality Act) which replaced the country by country quota system which had favored Europe, and ended the ban on Asian entry, and part was due to economic changes in Asia and



Latin America that have increased the potential pool of immigrants from those regions (Massey 1995).

The scale and composition of the current flow of immigrants has created concern among native-born Americans about what the economic and social consequences of immigration will be. The backlash against both legal and illegal immigrants in America can be seen in the passage of Proposition 187 in California, the many attempts to implement English only requirements in different states, and the discussion of stricter border policies by Pat Buchanan and Gov. Pete Wilson during the 1996 presidential election campaign.

Although most of the present debate about immigration concerns immigrants from Latin America, there are several reasons why the study of immigrants from Asia is useful for increasing our knowledge about the processes of immigration.

First, even though Asian-Americans make up only 3% of the current United States population, they are the fastest growing segment of the United States population. Between 1980 and 1990, the number of people claiming Asian or Pacific Island ancestry in the United States Census increased by 107.8%, the largest increase among any regional group (Kitano & Daniels 1995). And by 1990, six of the ten top sending countries of immigrants were Asian (Fix & Passel 1994). With the leveling of immigration flows from Latin America, Asian immigration will become a larger and larger percentage of total immigration (Fix & Passel 1994).

Second, most Asian immigrants have settled in a few metropolitan areas, creating a greater visible presence than if they had settled more uniformly across the country. Examples of this concentration are the large Korean and Chinese

populations in Los Angeles, and Vietnamese in San Jose and Orange County (CA). In fact, on the West Coast, Asian immigrants are a large percentage of the total population.

Finally, the classification of Asian includes an incredible diversity of people across ethnic, religious, and socio-economic groupings; ranging from Muslim Cambodians to Buddhist and Christian Vietnamese, from well educated Indians to illiterate Hmong (Rose, in Glazer 1995).

Studying Asian immigrants to the United States therefore allows us to examine theoretical models concerning processes of immigration among a group that is becoming a more important component of the United States population, as well as one that allows us to test the generality of these models across diverse sub-groupings.

## **RESEARCH**

Research into the processes of immigration has come from a variety of fields such as economics, geography, political science, and sociology. The studies have examined various aspects of immigration, ranging from the characteristics of immigrants, to the social and economic consequences of immigration for the immigrants themselves, to the impact their presence has on the communities they join.

Many of these studies, however, have ignored an important step of the immigration process; the immigrants' choice of which area to settle and reside. How immigrants affect an area economically and socially, the reception they receive by the host population, the speed of their assimilation, all occur within a

framework of where they choose to live. It is this aspect of immigration, choice of residential destination, that this study will examine.

## **THEORY**

The basis of most theories of human migration can be traced to the work of Ravenstein, who in 1885 presented a paper on what he would later call the “Laws of Migration” (cited in Lee, 1966). The major features of Ravenstein’s “laws” have been summarized by Lee (1966) as follows:

- 1) Migration decreases by distance, with most migrations only covering short distances.
- 2) Migration proceeds in stages, with people moving from rural areas to small towns, and then onto large urban areas.
- 3) Each stream of migration creates a counter stream.
- 4) Rural residents are more likely to migrate than those who live in urban areas.
- 5) Females are more likely to migrate short distances.
- 6) Advances in technology help facilitate migration.
- 7) Economic considerations are the dominant reason for migration.

An important attempt to create a model to test empirically some of the variables set forth by Ravenstein was Zipf’s (1946) “gravity model” of migration (Price-Spratlen, 1993). Examining migration between two points, Zipf argued that migration was a function of the size of and the distance between two

locations; with migration varying positively as the size of the areas increased, and inversely with the distance between the two points.

A major criticism of the gravity model is that it does not explain economic and social factors that contribute to migration, a concern that is at the heart of present debates of the causes of migration.

Recent research into patterns of contemporary international migration can be broken into two major groups: first, “push-pull” theories that see migration as resulting from individuals making decisions based on economic differences between countries, and second, theories that see migration as networks created by the movement and interaction of people in different areas (Portes, 1989).

Most of the economic models of contemporary international migration are based on variations of the neoclassical model. The neoclassical economic model saw migration as caused by differences (at the macro level) between countries in supply and demand for labor. Countries with a large supply of labor relative to capital will have low wages, while countries with a small supply of labor relative to capital will have high wages. The difference in wages causes a redistribution of labor from low wage areas to high wage areas. At the micro-level, the theory saw each potential migrant as a rational actor making a cost-benefit analysis of whether to migrate (Massey, 1993).

Recent modifications to this model have stressed the problem of how migrants obtain adequate information to make their decisions, and subjective perceptions of costs and benefits (both economic and non-economic) of moving. Schwartz (1973) gives an overview of how cost-benefit analysis may be shaped for decision makers:

- a) migration is an investment with certain costs and benefits.
- b) information to potential migrants is incomplete.
- c) non-monetary costs and benefits.
- d) subjective expectations of future benefits.
- e) individuals have different subjective predictions.

Portes (1989) has raised several major criticisms of models solely based on “rational” decision making by individual actors. The first major problem he points to is that these models are used to explain migration flows after they have already taken place, for example Mexican labor coming to the United States, or Italian labor to Switzerland in the past. He argues that though they may describe these migrations well as historical events, they are unable to explain: 1) why different countries or different regions of a country with similar economic situations have different rates of emigration, 2) which individuals ‘sharing similar lopsided differences of advantage’ will choose to migrate, and 3) why migration patterns are maintained when economic changes no longer make it advantageous to migrate.

