

**LABOR MARKET STRATIFICATION AMONG ASIAN IMMIGRANTS IN THE
UNITED STATES**

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ABSTRACT

Because of changes in the labor market, occupations within both the mainstream and the ethnic economy has become more heterogeneous and stratified among Asian immigrants in the United States. In this paper, I draw upon a labor market segmentation perspective and disaggregate the mainstream and ethnic economies into primary and secondary segments, and assess what factors affect employment in each. Using data from the 2000 Census, I find that a significant portion of occupations within the ethnic economy fall into the primary segment. While those who work in the ethnic primary segment have completed fewer years of schooling than those in the mainstream primary segment, years in the United States and English proficiency do not significantly distinguish between employment in the mainstream primary and ethnic primary segments. However, those that work in the ethnic secondary sector have significantly lower levels of all human capital measures than those that work in the mainstream secondary sector. In addition, family formation has less of a negative effect on employment in the ethnic secondary segment than in other segments of the labor market.

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In the second half of the twentieth century, and even more so between since 1990, the flow of immigrants to the United States has shifted away from European countries and is now primarily from Asian and Latin American countries. Once in the United States, members of Asian groups tend to be spatially concentrated in a limited number of metropolitan areas. A result of residential concentration that has received much attention is the tendency for many Asian immigrants to concentrate in specific occupations and/or industries and the development of an ethnic economy that co-exists alongside the mainstream labor market.

Prior to 1965, when immigration from Asian countries was a mere trickle, and new arrivals were primarily from European countries, a strong manufacturing industry in the United States provided opportunities in the mainstream labor market for new immigrants. In the latter half of the 20th century, jobs in manufacturing industries dwindled, and the labor market became bifurcated with an increase both in professional occupations and low-wage service segment occupations. This economic restructuring has made it more difficult for low-skilled and less-educated workers to find employment in stable, high-quality jobs, particularly among more recent immigrants.

More recently, the Immigration Act of 1990 increased total immigration to 700,000 per year and expanded the number of immigrant visas sponsored by employers to 140,000 per year from 54,000. The largest categories include advanced professionals and those with extraordinary or exceptional ability, professionals and skilled workers. This resulted in an increase of professional immigrants, particularly within high-tech industries. Because of the changes in the labor market and changes in immigration policies, the ethnic economy can no longer be seen as consisting only of low-wage service sector occupations. In addition, in terms of human capital and work skills they bring to the United States, recent immigrants are more diverse than ever. Today's immigrants have

either very high or very low levels of education. The larger ethnic economy is more heterogeneous than in the past; therefore, when studying the predictors and consequences of ethnic economy employment, a simple comparison of the ethnic economy to the mainstream economy is no longer adequate.

While the consequences of the ethnic economy have received much attention, there is surprisingly little research on what predicts ethnic economy employment, particularly among non-entrepreneurs. A handful of studies investigate what predicts ethnic entrepreneurship among immigrants, and even fewer studies examine the workers themselves (see e.g., Portes and Jensen 1989; Zhou 2004). This paper examines the labor market stratification of Asian immigrants in the United States and investigates the mechanisms through which first-generation Asians are stratified into various labor market segments. In particular, I assess the impact of demographic and human capital characteristics on employment in the ethnic and mainstream economies, and in the primary and secondary segments within each.

Labor Market Segmentation

According to human capital theory (Becker 1962), differences in skills (gained through work experience, training, and ability) determine an individual's capacity for productivity, which determines wage rates. Traditional economic theories of labor markets assume that the labor market is homogenous in nature and that individual earnings are based on productivity and human capital. Sociological theories of the labor market, on the other hand, criticize this assumption and observe that job structures differ. Not all jobs provide the same returns to human capital. Instead, labor markets are segmented and the segments are qualitatively different from each other. In addition, there is a process that determines the segment in which individuals are employed, which is related to

the reward attainment process (Lang and Dickens 1988; Eliason 1996). Further, there are barriers to mobility between segments (Kalleberg and Sorensen 1979).

For the purposes of this study, I consider the primary and secondary segments of the labor market. The primary segment of the labor market is comprised of a series of internal labor markets, whereas jobs in the secondary segment are not protected from market competition. The primary segment offers substantial advantages to its workers, such as built-in career ladders and opportunities for mobility. The primary segment utilizes labor that requires more general and specific training, whereas the secondary segment requires simpler, more menial, and more repetitive labor (Doeringer and Piore 1971; Piore 1970; Piore 1986). In addition, jobs in the primary segment often offer higher wages, greater opportunity for advancement, and better fringe benefits (Bluestone et al. 1973; Doeringer and Piore 1971; Piore 1970; Piore 1986). The secondary segment, on the other hand, typically lacks opportunities to attain new skills necessary for career advancement. Jobs in the secondary segment tend to be characterized by low wages, job instability, harsher discipline, and poor working conditions. Because of these differences, proponents of a segmented labor market perspective argue that labor market segment affects wages above and beyond the characteristics of the individuals employed within each segment.

The secondary segment benefits from the increasing waves of low-skilled immigrants. Immigrants and other minority groups are disproportionately represented within the secondary segment of the labor market (Piore 1986). Given the barriers to mobility between segments, it is extremely difficult to move from secondary jobs to primary jobs. Therefore, it is important to study how individuals enter each segment of the labor market. This is especially crucial for new immigrants. Because they did not grow up in the United States and have less work experience, they are more likely to be unfamiliar with hiring practices and job search avenues.

In the immigration literature, it is almost assumed that immigrants with high levels of human capital work in the primary segment of the mainstream labor market, and those with low levels of human capital work in the secondary sector of the labor market or within the ethnic economy. There is little empirical evidence, however, that this is actually the case. If a primary segment of the ethnic economy exists, it could reasonably be expected that not all immigrants who work in the ethnic economy have low levels of human capital. Therefore, we need to better understand the nature and extent of differences between mainstream primary and ethnic primary workers and what differentiates mainstream secondary workers from ethnic secondary workers.

Prior Research on the Ethnic Economy

While much research on the economic incorporation of immigrants has focused on the advantages and/or disadvantages of employment in the economic enclave (e.g. Portes and Bach 1985; Wilson and Portes 1980; Bailey and Waldinger 1991; Zhou 1992; Zhou and Logan 1989; Sanders and Nee 1987), Light et al (1994) suggest that research on the economic incorporation of immigrants should move beyond the economic enclave and focus on the broader ethnic economy defined by Bonacich and Modell (1980) to include the self-employed and their co-ethnic employees . Most immigrant groups have an ethnic economy, but few have an enclave economy. Thus, Light and his colleagues argue that the enclave model's imposition of locational constraints can be too limiting and that studying only enclaves ignores the larger part of immigrant economic adaptation. For the purposes of this study, I utilize this broader concept of the ethnic economy and focus on what Light and Gold (2000) term the "ethnic ownership" economy, which is comprised of industries in which there is an over-representation of co-ethnic owners. Doing so allows me examine the incorporation of Asian immigrants into the broader ethnic economy versus the mainstream economy.

The ethnic economy can be viewed as a positive mode of incorporation for new Asian immigrants for a number of reasons. By providing job opportunities that may not be available in the mainstream labor market, the ethnic economy may help to lower unemployment and poverty rates. In addition, ethnic business concentrations may help to maintain ethnic solidarity, which helps new immigrants adapt to their host society. Even though many jobs in the ethnic economy are characterized by low wages, solidarity among co-ethnics may enhance occupational mobility (e.g. Bonacich and Modell 1980; Portes and Bach 1985; Zhou 1992) and may lower the probability of joblessness among immigrants who are not fluent in English (Wilson 1999; Wilson 2003). Waldinger (1996) suggests that an ethnic niche is “the principal mechanism by which ethnic groups move into and up the economy,” (p. 59). Ethnicity can act as a prerequisite for, rather than a barrier to, employment and promotion.

On the other hand, an ethnically divided workforce can have social costs. Industrial and occupational segregation may slow the assimilation process. According to a classical assimilation perspective, this hampers the eventual economic success of those immigrant groups in the United States. In addition, the ethnic economy may provide job opportunities, but those opportunities are not necessarily good. Ethnic jobs are often characterized, both in public and academic discourses, as exploitative, low-wage jobs with long hours and poor working conditions. They can be seen as just another form of cheap labor; this time, however, it is the exploitation of workers by co-ethnics rather than members of other ethnic groups.

