

## THE DETERMINANTS OF EARNINGS OF KOREAN IMMIGRANTS IN THE UNITED STATES

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*This paper tries to explain the earnings attainment of Korean immigrants in the Chicago area by combining insights provided by different perspectives, each of which emphasizes a distinct factor: human capital, acculturation, or positions in the labor market. Among others, it is argued that these factors are interactive and therefore the impact of one factor cannot be properly assessed without considering other factors simultaneously. More specifically, while the rates of returns on the investments in human capital and acculturation are positive in the primary labor market, the same is not true in the secondary labor market or in the self-employed segment.*

### INTRODUCTION

The 1965 amendments to the Immigration and Nationality Act removed the restriction on Asian immigrants in the United States. Since these amendments were enacted, Asians have made up 35 percent in 1971-1980 and 45 percent in 1981-1988 of all new immigrants to the U.S. (Keely 1971; Neidert and Farley 1985, p. 849; Jasso and Rosenzweig 1990). Their large-scale immigration has contributed to substantial increases in the Asian-American population, which grew 141 percent between 1970 and 1980. The number of Asian-Americans reached approximately 3.5 million in 1980, or 1.53 percent of all Americans.

What has attracted the attention of journalists, historians, and social scientists, are the educational and economic attainments of this small but growing population. According to research based on the 1980 U.S. Census data, the median incomes of full-time Asian-American workers were higher than those of blacks (\$11,327) and hispanics (\$11,650). Moreover, some Asian-American ethnic groups had a higher median income than that of whites (\$15,572).<sup>1</sup>

Yet the extent to which they have achieved socioeconomic success and the determinants of their achievements are topics of controversy. Some research emphasizes individual characteristics to explain levels of socioeconomic attain-

<sup>1</sup>The 1980 U.S. Census shows some variation of annual median income among full-time Asian-American workers: Asian Indians (\$18,707), Japanese (\$16,829), Chinese (\$15,753), Korean (\$14,224) and Philipinos (\$13,690).

ment, while other perspectives stress the importance of structural opportunities as determinants of earnings and other rewards.

Recent approaches to studying earnings attainment illustrate these diverse perspectives. Human capital theories assert that earnings are primarily determined by the education and work experiences individuals bring to the labor market (Mincer 1974; Becker 1975; Rosen 1977). By investing in these forms of human capital, individuals postpone their earnings, and reduce the length of their working lives but increase their potential productivity in the labor market.

Other studies discuss the influence of cultural assimilation on earnings (Weinstock 1969; Henry 1978). In addition to acquiring job-related skills, immigrants attempt to adjust to their new surroundings. The degree to which their values and behaviors correspond or conflict with those of the host culture may help or hinder economic success.

Finally, structural determinants such as type of employment and positions in the labor market have been used to question the assumption that individual qualifications and attributes basically determine earnings (Doeringer and Piore 1971; Stolzenberg 1975; Hodson 1978). Some studies emphasize the occupational concentration of Asian immigrants, and the positive and negative implications of ethnic ties. On the one hand, ethnic enclaves may provide unique advantages, such as a reliable supply of labor. On the other hand, concentration in peripheral economic sectors, or the secondary labor market, may restrict the opportunities and rewards of Asian-Americans (Hirschman and Wong 1984).

We will focus on the earnings attainment of Korean immigrants by combining different insights from these different perspectives. Korean immigrants are one of the fastest growing immigrant groups in the United States. The 1970 Census reported about 70,000 Koreans. Since then, about 30,000 immigrants have been admitted annually, and the population has increased rapidly. According to the 1980 U.S. Census, 354,593 Koreans were living in the United States (Xenos *et al.* 1980).

These recent Korean immigrants share at least two characteristics with other Asian immigrants. First, they are one of the most highly educated groups. According to Barringer and Cho (1989), 35% of Koreans have completed college education, as compared to about 17% among whites. Estimates based on the 1980 U.S. Census show that their average years of schooling is 14.93 years (Duleep 1988). Second, like other Asian immigrants, Koreans have established their own businesses within ethnic enclaves. Some studies refer to Korean immigrants as a new example of a middle-man minority; Korean immigrants are over-represented in small businesses and sometimes

encounter hostile reactions despite their non-participation in the wage labor market (Bonacich 1973; Hurh and Kim 1984, pp. 21-22; Light 1985).<sup>2</sup> Other studies stress that the small businesses of immigrants tend to be situated in disadvantaged segments of the labor market. Korean immigrants in small businesses work longer hours, have fewer benefits, and earn less than the average U.S. worker (Bonacich *et al.* 1977; Kim 1981; Light 1980).<sup>3</sup>

We will examine the impact of human capital, acculturation, and positions in the labor market on the earnings of Korean immigrants, and provide a more extensive model for Korean immigrants. The hope is that a fuller knowledge of the determinants of Korean immigrants' earnings will help understand both the success and problems faced by other Asian Americans, and will eventually contribute to a fuller understanding of the earnings process in general.