Portes (1989) argues instead, that migration is primarily dependent on “networks constructed by the movement and contact of people over space.” At the national level these networks are seen to have been initiated by countries with need for cheap labor. The Dual Labor Market theory argues that this demand for cheap labor is inherent in the labor structure of developed countries (Piore 1979, cited in Massey 1993). The greater the economic links between the countries, the greater the migration flows (Massey, 1988). At the individual level availability of networks reduces the costs and risks of moving. A potential

immigrant can rely on kin or friends already in the country to provide information, help in finding jobs, or financial assistance if necessary (Portes 1989; Massey, 1993).

One question that naturally arises is whether these two perspectives are mutually exclusive, or are there some conditions where one or the other may dominate, or whether a combination of the two may occur. Portes (1989) and Massey (1993) both seem to imply that these perspectives are not directly connected, Portes arguing against the primacy of push-pull theories, and Massey viewing networks as perpetuating streams that already exist.

Although many empirical studies have been conducted comparing network theory to economic models, the work has focused on migrants that occupy lower status jobs in the receiving country, exemplified by Massey's work on Mexican labor, or compared differences within a single immigrant population, such as Funkhouser's (1993) work with Dominican and Cuban immigrants.

## **IMMIGRANT GROUPS**

This study will compare the settlement choice of four Asian immigrant groups to the West Coast of the United States; Chinese, Asian Indian, Korean and Vietnamese. Portes (1989) has argued that current immigrants no longer can be pictured as low skill labor, but instead can be manual, professional, technical, or entrepreneurial. The four immigrant groups selected for this group were chosen to reflect this diversity; differing in both educational levels and occupational characteristics.

In terms of educational attainment compared to the general U.S. population, the average level of educational attainment for these groups ranged from very high for the Asian Indians and Koreans, to slightly above average for the Chinese, to slightly below average for the Vietnamese (see Table 1).

In terms of occupation, Asian Indians (49%) and Chinese (33%) are found predominantly in the managerial and professional specialty occupations; while Koreans are more spread out among the different occupational categories, managerial and professional specialty (25%), technical, sales, and administrative support (27%), and operators, fabricators, and laborers (20%). Finally, Vietnamese are found employed mainly as operators, fabricators, and laborers (30%) and in technical, sales, and administrative support (27%) (see Table 2).

The four immigrant groups were also selected because they existed in significant numbers at the time of the 1980 US Census, while still being mainly composed of foreign born members.

Although large scale immigration of these groups to the United States began with the passage of the 1965 Amendment removing quotas on Asian immigration, there are important differences in the immigration history of each of these groups to the United States.

## CHINESE

The Chinese have the longest history among Asian groups in the United States. During the 1850's many impoverished Chinese, lured by rumors of gold and the fortunes to be made in California, began to emigrate to the United States. Most of these migrants were from South China, which was characterized by the

**TABLE 1: 1980 EDUCATIONAL ATTAINMENT OF ETHNIC GROUPS**

(% of people 25 and older, high school graduates)                      (median years of school completed)

	Male	Female	Male	Female
US Population	67.3	65.8	12.6	12.4
Asian Indian	88.7	71.5	16.9	13.0
Chinese	74.3	67.4	13.7	12.8
Korean	90.0	70.6	14.4	12.5
Vietnamese	71.3	53.5	12.4	12.0

Source: 1980 Census of Population, Asian and Pacific Islander Population in the United States

1980 Census of the Population, Characteristics of the Population



**TABLE 2: 1980 OCCUPATIONAL STRUCTURE OF ETHNIC GROUPS BY PERCENTAGE**

% of employed 16 years or older	Chinese	Asian Indian	Korean	Vietnamese
Managerial, and Professional Specialty Occupations	32.6	48.5	24.9	13.4
Technical, Sales, Administrative Support	30.1	28.0	27.4	26.7
Service Occupations	18.6	7.8	16.5	15.3
Farming, Forestry, Fishing	0.5	0.9	0.9	0.9
Precision Production, Craft, Repair	5.6%	5.2%	9.9%	14.5
Operators, Fabricators, Laborers	12.7	9.6	20.4	29.3
TOTAL	100.1*	100	100	100.1*

\*(totals may be greater than 100% due to rounding error)

Source: 1980 Census of Population, Asian and Pacific Islander Population in the United States

greatest contact with foreigners, and the easiest access to means of transport (Tsai, in Kim 1986).

Upon their arrival to the United States these immigrants were forced into certain occupations. Barred by law from mining, they instead turned to typically female enterprises such as cooking, laundry, and domestic service, where there was a great need for labor at the time. They were also instrumental in the building of the Union Pacific/Central Pacific railroad from 1865 to 1869. But with the completion of the railroad, there was a backlash against the Chinese, as the large numbers of people arriving from the East resented having to compete for jobs with the Chinese. In 1882, under great pressure from the Western states, the federal government passed the Exclusion Law prohibiting Chinese immigration for ten years, an act which was continually renewed until 1943.

The effect on Chinese immigration was that immigration dropped from an average of 72,000 a decade from 1851-1890, to 16,800 a decade from 1891-1960 (Statistical Yearbook of the Immigration and Naturalization Service, 1994). For the Chinese remaining in the United States, most were driven into Chinatown ghettos (Tsai, in Kim 1986).

Large scale Chinese immigration began again in the 1960's, and of the Chinese living in the United States in 1980, over 72% were born outside the United States (1980 Census of the Population, Asian and Pacific Islander Population in the United States).

## KOREAN

Korean migration to the United States began as early as the beginning of the twentieth century, when Koreans were hired to replace Chinese and Japanese

labor on Hawaiian plantations. This migration, however, was relatively small, and mainly limited to Hawaii (Kitano & Daniels 1995). This immigration effectively stopped, when in 1910, Korea was formally annexed by Japan (Mangiafico, 1988).