Researchers that focus on the broader ethnic economy rather than the economic enclave also find that the advantages of the enclave do not always exist within industries and/or occupations with ethnic concentration. Counter to the predictions of the enclave approach, Wilson (2003) finds that, overall, working in one’s own ethnic niche increases the probability of being jobless. In addition, he finds that individuals who speak English poorly are less likely to be jobless if they work

in an ethnic niche. This could be a potential benefit to recent immigrants of working in ethnic economies. Logan, Alba, and Stults (2003) distinguish between industries in the ethnic economy in which there are co-ethnic concentrations of workers (employment niche), co-ethnic concentrations of owners (entrepreneurial niche), and co-ethnic concentrations of both owners and workers (enclave). They find mixed returns for ethnic economy employment, and that benefits of working in the ethnic economy are not consistent across ethnic groups.

Limitations of Prior Research

Research on ethnic economies illuminates their prevalence and highlights their potential benefits and downfalls. However, these studies fail to make use of the theoretical and methodological advancements made in labor market stratification research. Even though the enclave-economy model developed from a segmented labor market framework, research on the ethnic economy often ignores the key assumption that the mainstream economy is not homogenous in regard to processes of hiring and reward attainment. While Logan et al (2003) carefully differentiate various segments within the ethnic economy by distinguishing between entrepreneurial niches, employment niches, and enclaves, they do not compare them to different segments within the mainstream economy except to differentiate between the public and the private segments. Zhou and Logan (1989) distinguish between owners and workers within the enclave, but both of these groups also exist within the primary and secondary segments of the labor market. In addition, studies using residential or place-of-work definitions of economic enclaves (e.g., Sanders and Nee 1987) cannot separate work in the primary and secondary segments of the labor market.

Some researchers have tried to distinguish between primary and secondary segment employment in the mainstream economy, but use crude measures of each. Wilson and Portes (1980) for example, used firm size. Portes and Bach (1985) and Model (1992) use ethnic composition to distinguish between primary and secondary segments, by distinguishing mainstream secondary

employment as industries that have an over-representation of Anglo employers and an over-representation of minority employees, and primary segment employment as industries that have an over-representation of Anglo employers and employees. Unfortunately, this operationalization of the primary and secondary segments does not incorporate important theoretical differences between the primary and secondary segment discussed in the segmented labor markets literature. Rather than differentiation by occupational or industrial characteristics, the segments of the labor market are delineated by ethnicity. One cannot assume, however, that all industries where ethnic minorities are concentrated offer only secondary segment jobs or, conversely, that only industries with primarily Anglo owners and Anglo workers provide primary segment jobs.

In addition to these problems of operationalization of the primary and secondary segments in the mainstream labor market, these studies also fail to distinguish between various segments within the ethnic economy. It should not be assumed that jobs within the ethnic economy or the ethnic enclave are homogenous, and they should not be treated as such in empirical comparisons to the mainstream economy. I argue that, like the mainstream labor market, the ethnic economy is also segmented into primary and secondary segments, and this needs to be taken into account before assessing the consequences of employment in the ethnic economy.

Description of Data Used in Part I

In Part I of this study I use data from the 2000 U.S. Census 5% Integrated Public Use Microdata Series (IPUMS) developed at the University of Minnesota by Ruggles et al (2004) to examine patterns of participation in the ethnic economy among Asian immigrants. The majority of Asian immigrants in the United States cluster in large metropolitan areas, and most establish economic niches in these areas, regardless of whether or not they establish ethnic enclaves. To assess the impact of the ethnic economy among these groups, I utilize data from Metropolitan Areas

in the United States where the proportion Asian is twice the proportion in the United States as a whole (at least 7.2 percent). These include Los Angeles-Long Beach, Orange County, San Francisco, Oakland, Sacramento, San Diego, Seattle-Tacoma, New York City, Northeastern New Jersey, and Washington, DC. Fifty-four percent of Asians in the United States live in these metropolitan areas.¹

To determine which industries are ethnic economies, I use data from the 5% IPUMS and select those individuals ages 25-64 who are employed. For subsequent analysis to examine the labor market segment selection process and reward attainment, I include first-generation (not born in the United States) Chinese, Korean, Vietnamese, Japanese, Filipino, and Asian Indian immigrants. In my analysis, I include those who are between the ages 25 and 64, are not currently enrolled in school and do not work in the military or public segment. Because the sociological debate asks whether or not the ethnic economy is detrimental for workers rather than employers, I exclude respondents who are self-employed in this analysis. This yields an analysis sample size of 79,213 Asian immigrants. To conduct the analyses, I use information on socioeconomic and demographic characteristics, labor force participation, employer, and industry. Below, I provide a brief discussion of variables and their construction. Table 1 shows weighted descriptive statistics for these variables, for the full sample, and separately by labor market segment.

Dependent Variable

The dependent variable in this study is labor market position. The measurement of labor market position is complex and is accomplished by first categorizing respondents as employed or

¹ While Fresno, Stockton-Lodi and Yuba City have a very high proportion of Asians, they are not included in the analysis because of their relatively small population sizes, and while Honolulu has the highest concentration of Asians in the United States, I have excluded it here. Since Asians are the majority population in Honolulu, I believe that Asian ethnic economies operate differently there than in other metropolitan areas where Asians are an ethnic minority. In other metropolitan areas of the country, the proportion of Asian is so small that distinguishing ethnic economies would be difficult. In addition, the metropolitan areas in my analysis sample have a concentration of more than just one or two Asian groups.

not employed. The “not employed” category includes those who are unemployed and looking for work, and those who are out of the labor force. Next, I differentiate between the ethnic and the mainstream economies, and last, I distinguish primary segment from secondary segment jobs.

Ethnic Economy

In this paper, I use a broad definition of an ethnic economy, including industries in which there are over-representations of a specific ethnic group as owners.² Two hundred sixty-five categories were constructed by the Census. In order to avoid having sparsely populated cells, I collapse these fully-detailed three-digit-code categories into 94 categories classified by their two-digit industry codes. An individual is in an ethnic sector if he or she is employed in an industry in which there is an over-representation of employers or self-employed individuals of the same ethnicity as the respondent. Within each metropolitan area, I determine over-representations following the method of Logan, Alba and McNulty (1994).³ Odds ratios are calculated for owners, which represent the odds of a group member being an employers or self-employed in one sector, versus being an employer or self-employed in another sector, to the odds of another group member being an employer or self-employed in that sector. If odds ratios are greater than 1.5 for owners in a given industry, individuals are considered to work in an ethnic industry.⁴

An advantage of this operationalization of the ethnic economy is that it is both metropolitan area- and ethnic group- specific. Because I calculate odds ratios for each metropolitan area

² This is consistent with what Light and Gold consider to be “ethnic ownership” industries rather than ethnic enclaves.

³ Logan et al.’s (1994) measure of sector concentration is the most sophisticated method that uses Census data. With simpler measures, such as proportion co-ethnic in an industrial sector, smaller groups are more easily over-represented. Logan et al.’s measure is advantageous because it is independent of the size of group and of the industry sector.

⁴ As Wilson (2003) suggests, the value of 1.5 is arbitrary, but using this value examines the lower limit to the extent to which members of an ethnic group are over-represented in an industry.

separately, industries in which there is a concentration of an ethnic group are not the same across metropolitan areas. In addition, rather than assessing industrial concentration of Asians in general, I consider a respondent to be working in an ethnic economy if he or she works in an industry where there is an over-representation of owners of the same ethnicity. For example, in most metropolitan areas there is an over-representation of Vietnamese owners in the beauty, barber, nail salon industry, but not of Japanese owners. Thus it is considered to be an ethnic economy for a Vietnamese worker because there is an over-representation of self-employed Vietnamese in this industry, but it would not be considered as an ethnic economy for a Japanese worker.