## THEORETICAL FRAMEWORK

### *Human Capital Theory*

#### 1. Education and Work Experience

In a perfect competitive labor market, workers' rewards correspond to their level of human capital (Rosen 1977; Talor *et al.* 1986). Human capital theorists assume that higher levels of education and work experiences positively affect productivity and earnings. Formal education enhances one's ability to make better decisions and formulate career plans. People with higher education are expected to perform their tasks skillfully and efficiently, and contribute to higher productivity. Learning time is less, and errors in performing are fewer among better-educated people (Becker 1975).

In addition, individuals continue to invest in human capital after they complete their formal schooling. Many employers offer on-the-job training to develop new skills or improve old ones. Further job training and accumulated

<sup>2</sup>According to Bonacich, the term of middle-man minority has been used to describe groups such as the Chinese in South Asia, Jews in Europe, and Japanese in the United States who perpetuate an alienated status. Their stranger orientation affects the solidarity and economic activity of the ethnic group. One of the most important characteristics of a middleman minority is their economic role. Concentrated in certain types of occupations, they occupy an intermediate rather than low-status position. Sometimes they are involved in intergroup tensions when their entrepreneurship "buffers elites and mass" (Bonacich 1973, pp. 583-85; Light and Bonacich 1988, pp. 17-20).

<sup>3</sup>Data from the 1980 U.S. Census show that whereas only 6.8% of all workers in the United States are self-employed, a very high percentage (11.9%) of Koreans are self-employed (Light and Bonacich 1988, p. 8).

work experiences are believed to increase an individual's productivity, and consequently have a significant effect on earnings.

According to these assumptions, the human capital of immigrant groups should enhance their opportunity for socioeconomic mobility. Considerable returns to past investments in education and occupational training are well documented. Portes (1981) reports that the level of education upon arrival as well as education acquired in the U.S. have moderate effects on earnings among Cuban immigrants. Nee and Sanders (1985) show considerable effects of education on earnings among Chinese and Philippine immigrants. The U.S. Commission on Civil Rights (1988) also reports a positive impact of education and experience on the annual earnings of foreign-born Japanese, Chinese, Philipinos, Indians, and Koreans in 1980.

## 2. Transferability of Human Capital

One problem, however, is that work experiences and education are not necessarily transferable from country to country (Chiswick 1982). Certain skills or training, while important in one's country of origin, may have lower value in the U.S. labor market. Therefore, in analyzing the role of human capital on immigrants' earnings, it is important to consider where human capital is acquired and how well it transfers to the host labor market. Transferability may vary among immigrants with different levels of human capital.

Moreover, those who have acquired work experiences and education in the U.S. are likely to have an advantage over more recent immigrants. Several studies show that foreign-born immigrants generally earn less than native-born persons right after their arrival, but later the immigrants earn as much as or even more than the native-born persons do. This improvement may be due partly to the immigrants' higher tendency to migrate to areas where their skills will yield higher earnings. It may also be caused by their acquired skills and education in the United States, and more access to information on the labor market through acculturation (Chiswick 1983; McManus *et al.* 1983).

### *Cultural Factors*

A second perspective used to explain earnings suggests that the socioeconomic status of immigrants is related to their degree of acculturation into mainstream society. Cultural assimilation refers to the adjustment or adaptation of immigrants to the cultural patterns of a host society. According to theories of assimilation, industrial organization weakens the traditional influences of kinship and geography on recruitment and promotion (Hirschman and Wong 1984, pp. 584-585). As immigrant groups become geographically, structurally,

and socially integrated with the host society, they gain access to job information and have more opportunities to use their skills in the labor market.

In addition, immigrants may become familiar with habits and attitudes, and experience upward mobility by shedding aspects of their own culture. Traditional values and attitudes are viewed as barriers to integration and socioeconomic achievement (Weinstock 1969; Henry 1978). However, some ethnic groups maintain their cultural identities and heritage even though they achieve socioeconomic success. Psychological adjustments are made without changes in personality structure (Hallowell 1955, p. 309). Strong ethnic identity among immigrants and their later generations does not seem to inhibit attaining high socioeconomic status that is comparable to that of whites (Greeley 1974; Kitano and Daniels 1987; Jiobu 1988). Such evidence suggests the existence of dual culture; an ethnic culture coexists with a host culture where the ethnic group interacts with the dominant group (Jiobu 1988, p. 234).<sup>4</sup>

Moreover, some values of the traditional cultures of immigrants may be highly compatible with those of the host society. Some studies attribute the rapid upward mobility of Asian ethnic groups to the compatibility of their values and behaviors with those of the American middle class (Gaudill 1952; Kitano 1969). Asian immigrants emphasize proper demeanor, a serious attitude toward life, and a firm belief in the importance of education and achievement. These values are likely to contribute to their socioeconomic achievements (Kitano 1969, pp. 111-122; Rose 1985, p. 183).