The next major migration was a result of the Korean War (1950-1953). This migration (from 1951-1964), mainly consisted of wives of soldiers, war orphans, and students who came to study in the United States (Kitano & Daniels 1995).

The most recent wave of Korean migration began in 1965. Like that of most other Asian groups, a major reason was the passage of the 1965 Immigration and Nationality Act amendment. There were also some important changes in Korea that contributed to this process. First, since the end of the Korean War in 1953, Korea has experienced a population boom, accompanied by large scale industrialization and urbanization, which the government has responded to by liberalizing emigration policy (Mangiafico, 1988). Recent Korean immigrants are predominantly female, and have a higher level of education than their countrymen.

## ASIAN INDIAN

Asian Indians have migrated to all regions of the world, but other than a Sikh population that formed near Fresno eighty years ago, there has been no permanent settlements of Asian Indians in the United States until recently (Saran, in Kim 1986).

Like the Chinese and Japanese before them, these early Californian settlers faced intense prejudice and discrimination, culminating in the passage of the

Immigration Act of 1917. This act created the “Pacific Barred Zone” which stopped immigration from certain parts of Asia, including India (Gonzales, 1986).

At the end of World War Two, in response to India’s participation on the side of the allies, the United States passed the Luce-Celler Bill, again allowing Asian Indian immigration to the United States (Gonzales, 1986). Most of this second wave of immigrants also originated from the Punjab. Since 1965, however, there has been a drastic change in the composition of Asian Indian immigrants. Unlike the Sikhs that came before, most Asian Indian immigrants today come from more urban areas in India, and tend to be very well educated, and typically concentrated in the professions (Gonzales, 1986).

Asian Indians differ greatly from other Asian immigrant groups in their settlement pattern. While over 50% of other Asian groups can be found along the West Coast, only 21% of Asian Indians live in the West. Instead around 33% live in the Northeast, with another 25% each in the South and Midwest (Kitano & Daniels, 1995).

## VIETNAMESE

Large-scale Vietnamese migration to the United States began with the fall of the U.S. backed government in April of 1975. The earliest wave of immigrants were those who came directly to the United States as part of the U.S. evacuation. The second group that arrived were the “boat” people and other refugees who spent time in refugee camps in parts of South East Asia, before being allowed into the United States. The final group of refugees were ethnic Chinese forced out of Vietnam by the new government (Kelly in Kim 1986).

The U.S. government policy towards Vietnamese immigrants has been markedly different than immigrants from most other Asian countries. Until 1980, there was an inconsistent policy of allowing in refugees who were blood relatives of Americans, or giving refugee status to those who had already made their way here. In the late seventies the criteria shifted to those like the Hmong, Laotians, and Kampuchians who had helped the U.S. government, which in turn was replaced by allowing those who had been persecuted by the Communist government (Kelly, in Kim 1986).

Finally, in 1980 the U.S. government passed the 1980 Refugee Act, which broadened the status of refugee to include economic suffering as a result of changed political circumstances, and gave refugees residential alien status rather than parole status (Kelly, in Kim 1986).

Settlement of Vietnamese refugees in the United States was delegated to voluntary agencies in the United States, but the U.S. government actively facilitated their dispersion throughout the United States, to avoid the development of large ethnic enclaves (Kelly, in Kim 1986).

**TABLE 3: COUNTRY OF ORIGIN & YEAR OF ARRIVAL FOR FOREIGN BORN IMMIGRANTS**

YEAR	CHINA*	INDIA	KOREA	VIETNAM
before 1970	200,369	56,500	42,807	3,989
1970-1980	265,961	174,770	180,350	152,174
1970-1974	107,326	75,575	72,544	11,128
1975-1980	158,635	99,195	108,350	141,046
1980-1990	649,214	345,622	326,842	292,717

\*China data includes Taiwan beginning in 1957. Immigration from Taiwan makes up less than 7% of the Chinese total during all periods.

Source: 1980 Census of Population, Asian and Pacific Islander Population in the United States  
 1990 Census of Population and Housing, Characteristics of the Asian and Pacific Islander Population in the United States

## **CHAPTER 2: METHODOLOGY**

### **UNIT OF ANALYSIS**

As the goal of this study is to analyze macro-level processes of ethnic group settlement choice, the unit of analysis for this study is the Standard Metropolitan Statistical Area (SMSA). The decision to limit the analysis to SMSAs seemed appropriate given that over 95% of Asian immigrants reside in metropolitan areas (1990 Census of the Population).

The choice of only West Coast SMSAs reflects both present demographic realities and concerns about regional differences affecting patterns of Asian immigration. Of the approximately seven million Asians presently living in the United States, over 50% live in the three West Coast states of Washington, Oregon, and California (1990 Census of Population), with the percentage of Vietnamese and Chinese above 50%, Koreans at 40%, and Asian Indians at 20%.

The choice of only Asian groups, and solely in SMSAs along the West Coast, also allows us to constrain variation in attitudes towards immigrant groups among the general population, as well as government policies towards these groups.

### **HYPOTHESES**

A logical extension of the premises of both “network theory” and economic models of migration, is that the same factors that initiate the decision to move will also affect choice of destination within areas after the decision to move has been reached.

### HYPOTHESIS #1: ECONOMIC OPPORTUNITIES

For economic models the assumption would be that SMSAs with the greatest number of economic opportunities will attract the largest number of immigrants.

### HYPOTHESIS #2: SIZE OF ETHNIC ENCLAVE

Based on network theories, one may argue that immigrants will move to areas where previous immigrants from their county have settled. Therefore the greater the size of an ethnic enclave in an area, the greater the immigration by members of that ethnic group to that area.

Although these two positions are not mutually exclusive, this study will attempt to separate out the relative importance of various factors that influence destination choice among immigrants. This problem will be discussed in greater detail in later sections of this study.