Primary and Secondary Segments

I further classify the mainstream and ethnic economies into primary and secondary segments. Primary segment occupations are characterized as skilled occupations with autonomy, occupation security, opportunities for advancement, and good working conditions. For this analysis, I categorize industries within the mainstream economy into primary and secondary segments using information provided by the U.S. Department of Labor's Occupational Information Network (O*NET), which replaced the Dictionary of Occupational Titles as the comprehensive database of worker attributes and occupational characteristics. This information was collected from surveys of a random sample of workers in occupations in a randomly selected sample of businesses.

O*NET provides a number of measures of occupational characteristics and skill requirements, of which I use six: critical thinking skills, complex problem solving skills, work conditions, independence, advancement opportunities, and specific vocational preparation (SVP). To distinguish between primary and secondary occupations, I first created a scale constructed from the mean of the first five different occupational characteristics. Higher scores indicate higher levels of each characteristic. The alpha for this scale is 0.92 which indicates that these indicators go together quite well. The mean of the occupational scale is 52.1 and the median is 53.4. Because for

this analysis, I disaggregate the ethnic and mainstream economies into two segments, I use the median as the cut-off point. Primary occupations are defined as those with skilled vocational preparation scores (SVP) of 7 or higher and an above-median score on the occupational characteristics scale.

Table 1 shows that among the respondents in my analysis sample, 23% are employed in the ethnic economy, and 42% are employed in the mainstream economy. Thirty-four percent are not employed or not in the labor force. Seventeen percent of the sample is employed in the mainstream primary segment, 25% work in the mainstream secondary segment, 7% work in the ethnic primary segment, and 16% are employed in the ethnic secondary segment. Put another way, among those that work in the mainstream economy, 40% have primary segment occupations, and among those employed in the ethnic economy, 30% work in the primary segment. While the proportion of primary segment employment is slightly higher in the mainstream economy, the fact that 30% of ethnic economy workers have primary segment occupations indicates that researchers should not consider all jobs in the ethnic economy as jobs with poor working conditions and little opportunity for advancement. While this might have been the case in the past, the ethnic economy now encompasses jobs that have high levels of autonomy, provide good working conditions and opportunities for advancement, and require complex, higher-order skills.

Independent Variables

In modeling the labor market segment assignment process, I include a number of variables that could affect the association between labor market segment, hours worked per week, and hourly wage. These variables can be categorized into three different types of measures: ethnic group, demographic, and human capital. In addition, two-stage Heckman models (which I will describe in the analytic strategy section of this chapter) require exclusion restrictions in the selection equation.

These are variables that predict labor market segment but do not have a significant effect on hours worked per week or wages, net of the other factors included in the equations.

Ethnic Group

In the IPUMS data, a race variable was constructed that has mutually exclusive racial categories. Using this variable, I construct dummy variables that indicate whether respondents were Chinese, Japanese, Korean, Filipino, Vietnamese, and Asian Indian. Mixed race respondents and those that marked “other” are not included in the analyses.⁵

The analysis sample is 12% Korean, 33% Chinese, 23% Filipino, 4% Japanese, 15% Asian Indian, and 13% Vietnamese. There are significant differences in ethnicity by labor market segment. In the mainstream primary segment, Asian Indians are over-represented whereas Koreans, Filipinos and Vietnamese are under-represented. In the mainstream secondary segment, Filipinos and Vietnamese are over-represented whereas Koreans, Chinese, and Asian Indians are under-represented. Within the ethnic economy, on the other hand, Koreans and Chinese are over-represented in the primary segment, and Filipinos and Vietnamese are under-represented. In the ethnic secondary segment, Koreans and Chinese are again over-represented, whereas all other groups are slightly under-represented. It should be noted that this distribution of ethnic groups is not representative of employed persons or of the U.S. Asian immigrant population as a whole. Because I exclude self-employed individuals from my sample and because Koreans are the most entrepreneurial ethnic group in the United States, the overall proportion of Koreans is lower in my sample than had I included self-employed individuals.

Socioeconomic and Demographic Variables

⁵ Questions about race and ethnicity changed in the 2000 Census. Individuals were asked to report their own race and the race(s) of others in their household. Before 2000, respondents had to choose one racial/ethnic category that best describes them, but in 2000, respondents were able to mark more than one racial category.

To account for demographic differences in labor market assignment and experiences, I control for gender (1=male), age, marital status (1=married), number of children living in the home, and home ownership (1=owns home). Whereas the overall sample is 43% male, the proportion of men is higher in the primary segment, within both the mainstream and the ethnic economies. In addition, there is a higher proportion of men in the ethnic primary segment than there is in mainstream primary, but a lower proportion of men in the ethnic secondary than in the mainstream secondary segment. The average age of individuals in the sample is 42 years old, and those who work in the ethnic economies are slightly older than those who work in the mainstream economy, both among primary segment and secondary segment workers. Seventy-six percent of the sample is married, and individuals who are employed in the ethnic economy are more likely to be married than those who work in the mainstream economy. Asian immigrants who work in the ethnic economy also, on average, have more children than those who work in the mainstream.

Human Capital Variables

Labor market position and reward attainment depend on levels of human capital. To measure human capital, I include the number of years the respondent has lived in the United States, English language proficiency, and education.⁶

Years in the United States indicates how long each foreign-born person has lived in the United States. For Asian immigrants in the analysis sample, the average time in the United States is 15.11 years. Among those who work in primary segment jobs, immigrants who work in the mainstream economy have been in the United States for a longer period of time than those who

⁶ It should be noted that I do not have a measure of work experience. Analyses using Census data typically measure work experience with a variable constructed by subtracting years of schooling from age, minus six. Because I include age and years of schooling in my analysis, this operationalization of work experience would be redundant.

work in the ethnic economy. Additionally, immigrants who work in the ethnic secondary segment have lived in the U.S. for fewer years than those in the mainstream secondary segment.

English language proficiency is measured by a dichotomous variable that indicates whether or not the respondent speaks English well. Seventy-four percent of the respondents speak English well, and those in the primary segment are much more likely to speak English well than those in the secondary segment, both within the mainstream and ethnic economies. This provides some evidence that the ethnic economy does provide greater opportunities for those who do not speak English well. Asian immigrants in the ethnic primary segment are less likely to speak English well than those in the mainstream primary segment. In addition, Asian immigrants are less likely to speak English well in the ethnic secondary segment than those in the mainstream secondary.

Education is measured by years of schooling. In the survey, persons educated in ungraded or foreign schools were to estimate the American equivalent of their educational attainment (Ruggles et al 2004). As mentioned earlier, in order to capture those individuals who have finished their schooling, I include only those who are not currently enrolled in school. On average, respondents have 13.70 years of schooling. Regardless of segment, individuals who work in the mainstream economy have higher levels of education than those in the ethnic economy.

It is notable that Asian immigrants in the ethnic secondary segment have had *fewer* years of schooling on average than those who are not employed and have similar levels of spoken English proficiency. On the other hand, those in the mainstream secondary segment have higher levels of education and are more likely to speak English well than those who do not work at all. These descriptive findings provide some evidence that perhaps the ethnic economy, and the ethnic secondary segment in particular, can provide opportunities for employment that otherwise would not be available in the mainstream.

Metropolitan Area

To control for differences between metropolitan areas that would account for both labor market segment and wage, I include a series of dummy variables indicating the metropolitan area in which the respondent resides, with Los Angeles-Long Beach as the reference category. Future research should look at specific characteristics of metropolitan areas that might affect the probability of ethnic versus mainstream economy employment.

Results

The fairly similar ratios of primary to secondary segment work within each labor market segment shows that not all ethnic economy work is confined to jobs with poor working conditions and little room for advancement, and that primary segment jobs do exist within the ethnic economy. I find that about 39% of those immigrants who are employed work in the ethnic economy versus the mainstream. Of those who work in each the mainstream economy, 40% are employed in the primary segment, and of those who are employed in the ethnic economy, 30% work in the primary segment.

Before modeling the process of assignment into the mainstream primary, mainstream secondary, ethnic primary and ethnic secondary labor market segments (versus non-employment), I first investigate what affects assignment into the mainstream and ethnic economies independent of segment. While I am primarily interested in assignment into all four different labor market positions, modeling only ethnic and mainstream economy employment first is important because it allows me to evaluate distinctions between the ethnic and mainstream economies more generally.