### *Positions in the Labor Market*

#### 1. Segmentation Approach

According to theories of dual economy, U.S. economy is divided into two basic sectors. The core or monopoly sector is composed of firms which are oligopolistic, capital intensive and profitable. In contrast, the periphery is composed of small firms requiring little capital but racing high competition (Averitt 1968).

Some research has focused on distinctions between two segments of the labor market (Doeringer and Piore 1971). Of several different segments that might constitute different labor markets, we consider only the following three: (1) the primary labor market; (2) the secondary labor market — em-

<sup>4</sup>Kitano and Daniels (1988) discuss that the two most often mentioned variables in studies on patterns of immigrants' adaptation are assimilation and ethnic identity. They suggest a model with four types of assimilation (i.e., high assimilation and high ethnic identity, high assimilation and low ethnic identity, etc.).

ployer segment (the self-employed); (3) the secondary labor market — employee segment. While the primary labor market consists of relatively high-paying, stable, secure jobs, and good working conditions, the secondary labor market consists of low-paying, unstable, unsecured jobs, and poor working conditions. Moreover, within a firm, careers and earnings may be influenced by different opportunities for promotion. Structural characteristics of internal labor markets will affect how wages are determined, and the extent to which mobility is possible.

Self-employment is more in the secondary labor market. Self-employed earnings may be attributed two components, the return to the labor of the self-employed, and the return to the owner's non-labor inputs into the business (e.g., physical capital). In the secondary labor market, there is little investment and little incentive to encourage job stability. Rapid turnover and little cumulative growth in job skills are common (Osterman 1975).

The main point is that career opportunities vary, depending upon the economic sector, labor market segments, or particular career ladders within a firm. Since career opportunities affect earnings, this segmentation has to be explicitly considered in any model dealing with individual earnings.

## 2. Occupational Segmentation Among Immigrants

Asian immigrants are highly represented in some of the most prestigious and best paid occupational categories (e.g., executive, administrative, managerial, and professional specialties) in the primary labor market. According to the 1980 U.S. Census data, whereas just over 23 percent of all other U.S. males are in these three categories, more than 56 percent of Asian Indian males, 38.6% of Chinese, 33.5% of Japanese, and 33% of Koreans are in these occupations (Xenos *et al.* 1987, pp. 273-274).

According to records from Immigration and Naturalization Service (INS) data, half of Asian working immigrants admitted from 1976 to 1980 report professional occupations (Duleep 1988, p. 125). Immigration to these occupations is granted, or admitted by explicit legal provisions, if their credentials are accredited. Human capital and acculturation are the fundamental resources and determinants of the economic mobility of immigrants in the primary labor market (Portes 1981).<sup>5</sup> Some studies of immigrants in these occupations report no evidence of systematic discrimination in salaries or work conditions. Although they experience initial downward mobility relative to their

<sup>5</sup>It does not mean that human capital acquired in countries of origin transfers perfectly. Even though the human capital has positive effects, it is expected that it has smaller effects than human capital acquired in the U.S.

situation in their countries of origin, they are better able to transfer human capital into better-paid jobs.

According to the 1980 U.S. Census data, a higher percentage (11.9%) of Korean immigrants belong to the self-employed category, compared to 6.8% of all workers in the U.S. Self-employment is a distinct pattern among Korean immigrants in the labor market.

Self-employment has been described as a niche, which has enabled the immigrants to successfully transform their marginality into an advantage. Some contend that the exclusion of Asian immigrants from most jobs left them no alternative but to concentrate on self-employment (Light 1972). Bonacich (1973) contends that the structural position of the 'sojourner community' gives rise to ethnic solidarity, promotes the building of an ethnic economy and perpetuates orientation to middleman roles. Others show that the legal status and language difficulties also contribute to a higher proportion of Asian immigrants in self-employment (Jasso and Rosenzweig 1990).

Finally, human capital of immigrants is irrelevant in the secondary labor market because individual attributes such as education and job training are less useful. Given the nature of occupational tasks in the secondary labor market, cheap labor is valued more highly than formal work skills (Portes 1981).