There are several other variables that have been found to be important in previous studies on immigration that will also be investigated in this study.

### EDUCATION

Bartel (1989) has shown how network theories and economic theories of immigration may be linked in her study of Asian, Hispanic, and European immigrants to the United States. Her research showed that higher education levels among immigrants would reduce the likelihood of their choosing to live in areas with high concentration of fellow countrymen, while immigrants with



lower education levels were more likely to choose to live in areas where others from their home country had settled.

At the macro-level the average level of education of each group should then also help determine which SMSAs immigrants will move to.

## DISTANCE

One of the earliest attempts to use distance as a key determinant in a theoretical model of migration was Zipf (1946) in his “gravity model” of migration (Price-Spratlen, 1993). Zipf argued that migration between two areas varied positively with the size of the two areas, and inversely with the distance between the two sites (Price-Spratlen, 1993). This effect of distance has been replicated in other studies, such as Schwartz (1973), who also found that the greater the distance between two areas, the lower the migration rates.

A modification of this premise will be used for this study. Given that the distance from Asia to any West Coast city should not be qualitatively different, “distance” in this study will be conceptualized as distances between cities in the United States. For each ethnic group we would expect the propensity of members of that group to settle in any SMSA to vary with distance from the largest enclave city for that group. Therefore, we would expect population growth in an area to vary inversely with distance from the largest population enclave of that group.

There is, however, the problem that this may give undue weight to large population enclaves in California, so I will also examine how population growth of each ethnic group varies with distance from the nearest port of entry city within each state.

## CHAPTER 3: MEASURES

### DEPENDENT VARIABLE

The dependent variable in this study will be the growth of immigrant population within each SMSA from 1980 to 1990 (Census of Population: Metropolitan Areas, Social and Economic Characteristics).

Two measures were created to measure population growth; the first measuring absolute population growth of each immigrant group within SMSAs, the second measuring relative immigrant population growth for each SMSA as a growth ratio.

The absolute growth of immigrant groups in each SMSA was measured as the natural log of the population growth of the group from 1980 to 1990 as follows:

$$\text{Population growth in SMSA} \quad \ln (\text{population SMSA } (T_{1990}-T_{1980}))$$

The relative growth of immigrant populations in each SMSA was measured as follows:

$$\text{Population Growth Ratio:} \quad 1- \frac{\text{immigrant population (1980)}}{\text{immigrant population (1990)}}$$

Population growth ratios of “0” meant that the size of the SMSA immigrant population stayed constant across the ten years. Using this proportion also insured that areas with large influxes of immigrants on an originally small base would not unduly influence the data.

For both measures if any SMSA had a decrease in population over the ten year period, then a constant was added to each SMSA so that there were no negative values. This was necessary for three of the immigrant groups, but the values in each case were relatively small (25 for Vietnamese, 137 for Chinese, and 179 for Asian Indians). Only four SMSAs had declines in population for any of the groups over the ten year period.

## **INDEPENDENT VARIABLES**

### **ECONOMIC OPPORTUNITY**

In order to test how important economic considerations are in determining residential choice among immigrants, I will examine three aspects of economic attractiveness of SMSAs for immigrants.

I. The first economic aspect that I will analyze is the economic opportunities provided by each SMSA irrespective of the ethnic group. There are three measures that I will use to represent this aspect of economic attractiveness. First, similar to Fligstein (1981), I will use level of per capita income as a measure of the economic “pull” of an area (Price-Spratlen 1993). The economic models of labor movement predict that immigrants should move to areas where wages are highest.

A second measure that I will use comes from the gravity model of Zipf (1946). He argued the greater the size of a location, the greater the migration to that area. Therefore the larger the population of a given SMSA the higher the migration we should expect for that area. Greenwood (1975) has argue that population size can be viewed as a proxy for the size of the labor market in an

area, meaning the greater the number and diversity of job opportunities (Price-Spratlen).

The third measure I will use is the absolute growth rate of the SMSA between the two time periods. A rapidly growing city can be seen as offering a variety of opportunities for newcomers and therefore should be attractive for immigrants.

Although total increase in SMSA population is also due to increased numbers of immigrants, there are two reasons I didn't not factor out these immigrants. First, in almost all the SMSAs the percentage of the total increase in population within an SMSA due to members of any immigrant group was negligible. Second, taking out members of each immigrant group from the total would make this variable harder to compare across the four groups.

II. The second aspect of economic attractiveness was intended to measure attractiveness of an SMSA specifically for each ethnic group. This measure was created by comparing the occupational structure for each ethnic group with the occupational structure of each SMSA.

Occupational structures for each immigrant group were created by analyzing the national job structure of these immigrants in 1980. (1990 Census of Population : The Foreign-Born Population in the U.S.) The occupational structure was broken into six categories: 1) managerial and professional specialty occupations 2) Technical, sales and administrative support occupations 3) Service occupations. 4) Farming, Forestry and Fishing 5) Precision production, craft, and repair occupations 6) Operators, fabrication, and laborers.

The distribution of occupation structure for each SMSA was created by looking at the distribution of employment in the thirty five West Coast SMSAs

(1990 Census of Population: Metropolitan Areas, Social and Economic Characteristics).

The fit of each immigrants occupational structure to that of the SMSAs was then calculated using an index of dissimilarity (Preston, 1995).

III. The third aspect of economic attractiveness that I will analyze is that of economic competition: how the presence or absence of other groups affect whether members of an ethnic group decide to move to a given SMSA.

As previously mentioned, Asian immigrants represent a diverse cross-section of educational and occupational backgrounds. For this reason it is hard to identify easily who these new immigrants are competing with, but I will attempt to analyze how the racial and ethnic composition of SMSAs influence the choice of SMSA for immigrants.