To do so, I utilize multinomial logistic regression to assess the effects of individual-level factors on employment in the mainstream and ethnic economies, with non-employment as the reference category. Results from the multinomial logit model are presented in Table 2. Model 1

controls for ethnicity and socioeconomic and demographic factors, Model 2 further adds human capital measures, and Model 3 includes metropolitan area. Because the sample size is so large, conventional alpha levels of 0.05 are too high, and many small effects would be considered statistically significant. Thus, in the tables I indicate effects that would be considered statistically significant at an alpha level of 0.01 (t-score of 2.58 or higher).

Model 1 in Table 2 shows that all ethnic groups are more likely to be employed in the mainstream economy than Koreans, with the odds ratios ranging from 1.59 to 2.52 times higher for other ethnic groups than for Koreans. Filipinos are the most likely to work in the mainstream economy, with the odds of mainstream employment over two and a half times higher than those of Koreans. Japanese and Asian Indian immigrants have the lowest odds of working in industries in which there is an over-representation of co-ethnic owners.

The Bayesian Information Criterion (BIC) statistic is used to assess improvement in model fit as each block of variables is entered into the model.⁷ A change in BIC of -7035.27 in Model 2 indicates very strong support that including other demographic characteristics in the labor market assignment process improves the fit of the model. In regard to mainstream economy employment versus non-employment, significant ethnic differences still remain even after accounting for socioeconomic and demographic characteristics. In addition, the magnitudes of these differences remain relatively unchanged. The only exception is that the positive effect of being Vietnamese on the odds of mainstream economy employment is no longer statistically significant.

Model 1 also shows that men are more than two and a half times more likely than women to work in the mainstream economy compared to not at all. In addition, there is a positive association between age and employment in the mainstream economy. The effect of age is non-linear--the positive effect of age gets smaller as age increases. Individuals who own their home are also more

⁷ If the BIC decreases by at least ten in the subsequent model, there is strong support that the latter model is a better fit to the data than is the former (see Raftery 1995 for discussion of BIC).

likely to work in the mainstream economy. On average, though, family formation is negatively related to employment in the mainstream economy. The odds of a married Asian immigrant being employed are almost 25% lower than those of a single person. In addition, number of children is negatively associated with mainstream economy employment.

Most of the effects of socioeconomic and demographic characteristics on working in the ethnic economy as opposed to not working at all are similar to their effects on the probability of working in the mainstream economy. Again, men are more likely than women to work in the ethnic economy versus not working at all, but the gender gap is slightly smaller than it is within the mainstream economy. Older immigrants are more likely to work in the ethnic economy as compared to either not working at all or in the mainstream economy. Thus, the average age of Asian immigrants in the ethnic economy is higher than the average age of their counterparts in the mainstream economy. Marriage and number of children are each negatively related to employment in the ethnic economy compared to not working at all, but workers with more children are more likely to work in the ethnic than in the mainstream economy. Thus, while number of children is negatively related to employment in the ethnic economy, family formation has an even stronger negative effect on working in the mainstream.

With the addition of human capital measures, Model 2 is a better fit than Model 1, as illustrated by a large difference in BIC (-3441.64). Years spent in the United States and years of schooling significantly increase the odds of mainstream economy employment as opposed to not working at all. In addition, immigrants who speak English well are more than 1.5 times more likely to work in the mainstream than those who do not. While years in the United States, spoken English proficiency, and years of schooling all have significant effects on mainstream economy employment, they do not mediate most of the effects of ethnicity and socioeconomic and demographic characteristics.

Levels of human capital have a greater impact on the probability of mainstream economy employment than on ethnic economy employment. Again, the directions of associations between the human capital measures and ethnic economy employment are the same as the mainstream economy, but their magnitude is smaller. I find that years of schooling have a significant positive effect on mainstream economy employment, but it has a much smaller effect on ethnic economy employment. An additional year of schooling increases the odds of mainstream economy employment by 0.10 but increases the odds of ethnic economy employment by only 0.03. Overall, immigrants in the ethnic economy have been in the United States for a short period of time, have had fewer years of schooling, and are less proficient in spoken English. These initial findings suggest that the ethnic economy might be a viable alternative to non-employment for immigrants with low levels of human capital. The ethnic economy may provide more employment opportunities for those who lack the skills and experience to find employment in the mainstream labor market.

Model 3 shows that region also makes an important difference in assignment into a labor market position, as shown by the significant improvement in the BIC (-1841.72) from Model 2. Immigrants in all metropolitan areas in the sample have higher odds of mainstream economy employment as opposed to non-employment than those in Los Angeles. Not surprisingly, there are regional differences in the probability of ethnic economy employment as well. Asian immigrants in San Jose have the highest odds of ethnic economy employment, and individuals who reside in Los Angeles (the reference category), New York City, and Washington, D.C. are more likely to work in the ethnic economy than those who live in the other metropolitan areas. This is most likely due to

the high concentration of entrepreneurial ethnic groups and the establishment of large Chinatowns and/or Koreatowns in these areas.⁸

While differences between employment in the ethnic economy and the mainstream economy exist, these results might be confounded by job segment. Thus, I next disaggregate the ethnic and mainstream economies into the primary and secondary segments. Table 3 shows the results from this analysis.

In the mainstream primary and mainstream secondary segments of the labor market, all groups are more likely to be employed than Koreans. In the mainstream secondary segment, Chinese, Filipino, and Vietnamese have higher odds of employment than Korean immigrants. Within the ethnic economy, however, only Chinese immigrants have higher odds of working in the primary segment as opposed to not working at all. Filipinos are the least likely of all Asian immigrants to be employed in the ethnic primary segment. Japanese and Asian Indians are the least likely to be employed in the ethnic secondary segment.

In the prior analysis, before disaggregating the ethnic and mainstream economies into primary and secondary segments, I found that the average age of Asian immigrants in the ethnic economy is higher than the average age of their counterparts in the mainstream economy. However, this is only the case among the primary segments. There are no significant differences in the age of workers in the mainstream secondary, ethnic primary and ethnic secondary segments. The negative effects of family formation still exist within all four segments of the labor market, and the effects are even stronger within both the primary and secondary segments of the mainstream economy.

⁸ It is important to note that Model 3 does not include interactions of metropolitan area and ethnic group. Regional differences in ethnic economy employment reflect differences in the concentration of certain ethnic groups and the availability of ethnic economy jobs for different ethnic groups in each area. Future analyses by ethnic group should be conducted in order to assess regional variation in the effects of ethnicity on ethnic economy employment.

In regards to the effects of human capital on employment within each labor market segment, the effects of time spent in the U.S. and spoken English proficiency are the greatest on employment in the mainstream primary segment, and they have the smallest effects on employment in the ethnic secondary segment. For each additional year in the United States, the odds of employment in the mainstream primary segment increase by 3%, but do so only by about 1% in the ethnic secondary segment. In addition, the odds of employment in the mainstream primary segment compared to not working at all for a worker who speaks English well is over twice that of one who does not, but the odds are only about 16% higher in the ethnic secondary segment. It is interesting to note that the magnitude of the effects of years in the United States and English proficiency are more similar between the mainstream secondary and ethnic primary segments.

It is important to examine the effects of education on ethnic secondary employment compared to work in the mainstream secondary segment and to not working at all. When comparing the ethnic secondary segment to the mainstream secondary segment, I find that those in the ethnic secondary segment have even lower levels of human capital than those in the mainstream secondary segment. In comparison to not working at all, years of schooling have a negative effect on the odds of employment in the ethnic secondary segment. In other words, those that have higher levels of education are *less* likely to work in the ethnic secondary segment as compared to not working at all. This is not the case for mainstream secondary employment. These findings suggest that the ethnic economy may offer opportunities that otherwise might not be available in the mainstream economy for those with low levels of education. The ethnic secondary labor market can provide an opportunity to work for those who may not have enough human capital to find jobs in the mainstream secondary labor market, and the ethnic primary labor market can give access to “good” jobs for those who may have otherwise been confined to secondary segment jobs in the mainstream economy.