## HYPOTHESES

These reviews suggest the following hypotheses.

**HYPOTHESIS 1:** *The higher the investment in human capital, the higher individual earnings.* Education and work experiences improve one's know-how and his/her ability to make better decisions, and to perform tasks more productively. As a consequence, they contribute to positive outcomes in the labor market.

**HYPOTHESIS 1a:** *The rate of returns to investment in human capital is higher in the primary labor market than in the other two labor market segments.* Although human capital increases an individual's earnings in the labor market, its effect is different in each labor market segment. Specifically, the returns in the primary labor market are expected to be higher than those in other labor market segments. In the primary labor market, relatively well-defined career structures exist. Human capital is widely used to mediate individual access to the structure. In contrast, individual human capital is less influential in the secondary labor market since occupational opportunities are restricted. Also, the extent to which human capital explains variations in earnings among the self-employed and the secondary labor market will be

different since the earnings of the self-employed are determined to a large extent by their non-labor inputs, such as physical capital.

*HYPOTHESIS 2: Acculturation has a positive effect on earnings. Through acculturation immigrants can increase social contact with other people and acquire job information. this provides better opportunities to use their human capital in the labor market.*

*HYPOTHESIS 2a: The effect of acculturation on earnings in the primary labor market is greater in the primary labor market than in the other two segments.* Since there are more occupational opportunities in the primary labor market than in the other segments, Korean immigrants in the primary labor market are expected to have a higher chance to utilize job information and social contacts.

*HYPOTHESIS 3: Human capital acquired in the U.S. has a more effect on earnings than human capital acquired in Korea.* The labor market of a society has its own characteristics. Human capital acquired in the country of origin may be more reflective of the labor market of that country. Thus, immigrants from a different society will encounter some difficulty in transferring their human capital into the labor market of the country of destination. We can generally expect that human capital acquired in Korea has a less effect than human capital acquired in the U.S.

*HYPOTHESIS 4: The greater the human capital, the greater the degree of acculturation.* Human capital improves individuals' abilities and know-how, decision-making and work performance in the labor market. If we assume that acculturation facilitates social contacts, provides more information on the labor market, and increases their earnings, immigrants who can make better decisions are more likely to be acculturated. Therefore, we also expect a positive effect of human capital on acculturation.

Furthermore, individuals who made a greater investment in human capital will have greater incentive to make these investments transferable to the market situation of the host society.

*HYPOTHESIS 5: Ethnic identity has a weak relationship with acculturation and no effect on the earnings of Korean immigrants.* This statement is derived from the dual culture theories which assert that the acculturation of an immigrant does not mean the shedding of his/her core values and attitudes. Thus, retention of ethnic identity does not always lead to lower outcomes in the labor market despite positive effects of acculturation on earnings. This hypothesis will be tested by examining the relationship between acculturation and ethnic identity, and effects of ethnic identity on earnings.



## DATA, MEASUREMENT, AND METHODS

### *Data Source and Sample*

The data set originally comes from a study of Korean immigrants in the Chicago Area by Hurh and Kim (1990). The sampling consisted of two steps. After compiling a list of 11,726 Korean households, a random sample of 1,000 households was made. One adult member of each household was chosen and these individuals were interviewed. The total number of completed interviews is 622 (Hurh and Kim 1990, p. 460). The questionnaire contained, among other items, language usage, friendship patterns, job satisfaction, business operation, some background variables (e.g., education, occupation, age, sex, etc), and so on. This research deals with 535 respondents who were working and had income in 1985.

The data have some limitations. First, there are few immigrants with a very long residency. Most of the people surveyed (65.9%) immigrated to the U. S. within the past 10 years. Second, the data covers only the Chicago metropolitan area, which has the third largest population of foreign-born Koreans. To be precise, the results from this study should be interpreted as applicable to the case of Korean immigrants in the Chicago area.

### *Measurement*

#### 1. Human Capital

In order to measure human capital, working experiences and level of formal education are selected. Working experiences are estimated in a manner identical to that found in Tolbert *et al.* (1980) and Chiswick (1982), where the proxy for work experiences is used, based on the respondents' education, years of residence in the U.S., and age. Each measure includes two variables according to where these forms of human capital are acquired, i.e., Korea and the U.S. Work experiences in Korea (EXPK), are estimated by age minus number of years of schooling in Korea minus years of residence in the U.S. minus seven years. Work experiences in the U.S. (EXPU) are measured by the number of years of residence minus years of schooling in the U.S. Education in Korea (EDUCK) and the U.S. (EDUCU) are measured by total years of schooling in Korea and the U.S., respectively.