For this study I will examine three ethnic and racial groups within each SMSA: African Americans, Hispanic, and Asian.

There are several possible outcomes that I predict for how makeup of population within SMSAs could influence the desire of immigrants to move to an area.

For the lower status immigrant groups, a large presence of Hispanics and African Americans should represent competitors, and I would expect to find lower levels of immigration to areas where this presence is high. For higher status immigrant groups the presence of these other two groups should not affect the likelihood of whether or not they settle in an SMSA.

The presence of other Asian groups in an area presents two possible outcomes that I will examine; the first is that the presence of other Asians in an area has paved the way for future Asian immigrants, and that we should find

higher rates of immigration to areas where there is a greater presence of other Asian groups.

The second possibility is that members of Asian groups will find themselves competing with members of other Asian groups and we would therefore expect to find lower levels of immigration to areas with high populations of other Asian groups.

#### ENCLAVE SIZE

The size of ethnic enclaves was determined by looking at the ethnic population within each SMSA in 1980. A related issue, is how far each SMSA is from the city with the largest ethnic enclave. The distance of each SMSA from the SMSA with the largest enclave for each ethnic group will also be calculated to see if there is an inverse relationship between distance and growth of the ethnic population.

There is the concern, however, that looking solely at the largest enclave may not accurately represent patterns across states. Given the increasing likelihood of air transport for better of immigrants, this study also looked at how distance from largest major city influenced settlement patterns. The four cities selected were Portland for Oregon, Seattle for Washington, and Los Angeles and San Francisco for California.

Each of these factors will be examined across the four groups, to see if there are patterns that hold across all groups. This study will also seek to see if differences that arise between groups can be explained by socio-economic characteristics of the different groups, or by characteristics of their immigration history to the United States.

**TABLE 4: WEIGHTED MEANS AND STANDARD DEVIATIONS FOR  
DEPENDENT AND SELECTED INDEPENDENT VARIABLES**

DEPENDENT VARIABLES

	<u>Population Growth Ratio</u> <u>1980-1990</u>		<u>Ln Population growth</u> <u>1980-1990</u>	
	<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>
Asian Indian	0.63	0.15	6.68	2.02
Chinese	0.46	0.15	7.02	2.39
Korean	0.58	0.10	6.79	1.79
Vietnamese	0.51	0.22	6.43	2.48

INDEPENDENT VARIABLES

	<u>Mean</u>	<u>SD</u>
ln SMSA Population (1980)	12.93	1.10
ln SMSA Population Growth (1980-1990)	11.32	1.37
SMSA Per Capita Income	7675.09	914.25

## **CHAPTER 4: RESULTS**

### **ABSOLUTE GROWTH (RESULTS AND DISCUSSION)**

The two best indicators of which SMSAs would have the greatest net increase in immigrants from 1980 to 1990 (natural log), for all four immigrant groups, were the size of population of the metropolitan area in 1980 (ln), and the size of the respective ethnic group in 1980 (ln). Using these two variables alone in a multiple regression analysis, we are able to explain from 67% of the variance of growth among SMSAs for Asian Indians, to over 80% for Chinese and Vietnamese, to 96% of the variation of growth for Koreans (see Table 5).

Because of the high inter-correlation between SMSA population in 1980 and SMSA ethnic population in 1980 (.941 for Chinese, .837 for Asian Indians, .903 for Koreans, .913 for Vietnamese) it was impossible to separate the relative influence of each of these factors.

At first glance, these numbers can be used to support either position. The high correlation between the SMSA 1980 ethnic population and the growth of that ethnic population from 1980 to 1990 suggest that immigrants are going to areas where previous immigrants from their country have settled. Although this is true for the measured period of 1980 to 1990, it doesn't explain how a newer immigrant group such as the Vietnamese went from nearly invisible numbers of people in 1970, to the numbers found in 1980.

At the same time, some economic models have tried to use population size as a proxy for the labor market in an area (see Greenwood, 1975). Unless we can identify what aspects of the labor market are attracting immigrants, it can also be argued that population size also serves as a proxy for non-economic



**TABLE 5: NET GROWTH IN IMMIGRANT POPULATION FOR SMSAs****(1980-1990)****(Pearson Correlations & Explained Variance using SMSA Population & SMSA Ethnic Population)**

	Chinese	Asian Indian	Korean	Vietnamese
SMSA (1980) Population	.907	.760	.941	.857
SMSA (1980) Ethnic Population	.854	.799	.969	.888
explained variance	.826	.667	.963	.802

characteristics of an area (i.e. the ability to support cultural aspects of an ethnic community such as ethnic newspapers or grocery stores).

The problem of high inter-correlations between the population of the SMSA in 1980 and other variables limited the analysis of the data to examining the Pearson correlations between different variables and examining how much variance was explained using the different hypothesized models.

#### MULTIPLE REGRESSION ANALYSIS (WITH RESIDUALS)

Although most of the variation in net SMSA ethnic population growth could be explained by the size of the SMSA population in 1980 and the SMSA ethnic population in 1980, I decided to examine the residuals to see if any of the other variables could explain the remaining variance, and if there were differences to be found across the four ethnic groups. Four different models were examined to see which best explained the variance in residuals (Table 6).

##### Model 1: SMSA Economic Characteristics

The first model examined if the economic characteristics of the SMSA, such as SMSA growth or SMSA per capita income could help explain which SMSAs would experience growth in ethnic populations.

Examining the zero-order correlations we find that for the Asian Indians (.310) and Vietnamese (.326) SMSA growth was moderately correlated with the residuals. This effect was much weaker for Chinese (.052) and Koreans (.168). For per capita income of the SMSA the results were the opposite, with correlations of .320 for Chinese and .311 for Koreans, and only .043 for Vietnamese, and a -.241 for Asian Indians.