I am primarily interested in how ethnic group, socioeconomic and demographic characteristics, and human capital distinguish between the mainstream and ethnic primary segments, and between the mainstream and ethnic secondary segments. In this case, the comparisons of interest are the effects of ethnic primary employment with the mainstream primary segment as the reference group and the effects of ethnic secondary employment versus mainstream secondary employment. I next utilize a multinomial logit model to predict assignment into the mainstream secondary, ethnic primary, and ethnic secondary segments (along with non-employment) of the labor market, with the mainstream primary segment as the reference group. I then conduct the same analysis with the mainstream secondary as the reference category.

The parameter estimates, standard errors, and odds ratios of employment in the ethnic primary segment with the mainstream primary as the reference category are shown in the first three columns of Table 4. The next three columns of Table 4 then present results from the multinomial logit model of employment in the ethnic secondary economy, with the mainstream secondary segment as the reference category.

Socioeconomic and Demographic Characteristics

Comparing the ethnic economy to the mainstream economy, I find that there are ethnic differences in primary segment employment. Filipinos, Japanese, and Asian Indians are all less likely than Koreans to work in the ethnic primary labor market compared to the mainstream primary labor market. I also find ethnic differences in secondary segment employment between the mainstream and the ethnic economies. Members of all ethnic groups except for Vietnamese are less likely than Koreans to work in the ethnic secondary segment versus the mainstream secondary segment.

Notably, the patterns of ethnic differences in primary segment employment are similar in the mainstream and the ethnic economies, with the exception of Japanese workers. Japanese have the highest predicted probability of mainstream primary employment, but Koreans and Chinese have

the highest predicted probabilities of ethnic primary employment. Filipinos and Vietnamese have very high predicted probabilities of working in the mainstream secondary labor market, but Chinese and Koreans have the highest probabilities of working in the ethnic secondary labor market.

Table 4 shows that the female disadvantage does not significantly differ between the mainstream primary and ethnic primary segments. Even within the ethnic economy, it appears that women are still concentrated in occupations with fewer opportunities for advancement, less autonomy, and poorer working conditions. In fact, female workers in the ethnic economy are more likely to be concentrated in the secondary segment than immigrant women who work in the mainstream economy. Table 4 shows that women are more likely than men to be employed in the ethnic secondary segment versus the mainstream secondary segment of the economy and Figure 4.2 shows that while men have higher predicted probabilities of employment in the mainstream primary, ethnic primary, and mainstream secondary segments than women, there is no gender gap in the probability of ethnic secondary segment employment.

Overall, as age increases, the predicted probabilities of employment in both primary segments decrease. Table 4 shows a significant positive effect of age on employment in the ethnic primary segment compared to the mainstream primary segment of the labor market. In addition, the last three columns of Table 4 shows that as age increases, so do the odds of ethnic secondary employment over mainstream secondary employment. This figure illustrates that the gaps between probabilities of mainstream primary and ethnic primary employment and between mainstream and ethnic secondary employment narrow as immigrants get older.

Regarding the effects of family formation, there is essentially no effect of marital status on the probabilities of employment in each labor market segment. Further, the effects of number of children and marital status in the mainstream primary segment are the same as their effects in the ethnic primary segment. Marital status and number of children do not significantly affect

employment in the ethnic secondary segment as opposed to the mainstream secondary segment. There is a positive effect of number of children on ethnic secondary employment compared to mainstream secondary employment. These findings are somewhat suggestive that the ethnic secondary segment might be more flexible towards family obligations.

Human Capital Characteristics

Not surprisingly, immigrants who work in the mainstream primary segment have been in the United States for a greater length of time, are more likely to be proficient in spoken English, and have had more years of schooling than immigrants in the mainstream secondary and ethnic secondary segments. However, Table 4 shows that there are no significant effects of time in the United States or English proficiency on ethnic primary employment versus mainstream primary employment. Education, on the other hand, does negatively affect employment in the ethnic primary segment versus the mainstream primary segment. For each additional year of schooling, the odds of employment in the ethnic primary segment compared to the mainstream primary decrease by about thirteen percent.

All of the human capital measures do differentiate between ethnic secondary and mainstream secondary employment. For each additional year of living in the United States, the odds of working in the ethnic secondary segment compared to the mainstream secondary decrease by about one percent. The odds of an immigrant who speaks English well working in the ethnic secondary segment as opposed to the mainstream secondary segment are only about three-quarters those of an immigrant who does not speak English well. For each additional year of schooling completed, the odds of ethnic secondary employment versus mainstream secondary employment decrease by almost four percent.

Figures 1 through 3 best depict these relationships. Figure 1 shows that as years in the United States increase, the predicted probabilities of employment in the mainstream primary, ethnic

primary, and mainstream secondary segments of the labor market all steadily increase, but the predicted probability of ethnic secondary employment actually decreases. The same pattern exists for English proficiency. Figure 2 illustrates how the predicted probability for participation in each labor market segment is higher for those who speak English well than for those who do not, except for the ethnic secondary segment. Those who speak English well have a lower predicted probability of ethnic secondary employment than those who do not speak English well. Finally, Figure 3 shows that more years of education slightly increases the predicted probabilities of employment in the mainstream primary, ethnic primary, and mainstream secondary labor market segments until about 12 years of schooling are completed. Completing more than 12 years (having effectively completed at least one year of college) decreases the predicted probability of mainstream and ethnic secondary employment and increases the probabilities of mainstream primary and ethnic primary employment. Additionally, Table 4 shows that the effect of years of schooling on ethnic primary employment as opposed to mainstream primary employment is negative. As Figure 3 shows, at about 19 to 20 years of education (graduate or professional degree), the probability of employment in the ethnic primary segment begins to level off at about 0.15, while the predicted probability of mainstream primary employment continues to increase past 0.50.

Regional Differences

The effects of metropolitan area found in the prior analysis of employment in the mainstream and ethnic economies hold even when splitting them into the primary and secondary segments. In almost all metropolitan areas, there are much lower odds than in Los Angeles of employment in the ethnic primary and ethnic secondary segments compared to the mainstream economy. The only exception is in San Jose, where immigrants have similar odds of ethnic primary employment than those who live in Los Angeles. In all metropolitan areas, Asian immigrants have lower odds of ethnic secondary employment compared to mainstream secondary employment than

their counterparts in Los Angeles. As mentioned earlier, these regional differences are average effects; they do not account for variation in the effects by ethnic group.

Conclusion

In this paper, I examined labor market assignment processes among Asian immigrants in the United States. Specifically, I asked: What factors determine participation in the ethnic economy versus the mainstream labor market, and within the primary and secondary segments of each? To answer these questions, I first examined the rates of employment in the mainstream primary, mainstream secondary, ethnic primary, and ethnic secondary segments of the labor market. I found that Koreans and Chinese have the highest rates of ethnic economy employment, and the Filipinos and Vietnamese have the lowest. Within the ethnic economies, a substantial proportion of the jobs can be considered primary segment employment. Thus, to characterize all ethnic economy jobs as low-skilled and having poor working conditions would be a misconception. In fact, half of the jobs in the Japanese and Asian Indian ethnic economies would be considered primary segment, about one-third of the jobs in the Korean and Chinese ethnic economies would be considered as so.

I then analyzed how assignment into the ethnic primary segment differs from assignment into the mainstream primary segment, and how assignment into the ethnic secondary segment differs as compared to the mainstream secondary segment. Consistent with prior research, my results indicate marked differences in the effects of age, socioeconomic and demographic characteristics, and human capital on the attainment of primary versus secondary segment jobs. Besides ethnicity, however, these variables have little impact on ethnic primary employment compared to mainstream primary employment. Overall, the process of obtaining a primary segment job in the ethnic economy is quite similar to that in the mainstream economy.

To summarize, I find that all Asian immigrants except for Chinese are less likely than Korean immigrants to work in the ethnic primary segment than in the mainstream primary segment. Overall, most socioeconomic, demographic, and human capital characteristics do not distinguish between ethnic primary and mainstream primary employment. There is a positive effect of age on ethnic primary segment employment compared to working in the mainstream primary segment, which suggests that older immigrants are more likely to have primary segment jobs in the ethnic economy than in the mainstream economy. In addition, years of schooling has a negative effect on working in the ethnic primary segment as opposed to the mainstream primary segment. Thus, education may be less important in gaining access to primary segment jobs in the ethnic economy.