#### 2. Cultural Factors

In this study, the acculturation of new immigrants is viewed as the process by which they modify their attitudinal and behavioral patterns in order to

maintain and improve their life conditions in a manner that is compatible with the new environment (Gordon 1964, p. 77; Hurh and Kim 1982, p. 73). Based on acculturation research on ethnic groups,<sup>6</sup> acculturation index (ACC) is constructed as a weighted sum of several variables: 1) language usage (subjective evaluation<sup>7</sup> of fluency in English speaking, writing and reading, and performance and objective words test);<sup>8</sup> 2) cultural exposure (time spent in reading English newspapers and magazines); and 3) ethnic interaction (dichotomous variable reflecting whether or not one attends American organizations).<sup>9</sup>

Ethnic identity is defined as a preservation of Korean values, and social ties with other Koreans. Although there may be many different Korean values, values considered in this study are "family-oriented." For example, the Confucian ethic that has provided a moral base for behavior is the importance of order within the family.<sup>10</sup> Priority is given to family need, rather than personal interest. Even the relations of general people or subjects to sovereign are considered in terms of an extended type of family (Kim 1983, pp. 24-25). Therefore, familism may be considered as an aspect of Korean values.

Five variables (i.e., sex-role, family hierarchy, importance of relationship with parent, and support of old parents) are selected for estimating familism (FAM).<sup>11</sup> Social ties with other Korean (SOCT) is measured by attendance at Korean ethnic organizations.

### 3. Positions in the Labor Market

Three positions considered relevant in the theoretical framework (namely,

<sup>6</sup>The Acculturation Rating Scale for Mexican Americans consists of 20 items designed to measure acculturation such as language familiarity, usage, and reference; ethnic identity; cultural exposure; and ethnic interaction (Cuellar *et al.* 1980; Gutierrez *et al.* 1989). The Suinn-Lew Asian Self-Identity Acculturation Scale is basically founded on ARSMA. This scale is composed of 21 multiple choice questions which cover language, ethnic identity, friendship choice, behaviors, generation attitude (Suinn *et al.* 1987). Campisi scale is five-point Likert type scale. Its sub-scales are measures of associations, language usage, self-perception, food habits, desire to be acculturated, and group identification (Weinstock 1969, pp. 50-52).

<sup>7</sup>There are several ways to measure the proficiency of English. For the problems in each measuring method, see Hurh and Kim (1984).

<sup>8</sup>For more discussion on returns to English language-skill of immigrants, see Jasso and Rosenzweig (1990).

<sup>9</sup>Loadings of all these items in principal components factor analysis exceed .78 and the first factor explains 75 percent of the common variances. Internal consistency, measured by Cronbach's alpha is .68.

<sup>10</sup>It includes three principles on the relationship of the sovereign and subjects, father and son, and husband and wife (Kim 1977, pp. 68-69).

<sup>11</sup>Only one factor is extracted. Loadings of all the items exceed .59. Internal consistency, Cronbach's alpha is .59.

the primary labor market, secondary labor market—employer, and the secondary labor market—employee) are identified by information about the ownership of businesses and about the occupation. Those who are not self-employed are divided into the primary and secondary segments according to whether they hold occupational title that are mainly found in the primary sector—executive, administrative, managerial, professional, and technical positions. Therefore, the primary segment does not exactly correspond to the primary labor market as defined in the literature.

#### 4. Earnings

As a dependent variable, earnings are measured by earnings in 1985. The original variable is coded in 21 categories, ranging from under \$5,000 to \$100,000 and over. It is converted to a continuous variable by recoding categories into mid-points, and using \$102,500 for the top category. To consider the log form of earnings functions which is widely used in social science, logarithmic transformation (LNEARN) is introduced. There are some reasons for using such a function. Earnings have been found to follow the log normal distribution more closely than the normal distribution. Heckman and Polachek (1974) provide statistical evidence that the log earnings function fits earnings data better than the linear function or other power functions of earnings. Mincer (1974) also argues that the relative difference of earnings is more important in studies on earnings than the absolute difference of earnings (dollar) among workers.

#### *Statistical Model of Earnings*

The basic model to be estimated derives from our earlier theoretical explanation. Three variables are considered endogenous: earnings (N), acculturation (K), and ethnic identity (T), while four variables pertaining to human capital (work experiences in Korea, education in Korea, work experiences in the U.S., and education in the U.S.) are considered exogenous. Our specification of causal order is based on the assumption that human capital is a relatively stable variable, the acquisition of which is mostly accomplished before one acquires ethnic identity in a host society or the acculturation process is completed. The relationship between acculturation and ethnic identity is considered non-causal. In order to assess the interaction between individual characteristics and positions in the labor market, the relative effect of human capital and acculturation on immigrants' earnings across the labor market segments are examined. Each subgroup is simultaneously analyzed according to a LISREL model with the parameters of human capital and acculturation treated differently. The following equations are estimated.