**TABLE 6: RESIDUALS OF 1980 SMSA POPULATION AND ETHNIC POPULATION**

**(Pearson Correlations and Explained Variance)**

	Chinese	Asian Indian	Korean	Vietnamese
-Ln SMSA growth	.052	.310	.168	.326
-SMSA Per Capita Income	.320	-.241	.311	.043
-R <sup>2</sup>	.115	.286	.098	.122
-Ln SMSA growth	.052	.310	.168	.326
-SMSA Per Capita Income	.320	-.241	.311	.043
-Ethnic group Occupational Structure (Dissimilarity Index)	-.289	.067	-.003	.104
-R <sup>2</sup>	.123	.286	.098	.135
-Ln African American 1980	-.116	.002	-.087	.150
-Ln Hispanic 1980	-.022	.095	-.045	.280
-Ln Other Asian 1980	.002	.061	-.056	.143
-R <sup>2</sup>	.129	.051	.015	.114
-California	.019	.422	.028	.602
-Distance from largest enclave -	-.056	-.356	-.016	-.420
Distance from nodal city	-.115	-.186	-.205	-.299
-R <sup>2</sup>	.021	.209	.043	.557

Combining the two variables in a regression analysis, we find that other than for the Asian Indians ( $r^2 = .286$ ), this model did not explain much of the remaining variance.

#### Model 2: SMSA AND ETHNIC GROUP ECONOMIC CHARACTERISTICS

In the second model, the similarity of the economic characteristics of each Asian immigrant group to that of the SMSAs' occupational structure was added as an additional variable to the previous model. This model did not perform appreciably better than the previous one. Comparing the four ethnic groups, we find that only for the Chinese was there a relatively moderate correlation in the expected direction, with a correlation of  $-.289$  between the dissimilarity index of the Chinese occupational structure and the SMSAs' occupational structures.

#### Model 3: COMPETITION VS. TRAILBLAZERS

The third model analyzed how the presence of other ethnic or racial groups affected SMSA growth for the four immigrant groups. The groups considered were African Americans, Hispanics, and other Asians. Other than the Vietnamese with relatively weak correlations of  $.150$  with African Americans,  $.280$  for Hispanics, and  $.143$  with other Asians, there was little correlation with other groups among the other three immigrant groups. For each of the four immigrant groups the presence or absence also provided little explanation for the observed variance in residuals.

#### Model 4: DISTANCE AND CALIFORNIA EFFECTS

The fourth model examined how distance from ethnic enclaves or nodal port city influenced the growth rates of ethnic populations in each SMSA. This model also analyzed if there was a California effect, suggesting that immigrants are choosing California rather than West coast cities.

Examining the zero order correlations we find that for Vietnamese (.602) and Asian Indians (.422) there is a strong correlation between net growth and whether the SMSA was in California. This effect was almost negligible for the Koreans (.028), and the Chinese (.019).

This pattern is nearly replicated when we examine distance from the nearest ethnic enclave, with correlations of -.420 for Vietnamese and -.356 for Asian Indians, compared to -.056 for Chinese and -.016 for Koreans.

Overall this model explained .557 of the remaining variance for the Vietnamese and .209 for Asian Indians.

#### DISCUSSION

Both economic and network theories of migration proved inadequate in explaining the net growth rate of ethnic populations in SMSAs. For the economic model neither the economic characteristics of the SMSA, with the exception of Asian Indians, nor the compatibility of the economic structure of the immigrant group to that of the SMSA helped predict the growth of ethnic populations across SMSAs. This seems to provide support for Sassen's (in Portes, 1995) contention that "local" labor market characteristics, such as at the SMSA level, do not affect immigrants likelihood to settle in an area, as they do for native workers. The inability of the occupational structure of each ethnic group to help

predict which SMSA would increase in ethnic populations adds additional credence to Sassen's contention that it is not the structure of the local labor market that is determining migration for members of these groups.

Although the network model of migration is supported by the census data examined, it does not explain why there is such a great degree of similarity in SMSA choice across the four ethnic groups examined.

The premise of network theory is that immigrants will move to areas where they have ties to other people. At the macro-level this would suggest that large scale increases would occur in areas with large concentrations of members from their own ethnic group.

As previously mentioned, the correlations between the size of an ethnic group in an SMSA and the growth of that ethnic group were high across all groups. This finding is in part a consequence of the time period studied and the available data.

For the Chinese, who already had strong ethnic enclaves in larger West coast SMSAs as a result of their historical situation in the United States, the argument that newer immigrants are going to areas with already established ethnic communities seems supported.

It is harder to make this case for the Asian Indian and Vietnamese immigrants. Unlike other Asian groups, Asian Indians have settled more uniformly across the United States, and historically the notable concentration of Asian Indians on the West Coast was near Fresno. Newer immigrants from India since 1965, despite the previous lack of Asian Indian enclaves in the largest West Coast SMSAs, are replicating the pattern of the Chinese settlement.

The problem of using network models is even more clear with the Vietnamese population. When Vietnamese immigrants first started coming to the United States in the 1970's, the American policy encouraged their dispersal across the United States. Despite this effort, the Vietnamese population has within a short time become concentrated along the West Coast and predominantly in larger SMSAs.

The fact, that despite their different socio-economic conditions and the differences in their immigration histories, these groups still have similar settlement patterns across SMSAs, suggests that there are certain common features of these SMSAs drawing these diverse immigrant groups.

The model of migration which best predicts the observed settlement patterns of the different Asian immigrant groups is the gravity model. As previously noted, there is a strong linear relationship between SMSA size and net growth of immigrant population across all four immigrant groups. Particularly striking is the concentration of immigrant growth to a few large SMSAs (see Table 7 below). Immigrants from all groups seem to be choosing to settle in the Los Angeles area, the Bay area, and Orange County.