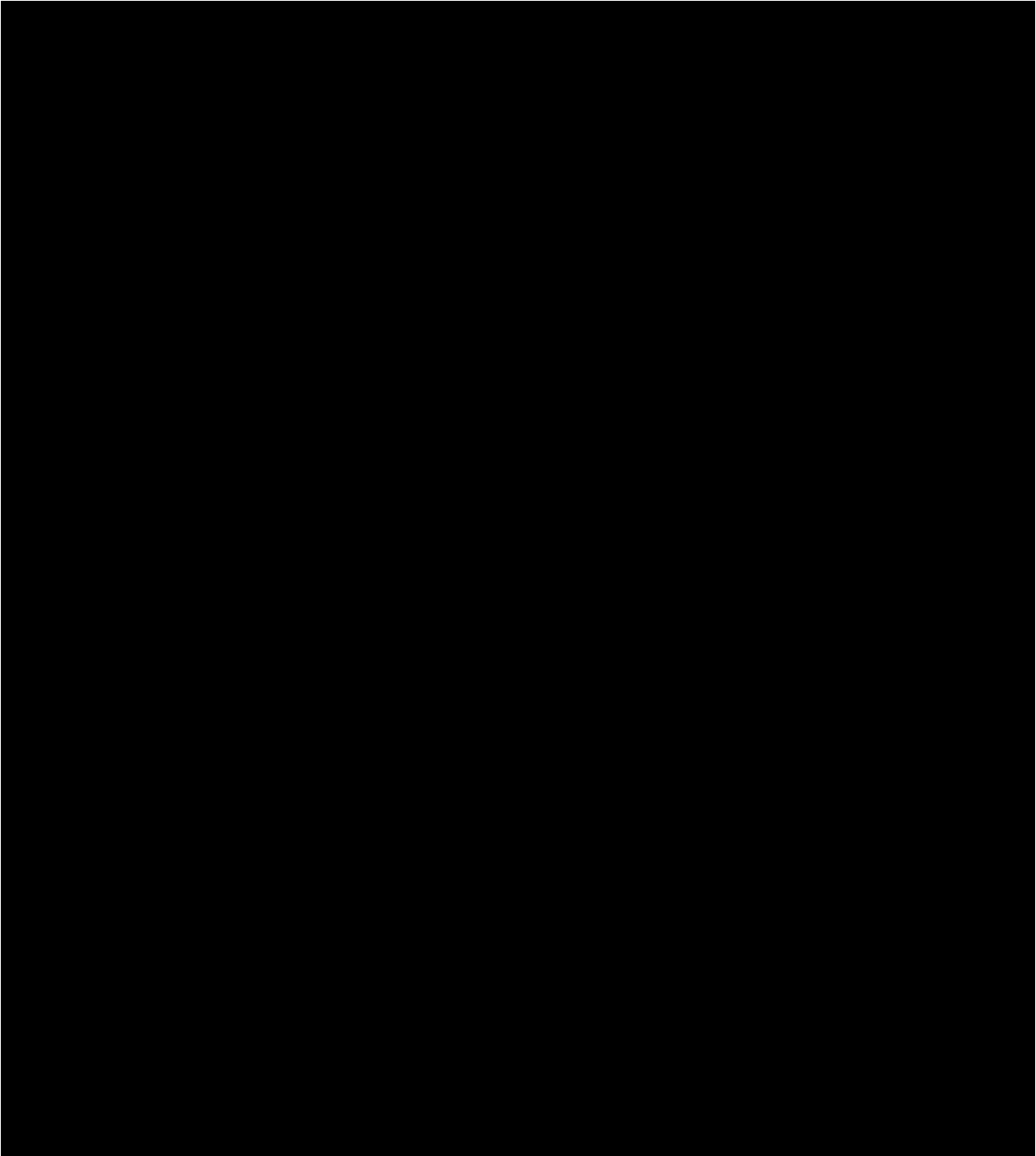
While few of the individual-level factors included in the model played a large role in differentiating between ethnic primary and mainstream primary segment employment, they did have significant effects on working in the ethnic secondary segment as opposed to the mainstream secondary segment. All Asian immigrants are less likely than Koreans to be employed in the ethnic secondary segment than in the mainstream secondary segment. Women are more likely than men to work in the secondary segment of the ethnic economy than the mainstream, as are older immigrants and those that have children. This provides some evidence that family formation may have a positive effect on ethnic secondary employment as opposed to mainstream secondary employment. These findings are somewhat suggestive that jobs in the ethnic secondary segment allow more flexibility when it comes to family obligations. In addition, all of the measures of human capital have significant negative effects on ethnic secondary employment versus mainstream secondary employment. This provides further support for the claim that the ethnic economy may provide opportunities for immigrants with low levels of human capital that are not necessarily available in the mainstream labor market.

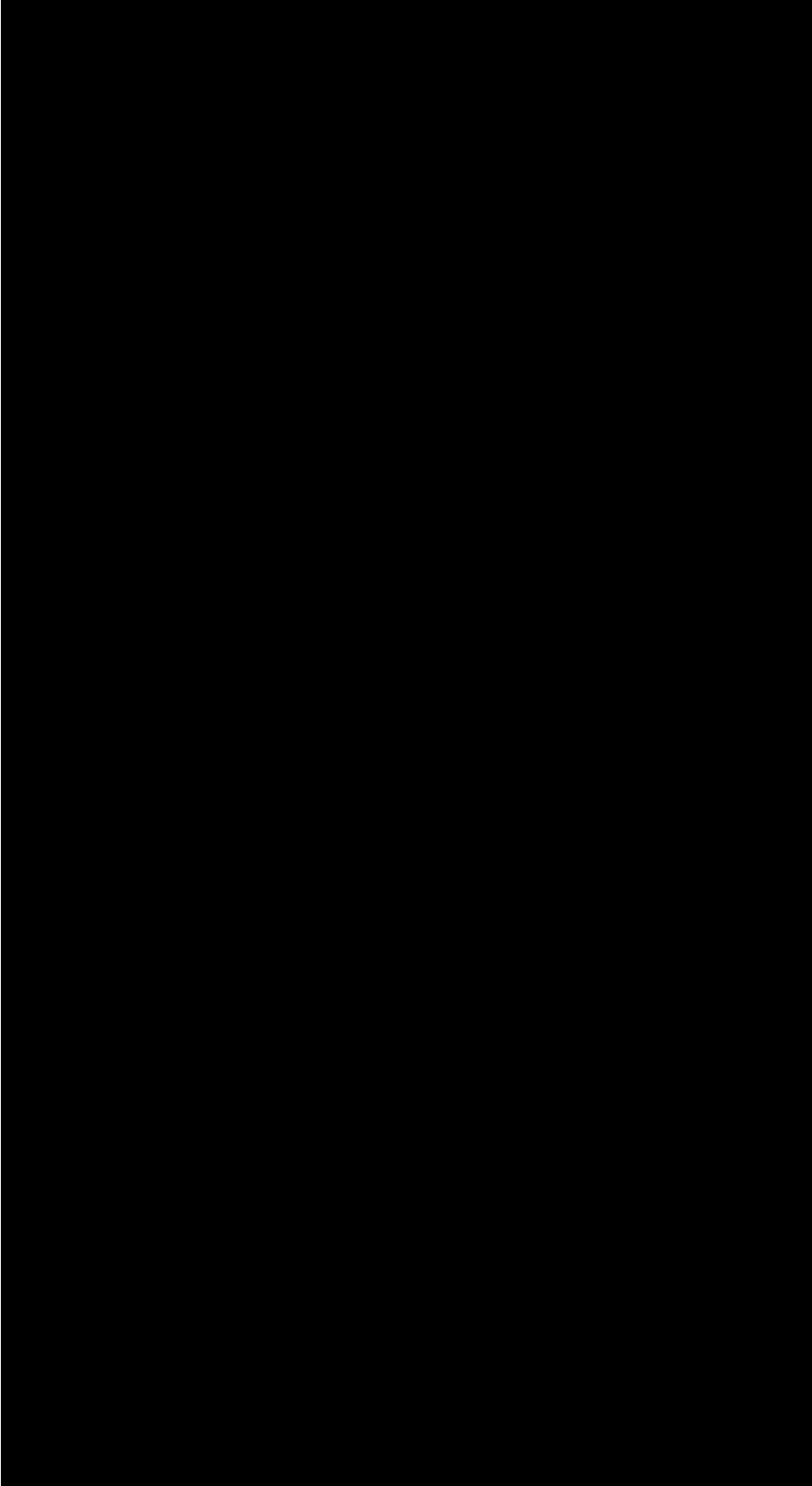
This research on the labor market experiences of Asian immigrant adults adds to existing research within the areas of immigrant adaptation and labor market stratification. Past research within the segmented labor markets literature has shown how there are multiple segments of the economy that are qualitatively different from each other. There are different processes of reward attainment within each as well as differences in the process of labor market segment assignment. My paper introduces the ethnic primary and ethnic secondary segments as two additional segments of the labor market and assesses their similarities to and differences from the primary and secondary segments of the mainstream economy. Prior studies of the ethnic economy typically do not acknowledge that primary segment jobs exist within the ethnic economy and ignore differences in jobs within the mainstream economy as well. I improve upon the limitations of prior research by taking into account differences in the types of jobs in ethnic economies. By doing so, this study uncovers the heterogeneity that exists within the ethnic economy, which provides more evidence of the diversity of the Asian American experience.