(1) *Assumptions about structure of relationship:*

1a.  $K = Xa + u_k$

1b.  $T = Xb + u_T$

1c.  $N = Xc + Kd + Te + u_N$

where  $K$  is a measure of acculturation (ACC),  $T$  is a measure of ethnic identity (FAM, SOCT),  $N$  is a measure of earnings, and  $X$  is a vector of human capital variables (EXPK, EDUCK, EXPU, and EDUCU).  $a$ ,  $b$ ,  $c$ ,  $d$ , and  $e$  are the vectors of coefficients.  $u_k$ ,  $u_T$ , and  $u_N$  denote vectors of random errors with means zero and constant variances, and are assumed to be independent of the exogenous variables.

(2) *Hypotheses about the invariant effects across groups:*

2a.  $a | 1 = a | 2 = a | 3$

2b.  $b | 1 = b | 2 = b | 3$

2c.  $e | 1 = e | 2 = e | 3$

where 1, 2, and 3 indicate the primary labor market, the self-employed, and the secondary labor market, respectively.

(3) *Hypotheses about relative magnitude of coefficients:*

3a.  $c | 1 > (c | 2 ? c | 3)$

3b.  $d | 1 > (d | 2 ? d | 3)$

where ? indicates no definite ordering.

(4) *Hypotheses about relationship between acculturation and ethnic identity:*

4.  $\text{Cov}(u_k, u_T) = 0$

where Cov denotes covariance operator. Significant negative covariances between acculturation and ethnic identity mean that acculturation leads to shedding ethnic identity.

This initial statistical model to be estimated is specified by the assumptions contained in (1), and the hypotheses stipulated in (2) above. The hypotheses elaborated in (3) and (4) require the examination of the magnitude and direction of estimated parameters under the statistical model.

## ANALYSIS AND INTERPRETATION

*Positions in the Labor Market and Individual Attributes*

Table 1 presents the means and standard deviations of the variables used in our main analysis for each labor market segment. As expected, Korean immigrants in the primary labor market earn considerably more than those in the self-employed and the secondary labor market. The mean earnings in the primary labor market is \$21,162.80 ( $= e^{9.96}$ ) whereas the means of earnings in the self-employment and the secondary labor market are \$9,228.02 ( $= e^{9.13}$ ) and \$8,777.97 ( $= e^{9.08}$ ), respectively.

TABLE 1. CHARACTERISTICS OF KOREAN IMMIGRANTS BY POSITIONS IN THE LABOR MARKET

Variable	Primary Labor Market		Self-Employed		Secondary Labor Market	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
LNEARN	9.96	0.72	9.13	1.01	9.08	0.88
EXPK	8.53	6.15	15.48	9.24	17.89	12.94
EDUCK	15.36	2.82	14.13	2.9	12.45	3.26
EXPU	9.03	4.99	8.41	5.24	5.73	4.43
EDUCU	1.80	2.28	0.75	1.68	0.68	1.69
ACC	49.76	12.73	37.82	15.81	27.85	17.42
FAM	11.31	2.22	12.19	2.39	12.42	2.17
SOCT	1.44	2.25	1.25	2.02	1.16	1.76
	N = 153		N = 111		N = 220	

LNEARN = Log of Earnings; EXPK = Work Experiences in Korea;

EDUCK = Education in Korea; EXPU = Work Experiences in the U.S.;

EDUCU = Education in the U. S.; ACC = Acculturation Index;

FAM = Familism Index; SOCT = Social Ties with Other Koreans.

The immigrants in the primary labor market also show higher levels of human capital both in Korea and the U.S. (except work experiences in Korea), and higher level of acculturation. Their means of education in Korea and the U.S. are 15.36 years and 1.80 years, respectively. The mean of work experiences in the U.S. is 9.03 years. The degree of acculturation is also the highest (49.76).

Overall, the human capital of the immigrants in the self-employed category is higher than that of immigrants in the secondary labor market. The immig-

rants in both labor market segments have less than one year of education in the U.S. on the average. The self-employed immigrants also show a higher degree of acculturation than do immigrants in the secondary labor market.

Although the analysis shows differences between labor market segments with respect to human capital and acculturation, there is no meaningful difference in ethnic identity.

### *Testing of the Model of Earnings*

The statistical model specified above and a series of related models are estimated by the maximum likelihood method with the assumption of multivariate normality. Descriptions and goodness-of-fit measures ( $L^2$ , likelihood chi-square) are presented in Table 2. The goodness-of-fit statistics are measures of the overall fit of models in all groups by multi-group LISREL analysis (Jöreskog and Sörbom 1985).