One interesting feature about the relationship between SMSA size and the net growth of immigrant populations is that there are several large SMSAs that are under-represented in Asian immigration population growth; such as Seattle, Riverside, and San Diego, and two that are relatively over-represented in Asian immigration growth, specifically Anaheim-Santa Ana-Garden Grove and San Jose. This seems less problematic when we incorporate the second variable of the gravity model, that of distance. Both Anaheim-Santa Ana-Garden Grove and San Jose are near the two largest SMSAs, Los Angeles and San Francisco. In fact,

**TABLE 7: SMSAs WITH GREATEST NET INCREASE OF IMMIGRANTS  
(1980-1990)**

	CHINESE	ASIAN INDIAN	KOREAN	VIETNAMESE
	Los Angeles/ Long Beach (151,324)	Los Angeles/ Long Beach (25,356)	Los Angeles/ Long Beach (84,813)	Anaheim-Santa Ana (Orange County) (52,489)
	San Francisco/ Oakland (110,757)	San Francisco/ Oakland (18,425)	Anaheim-Santa Ana (Orange County) (24,580)	San Jose (42,495)
	San Jose (42,174)	San Jose (14,594)	San Francisco/ Oakland (12,644)	Los Angeles/ Long Beach (33,898)
	Anaheim-Santa Ana (Orange County) (27,231)	Anaheim-Santa Ana (Orange County) (10,329)	Seattle (10,271)	San Francisco/ Oakland (17,927)
% of total increase in ethnic population growth due to: increase in -four largest growth SMSAs	82.9%	65.3%	75.9%	72.4%
-largest growth SMSA	37.8%	24%	48.5%	25.9%

Source: 1980 Census of Population, Asian and Pacific Islander Population in the United States  
1990 Census of Population, Asian and Pacific Islander Population in the United States



Anaheim-Santa Ana-Garden Grove is considered part of the Los Angeles-Long Beach SCSA (Standard Consolidated Statistical Area), and San Jose part of the San Francisco-Oakland SCSA, suggesting their relatively higher growth rates may be a spill-over effect from these larger areas.

Another interesting finding is the similarity between Asian Indian and Vietnamese immigrants in their propensity to settle in Californian SMSAs. One possible explanation for this finding is that internationally California still has a reputation as a “land of opportunity”, and newer immigrants are still likely to view it as a point of entry to the United States.

This possibility could create the observed differences between Asian Indians and Vietnamese on one hand, and Chinese and Koreans on the other, in two ways. First, as members of newer immigrant groups to the West Coast, Asian Indians and Vietnamese may have less knowledge, through network ties, about the West Coast, and therefore select to move to California. Second, due to the possibility of stage migration, Chinese and Koreans may be spreading from California to other West Coast cities, and we may find this pattern replicated among Asian Indians and Vietnamese at some future point of time.

### **RELATIVE POPULATION GROWTH (RESULTS AND DISCUSSION)**

To see which characteristics of SMSAs best predicted relative growth of immigrant population compared to their original population I examined five models using multiple regression analysis (see Table 8). The first model was the gravity model, the other four were the same as previously discussed in the section on net growth.

For explaining relative growth of immigrant populations in SMSAs, the most highly correlated economic indicator was SMSA growth. This held true for all four groups, ranging from .305 for Koreans, .442 for Asian Indians, .450 for Chinese, and .654 for Vietnamese.

For Asian Indians and Vietnamese immigrants the economic model was more useful in predicting relative growth ( $r^2 = .497$  for Asian Indians,  $r^2 = .560$  for Vietnamese), than for the Chinese (.277) and Korean immigrants (.061).

Comparing the occupational structure of the ethnic group to that of the SMSA occupational structure gave no additional predictive power to the economic model for any of these groups. The presence or absence of other ethnic or racial groups also did not seem to significantly affect the relative growth rate of the ethnic populations.

The location of a SMSA in California was more highly correlated to Asian Indian (.418) and Vietnamese (.709) relative growth rates than for the Chinese (.059) and Korean (.216) relative growth rates. Distance from the nearest ethnic enclave also followed this pattern with correlations to relative growth of -.385 for the Asian Indians and -.593 for the Vietnamese compared to .143 for the Chinese and -.222 for the Korean populations.

In terms of relative growth it seems that SMSAs that are growing rapidly in size will attract greater numbers of immigrant groups, which is compatible with the gravity model hypothesis.

The similarity of the effects of distance and California for Asian Indians and Vietnamese patterns of settlement, given their very different socio-economic characteristics, suggests that the length of time the group has been in an area may be an important factor in settlement patterns.

**TABLE 8: RELATIVE GROWTH IN IMMIGRANT POPULATION FOR****SMSAs****(Pearson Correlations and Explained Variance)**

	Chinese	Asian Indian	Korean	Vietnamese
<u>Gravity Model</u>				
-SMSA 1980	.432	.128	.177	.409
-Ethnic Poulation 1980	.274	-.029	-.097	.320
-R <sup>2</sup>	.340	.078	.033	.184
<u>SMSA economic characteristics</u>				
-SMSA 1980	.432	.128	.177	.409
-Ln SMSA growth	.450	.442	.305	.654
-SMSA Per Capita Income	.445	-.129	.173	.251
-R <sup>2</sup>	.277	.497	.149	.560