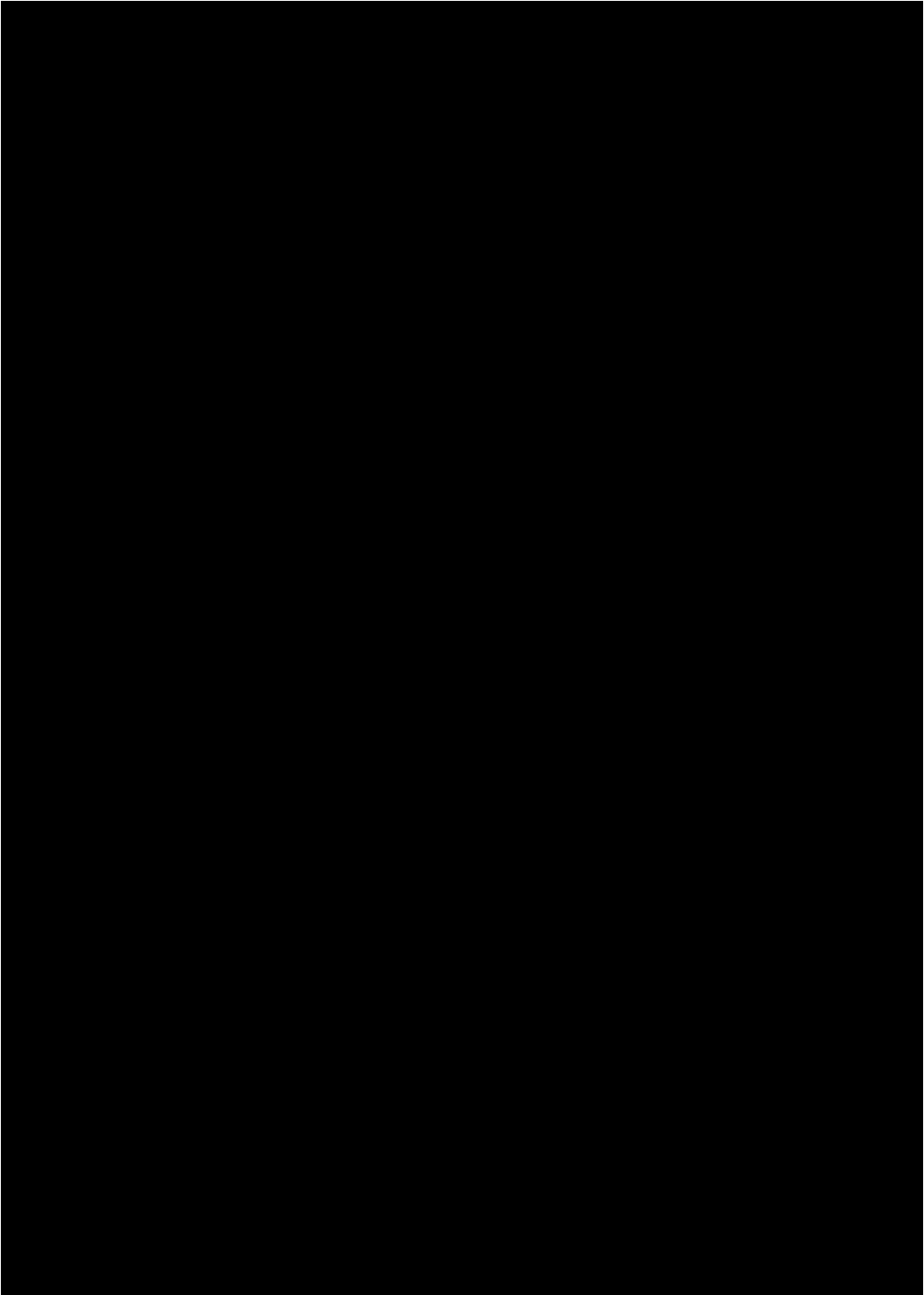
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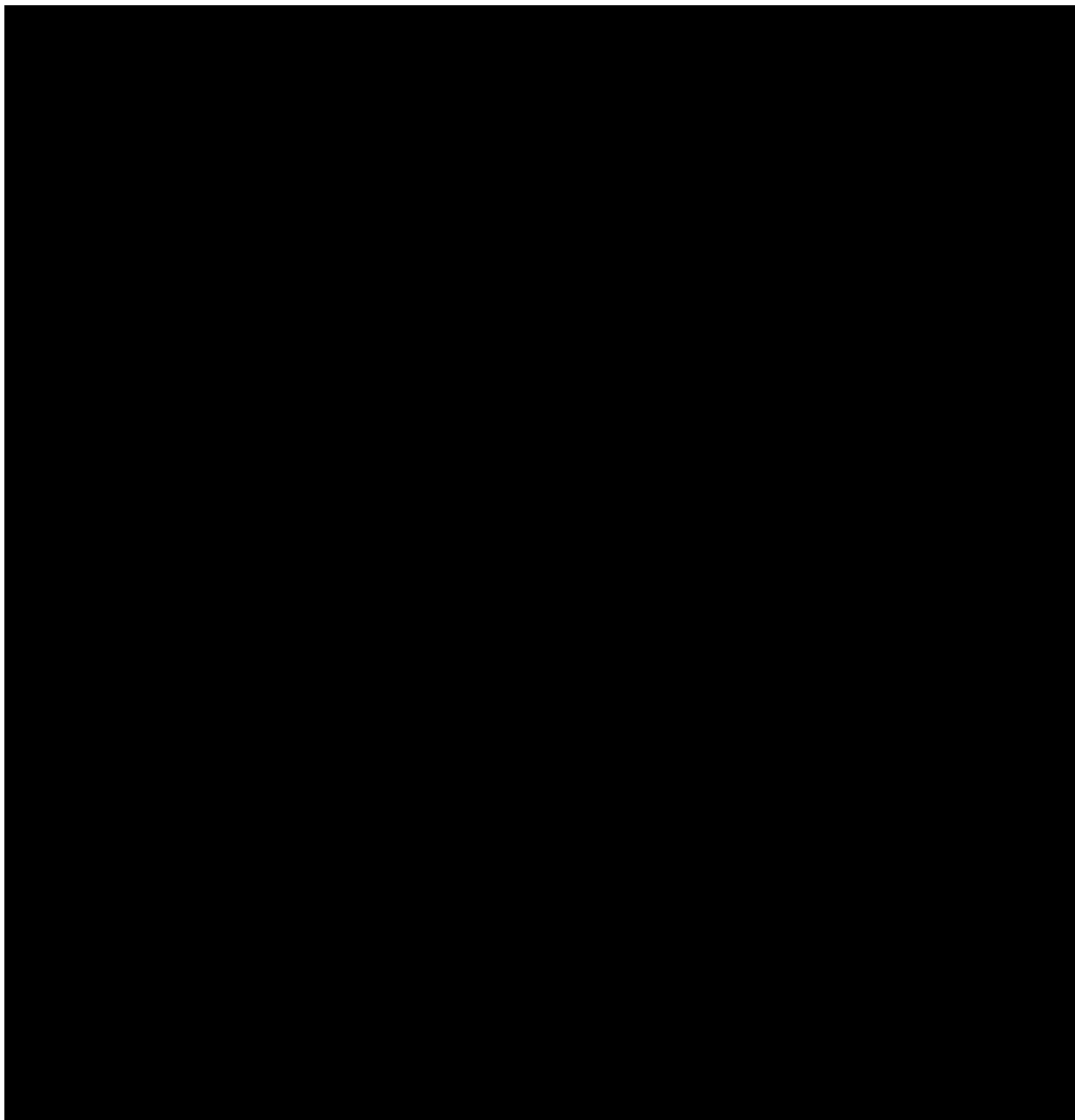
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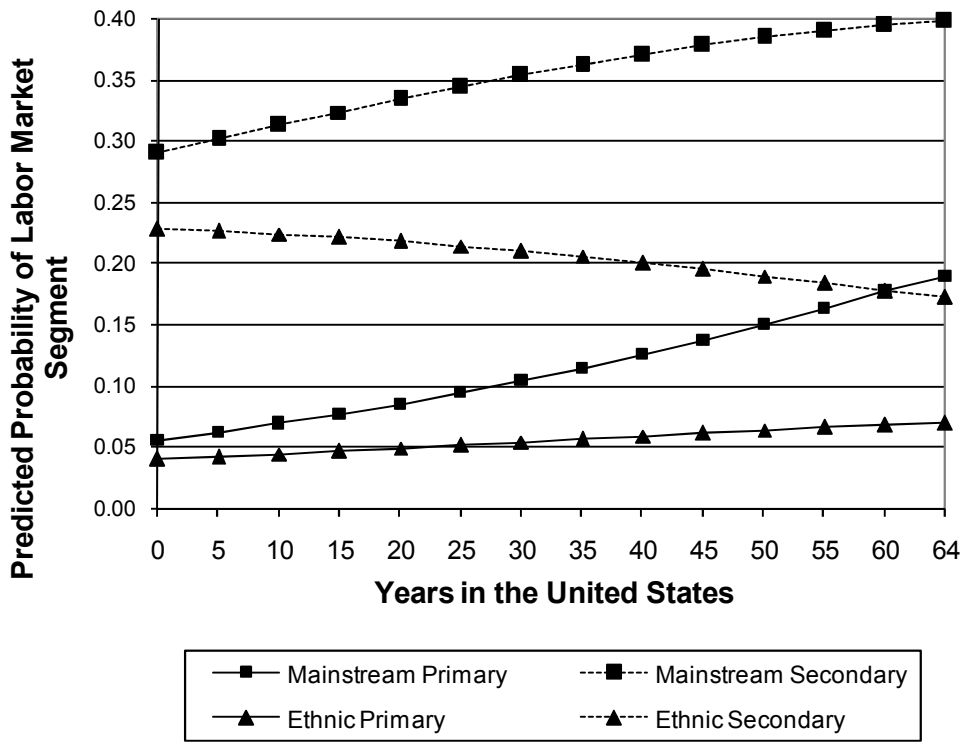