**TABLE 2. FIT STATISTICS AND DEGREES OF FREEDOM FOR MODELS OF KOREAN IMMIGRANTS' LOG EARNINGS**

Model	$L^2$	df	P
1. No Constraints on $v_1, v_2, v_3, v_4, v_5$	38.30	35	.104
2. Equality Constraints on $v_1$	39.70	37	.099
3. Equality Constraints on $v_2$	76.86	37	.001
4. Equality Constraints on $v_3$	68.11	37	.000
5. Equality Constraints on $v_4$	86.93	37	.000
6. Equality Constraints on $v_5$	65.59	37	.003
7. Equality Constraints on $v_1, v_2, v_3, v_4, v_5$	90.55	45	.000
1. vs. 2.	1.40	2	.497

$v_1$  = Work Experiences in Korea;  $v_2$  = Education in Korea;

$v_3$  = Work Experiences in the U.S.;  $v_4$  = Education in the U.S.;

$v_5$  = Acculturation.

Model 1 represents the hypothesis of the heterogeneous effects of human capital and acculturation on earnings attainment across the labor market segments. Not only effects of human capital ( $v_1, v_2, v_3, v_4$ ), but also effect of acculturation ( $v_5$ ) on earnings are assumed to be heterogeneous across labor market segments. The model is accepted at the .05 level of significance.

The contrasting model in which market segments are assumed to have no effects (or that the coefficients do not vary across the segments) is rejected as shown in Model 7.

The Models 2 through 6 are presented as a means of searching a more parsimonious model. As these models are constructed after the examination of Models 1 and 7, the associated significant tests cannot be taken at face

value. These models are presented here in order to anticipate objectives of those who might expect that market segmentation does not exist.

If one were to use the conventional criteria, Model 2 does fit the data, and represents a more parsimonious model than Model 1. This model, therefore, can be considered as a new hypothesis to be tested in the future. What is evident is that most of the hypothesized differences across the different labor markets do exist.

### *Examination of the Estimated Parameters*

This section consists of a subgroup comparison of parameters across labor market segments estimated under Model 1. The coefficients are shown in their unstandardized form. In a comparative study, unstandardized coefficients are preferred since differences across groups can be influenced by standardization using group-specific means and standard deviations, and standardization results in a loss of plenty of information on parameters of each group (Kim and Ferree 1981).

Table 3 presents effects of human capital on acculturation and ethnic identity, and relationship between acculturation and ethnic identity. Education in Korea, experiences in the U.S., and education in the U.S. have positive effects on acculturation as anticipated. This supports the earlier findings of the positive effect of education on acculturation (Richmond 1981; Arc and Torres 1983). However, work experiences in Korea have a negative effect on acculturation. Since work experiences in Korea are crudely measured by age and other variables, this result is probably due to the confounding effect of

**TABLE 3. EFFECTS OF HUMAN CAPITAL ON ACCULTURATION AND ETHNIC IDENTITY, AND RELATIONSHIP BETWEEN ACCULTURATION AND ETHNIC IDENTITY: COEFFICIENTS AND ABSOLUTE T-VALUES**

	Acculturation	Familism	Social Ties
Work Experiences in Korea	-.730(8.67)**	-.003(1.00)	.000(1.45)
Education in Korea	7.233(6.27)**	-.011 (.28)	.021 (.55)
Work Experiences in the U.S.	1.613(4.67)**	.065(4.86)**	.007(2.50)*
Acculturation		37.967 (.73) <sup>a</sup>	1.250(1.11) <sup>b</sup>

<sup>a</sup>Covariance between Acculturation and Familism.

<sup>b</sup>Covariance between Acculturation and Social Ties with Other Koreans.

\* $P < .05$ . \*\*  $P < .01$ .

age at arrival on acculturation (Richmond 1981). On the whole, this result supports our Hypothesis 4 about the positive effect of human capital on acculturation and the effect does not vary across the labor market segments.

As for ethnic identity, human capital does not have any significant effect on familism or social ties with other Koreans. The result does not support the argument that education has a negative effect on attendance at ethnic organizational activities (Richmond 1981).

The covariances between ethnic identity and acculturation are not significant. Previous research suggests that immigrants are more likely to shed their ethnic identity as they are acculturated (Henry 1978; Richmond 1981). Although the relationship is in the same direction, it is not statistically significant.

Table 4 presents effects of human capital, acculturation, and ethnic identity on earnings for each labor market segment. The effects of human capital and acculturation on earnings are different across the market segments as hypothesized.