**TABLE 8: CONTINUED**

<u>SMSA and Ethnic Group Economic Characteristics</u>				
-SMSA 1980				
-Ln SMSA growth	.432	.128	.177	.409
-SMSA Per Capita Income	.450	.442	.305	.654
-Ethnic group Occupational Structure (Dissimilarity Index)	.445	-.129	.173	.251
-R <sup>2</sup>	-.453	.035	.001	.164
	.333	.520	.157	.560
<u>Other Groups</u>				
-Ln African American 1980	.222	.093	.041	.479
-Ln Hispanic 1980	.277	.200	.177	.596
-Ln Other Asian 1980	.333	.144	.031	.486
-Ethnic Group 1980	.274	-.029	-.097	.320
-R <sup>2</sup>	.194	.200	.132	.389
<u>Distance and CA</u>				
-California	.059	.418	.216	.709
-Distance from largest enclave -	.143	-.385	-.222	-.593
Distance from nodal city	-.361	-.185	-.023	-.389
-R <sup>2</sup>	.254	.197	.050	.642

## CONCLUSION

The most significant finding of this study is that the gravity model of migration is the best predictor of which SMSA will increase in immigrant populations, with the largest SMSAs having the greatest net increases in immigrant populations. This finding was consistent across all four immigrant groups studied despite their different socio-economic characteristics, and the different historical conditions under which their migration to the United States took place, suggesting that the destination characteristics of areas may take precedence for understanding settlement patterns of immigrants.

Consistent with the gravity model, we find that there is a high correlation between the increased size of an SMSA and its relative increase in immigrant populations. SMSAs that grew rapidly between 1980 and 1990 showed the greatest relative increase in the size of their immigrant populations.

Distance, as a variable in the gravity model, is a little harder to conceptualize. Distance from country of origin to the United States could be used to compare the differences between past European migration and present day Asian migration, with the expectation that Asian migration will be less focused given lower transportation costs.

Within the United States, distance can be viewed as distance from the nearest ethnic enclave, or distance from nearest large nodal city. This suggests two patterns of ethnic group dispersal. The first suggests that members of ethnic groups move out from large ethnic enclaves to neighboring SMSAs, while the second suggests that members of ethnic groups enter large nodal cities and then disperse from there. In this study the first pattern was seen among Asian Indians and Vietnamese, while the second pattern better reflects Chinese and Korean

settlement patterns. These two patterns may not be mutually exclusive, and this idea will be further addressed in the discussion of future avenues of research.

Another important finding was the similarity of Asian Indian and Vietnamese migration patterns. Although the Asian Indians were the most educated and professional group, and the Vietnamese the least educated and least concentrated in the professions, they both seem to have been influenced by similar variables in their settlement pattern. Both groups have predominantly settled in California, and their net and relative growth in SMSAs is more strongly correlated to distance from largest ethnic enclave. Given the major differences in their socio-economic characteristics it seems likely that this similarity is due to their status as more recent immigrant groups to the West coast, with these effects acting more strongly on the more recently arrived Vietnamese.

As previously suggested, the “California effect” may be due to California’s history with Asia, its perception through the media and Hollywood as a “land of opportunity”, or simply because it is more known as a possible port of entry to America in Asian countries.

For members of newer Asian immigrant groups, SMSAs in California would therefore have a greater attraction. Over time this effect would be mitigated, as members of ethnic groups spread to other West Coast cities. Once members of ethnic groups are located in SMSAs in other states, they may in turn affect immigration by creating networks that make moves to other states from California, and from country of origin more likely. This could help explain why Asian Indian and Vietnamese patterns of settlement were similar, and why the “California” and distance effects were more pronounced for the Vietnamese.

It is important to note that the gravity model may work best within geographically bounded regions. For European immigrants, in the late 1800's and early 1900's, this meant the East coast, while for present Asian immigration this applies more to the West coast.

Another important contribution of this study is that it confirms Sassen's (in Portes 1995) contention that economic characteristics of labor markets that have been found to attract native workers to an area do not apply in the same way to immigrant labor. Even the addition of specific characteristics of the labor structure of the immigrant groups did not help predict which SMSAs would attract immigrants.

As previously mentioned, network theorists have pointed out how the presence of family, friends, or other members of one's ethnic group may have a greater influence on the decision making process of immigrants than the economic conditions of an area.

This study, however, also points out some problems with network models of immigration. Although network models accurately point out the importance of ties between members of ethnic communities in the process of immigration, they fail to explain why, despite the differences in socio-economic and historical conditions of these groups, that they are following very similar settlement patterns. Specifically, what are the characteristics of these larger metropolitan areas that are attractive to members of immigrant groups in the first place.

The criticisms of both economic and network models of immigration can also be made of the gravity model, for despite its predictive value it still does not

provide an explanation for why immigrants settle in certain areas. This problem is evidenced by the methodological and conceptual problems of separating economic and network models of migration. Methodologically it was impossible to separate whether larger SMSAs were attracting more immigrants because, as economists have argued, they have greater and more diverse job opportunities, or because they are able to support a larger ethnic enclave. Given the high correlation between these two variables this type of study is unable to distinguish which of these may be occurring.

Conceptually it is also hard to distinguish whether a move was made because of economic reasons or due to ethnic connections. If someone moves to an area because a friend in an ethnic community offers a job, how do we define the move?

One future avenue of research would be a life history analysis of immigrants. Asking immigrants about their residential and work histories, and why they decided to move to certain areas and how they found their jobs could help fill some of the gaps discussed in this paper, and untangle the relationship of economic and network aspects of immigration, as well as pointing to non-economic qualities of an area that may be important in settlement choice. Another way this type of research would be useful is that it could help researchers understand the time sequence of intra-regional moves, that a two period census study does not provide. It could also help researchers understand if immigrants are following a pattern of stage migration, first moving to ethnic enclaves and then on to other areas, whether they are flying into nodal cities and then moving, or if they are going directly to their choice of destination, and



whether socio-economic characteristics of immigrants may be having a greater effect on this aspect of immigration.

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