Figure 1. Predicted Probabilities of Labor Market Segment by Years in the United States.

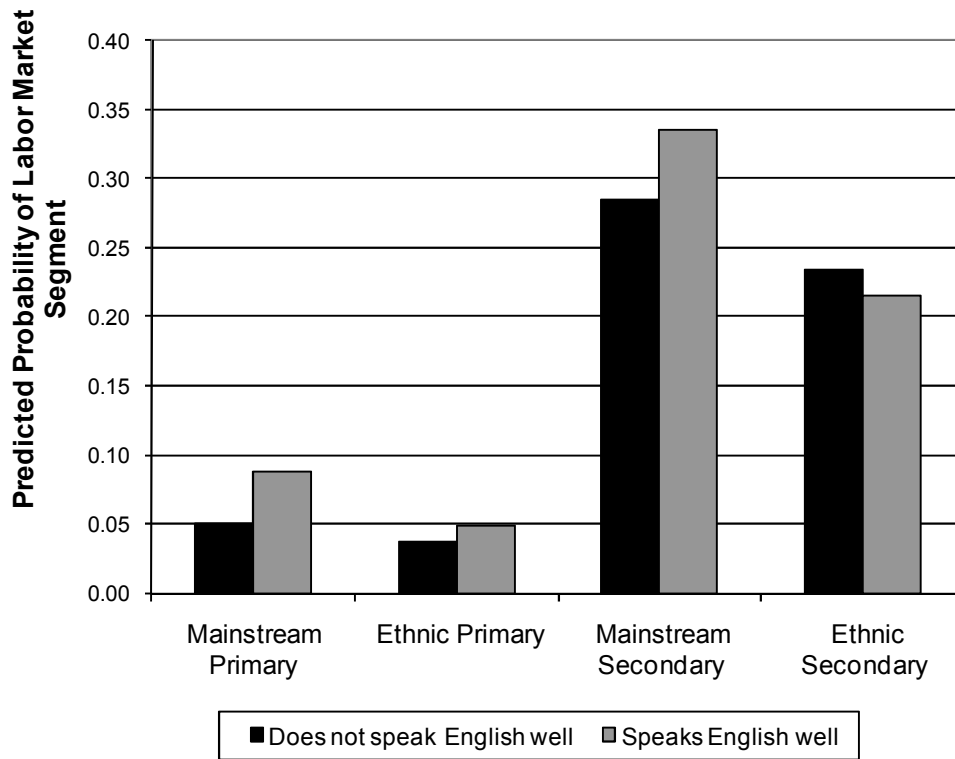


Figure 2. Predicted Probabilities of Labor Market Segment by English Proficiency

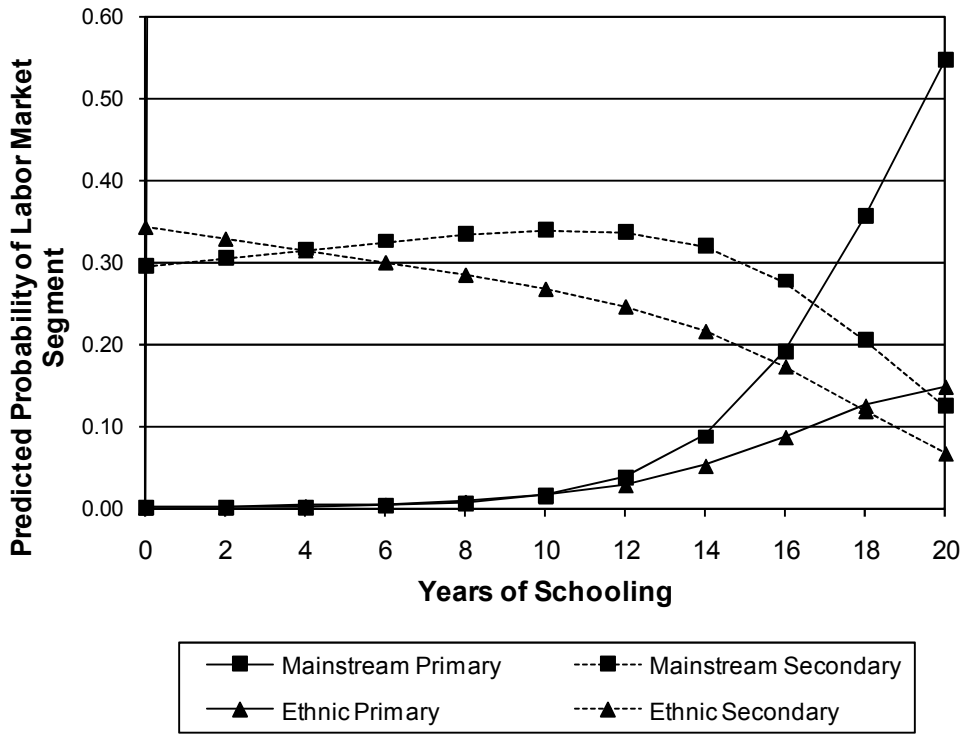


Figure 3. Predicted Probabilities of Labor Market Segment by Years of Schooling