TABLE 4. EFFECTS OF HUMAN CAPITAL, ACCULTURATION, AND ETHNIC IDENTITY ON LOG EARNINGS: COEFFICIENTS AND ABSOLUTE T-VALUES

	Primary Labor Market	Self-Employed	Secondary Labor Market
Work Experiences in Korea	-.001 (.83)	-.003(2.14)*	-.001(2.17)*
Education in Korea	.020(3.80)**	-.004 (.21)	.006 (.91)
Work Experiences in the U.S.	.026(4.12)**	-.000 (.02)	.011(4.04)**
Education in the U.S.	.013(2.16)*	-.015 (.45)	-.016(1.27)
Acculturation	.002(2.35)*	.000 (.18)	.000 (.27)
Familism	.003 (.70)	-	-
Social Ties with Other Koreans	.032(1.22)	-	-
R <sup>2</sup>	.331	.059	.133

\* $P < .50$ . \*\* $P < .01$ .

Human capital and acculturation are important for determining earnings in the primary labor market. The returns to these individual attributes are substantially greater for the primary labor market than for the other segments as anticipated in Hypothesis 1a. Our results support Portes's (1981) argument that immigrants in the primary labor market find opportunities to translate



past human capital investments and knowledge to the host society and find better-paid employment.

Among the self-employed, human capital does not have a significant positive effect on earnings. Work experiences in the U.S. are associated with higher earnings in the secondary labor market, although the amount of return is less than that in the primary labor market.

The returns to acculturation are also different. In the primary labor market, there is a moderate effect of acculturation on earnings. Among the self-employed and the secondary labor market, there is no significant effect of acculturation on earnings. This result supports Portes's (1981) argument that acculturation has no effect on earnings in the secondary labor market.

Work experiences in the U.S. have more effect on earnings than those acquired in Korea. On the other hand, education in the U.S. has less effect than that acquired in Korea. The lower returns to education in the U.S. may be caused by the fact that there are insufficient numbers of Korean immigrants who have acquired education in the U.S.

Although the coefficients for the familism index and social ties with other Koreans have negative signs, they are not statistically significant.

## SUMMARY AND DISCUSSION

By considering the simultaneous operation of individual attributes and positions in the market, we have shown that individuals with the same level of human capital and acculturation might find different opportunities to transfer those attributes into earnings because they occupy different positions in the labor market.<sup>12</sup> In general, investments in human capital produce greater returns in the primary segment than in the other two segments.

This study also reveals: 1) that work experiences acquired in the U.S. have a more impact on earnings than those acquired in Korea; 2) that education in Korea, work experiences in the U.S., and education in the U.S. positively affect acculturation; 3) that ethnic identity does not have a significant negative relation with acculturation; and 4) that ethnic identity has no effect on earnings.

The flow of Asian immigrants into the primary labor market is important. Most of Asian immigrant groups are highly represented in the primary labor

<sup>12</sup>It might be misleading to interpret that all differences of returns to individual attributes across labor market segments are due to positions in the labor market. Immigrants with lower human capital and acculturation are likely to be located in non-primary labor markets. That is, there would be an effect on our results, which comes from this "nonrandom" distribution of individual attributes across labor market segments.

market. Their relative high earnings may be due to their high concentration in the primary labor market, whereby the immigrants find opportunities to transfer investments in human capital into earnings.

Among the Asian immigrants, the self-employed represent another distinct labor market segment. Human capital does not play an important role in earnings attainment. However, other factors, such as physical capital, family, and ethnic solidarity which are not specified in our study may have important effects on their earnings.

Physical capital is a necessary resource for opening small businesses and will be an important influence on the earnings of the self-employed. Another important factor may be the role of family among the self-employed. Considering the small scale of most immigrant businesses, non-paid family workers are expected to be common. It will be hard to distinguish their work effort from that of the owner. Ethnic solidarity is also expected to influence earnings of the self-employed. Close ties provide the self-employed immigrants with unique economic opportunities, such as a rotating credit system (Light 1972).

This study has several limitations. First, since it is based on Korean immigrants, the results have restricted implications for the earnings attainment of Asian immigrants in general. Comparative studies will be more useful. Second, some potentially important variables, such as sex and marital status, are not explicitly controlled.<sup>13</sup> Thus, in future research, it will be necessary to incorporate these variables into the analysis to obtain more accurate results even though their effects on earnings attainment are not of primary interest.

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<sup>13</sup>In order to examine whether sex differences have an impact on earnings attainment, we analyzed the male sample of our data. The analysis yields similar conclusions. The returns to human capital and acculturation across labor market segments are heterogeneous.

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