An Examination of the Effect of Place of Education on Job Placement: Major- Occupation (Mis)Match among US- and Foreign-Educated Immigrants

Background

With the large influx of immigrants to the United States since the 1960s, much attention has been devoted to the economic assimilation of immigrants into the labor market (e.g. Chiswick 1983, Wong 1982). Classical economic assimilation theory posits that immigrants suffer an initial wage penalty that decreases as they learn host-country skills. Through assimilation, immigrants are able to reach parity – if not surpass – natives in earnings (Chiswick 1978). The Asian American population is often touted to have fulfilled the American Dream, as it has, by and large, fared well in the American economy, thus earning the title of "model minority." This optimistic perception of Asian Americans is misleading, as Asian Americans have to overeducate to reach earnings parity with their white counterparts (Hirschman and Wong 1984).

This paradox has generated a wealth of scholarly discussion, yet findings on whether the wage gap persists after controlling for background (e.g. nativity), human capital and social capital (e.g. Old Boy networks) have been mixed (e.g. Barringer et al 1990, Iceland 1999, Woo 2000). A recent work, however, found the missing link by revisiting the human capital model (Zeng and Xie 2004). The crux of the puzzle lies in the disaggregation of place of education into foreign and domestic sources. When the disaggregated place of education variable is included, such variables as race and nativity are no longer consequential, thus marking the importance of the location of one's education. While the paradox has been solved, the mechanism linking place of education and economic standing remains a puzzle.

Mechanisms Linking Place of Education and Earnings

From the human capital perspective, foreign-educated immigrants lack the necessary host-country skills, such as English language ability, for the US labor market. The skills acquired abroad also might not be easily transferable to the host-country. As employers routinely use credentials as a means to gauge the quality of the worker, the skills and training acquired in the country of origin might not be recognized in the US (Meyer and Rowan 1977). With limited information, employers might equate a US degree with English proficiency and other host-country specific skills. A US education also provides information channels and social networks that open up job opportunities. Lastly, at the macro-structural level, federal policies grant immigrant students short-term work visas upon graduation, which facilitate placement into an occupation that is closely related to their college major. Accordingly, it is more likely for US-educated workers to be placed into occupational fields that are relevant to their college majors. The association between field of study and occupational field might be stickier and more resilient for US-educated workers. In contrast, because of their lack of human and social capital, foreign-educated immigrants might be placed in occupations where their qualifications exceed the skills required for the occupation. Anecdotal evidence often paints the picture of the foreign-educated professional who, upon immigration, experiences downward mobility because he lacks the necessary human, cultural and social capital to pursue a career that is relevant to his major. Therefore, for this study, I explore whether this mismatch between qualifications and job placement is a viable explanation linking place of education and earnings. More specifically, I ask whether foreign-educated Asian American workers suffer a higher degree of job-mismatch

(and to what degree) than their US-educated counterparts, and whether they are unable to find occupations that are commensurate with their education. These differences in major-occupation pathways between foreign-educated and US-educated Asian American workers can be explained by individual and occupational characteristics.

Data and Methods

The analyses of the study consist of two parts. The statistical analyses for the first part of the study draw data from the 2003 National Survey of College Graduates. The NSCG is a cross-sectional nationally representative survey of respondents who identified as having a college degree or above in the 2000 Census. This dataset is ideal because of the demographics of the survey: the respondents have at least a bachelors degree, which eliminates some of the bias caused by the selection of immigrants into the US labor market. The association between field of study and occupational field might be more tenuous for those without a college degree, as they are, as some scholars would argue, of a "lower stock," therefore more likely to not be able to transfer their country-of-origin skills and credentials to the US labor market. The analytic sample is restricted to 25-64 year old able-bodied, foreign-born full-time male workers, yielding an analytic sample of 4,487 cases.

I first examine major-occupation mobility across place of education by running a series of loglinear models to test the association between major, occupation and place of education. The three-way table cross-classifies college major (origin) by occupational field (destination) by place of education (levels). I also test a series of multiplicative layer effects models (Xie 1992), which parsimoniously summarizes the difference between layers.

Since loglinear models only show associations and are limited in usefulness in multivariate analysis, the second part of the study seeks to model the occupational placement of these workers using the same analytic sample extracted from the NSCG as the first step. I attempt to determine whether and how occupational placement is a function of personal characteristics and occupational characteristics. Because decisions are not only made based on individual characteristics, I need to fit a model that captures how the choice of a given occupation among a set of occupations is affected by the characteristics of these occupations. To this end, I employ McFadden's conditional logit model, which allows me to take into account the respondents' choice set. Of the occupational choices available, the worker chooses the occupation that maximizes his utility. The occupation that the immigrant ultimately selects depends not only on his own personal characteristics (e.g. human capital, taste and preferences) but also on the characteristics of the opportunities presented to him.

The conditional logit model requires alternative-specific variables, which measure characteristics of the occupations. To operationalize these alternative-specific variables, I draw from the O*NET and the 2000 Census for occupational characteristics. The O*NET database contains information on occupational and worker attributes, such as the social, verbal and technical skills required for the occupation. The 2000 PUMS also contains valuable occupational information, such as the percentage of coethnics in a given occupation and occupational earnings. I match these occupational characteristics to the occupational codes provided by the NSCG. Case-specific variables include place of education, and the type of visa the respondent held upon first entry to the US. I model occupational placement of Asian American workers as a function of occupational characteristics, and personal characteristics, namely place of education and visa type. To evaluate the congruity between major and occupation for foreign and US-educated immigrants for each major, I stratify my sample by major.

Expected Findings

For the first part of the study, I expect the association between major and occupational field to be stronger for those with a US-educated degree. As enumerated above, for the same set of skills, foreign-educated immigrants might be more poorly matched to a fitting occupation than those with US-degrees. Human capital and credentials acquired (e.g. language ability) in the US are more transferable and usable in the US labor market. US-degree holders also have the social capital to find desirable occupations and hold work visas that grant them employment opportunities in the US labor market. These factors coupled together give US educated workers a vantage point in the US labor market and render them more employable than their foreign-educated counterparts. Because US-educated workers are able to find occupations that are closely related to their major field, they are less likely to experience major-occupation mobility than their foreign-educated counterparts.

As for the conditional logit models, I expect to find that foreign-educated workers are more likely to be "misplaced" into occupational fields that are different from their fields of study. Rather, foreign-educated workers will enter fields that are less lucractive, have a higher percentage of coethnics (e.g. ethnic niches in the service industry) and require less specialized training. However, with the exception of percentage of coethnics in the occupation, this pattern might reverse with the inclusion of the variable indicating whether the immigrant had a work visa upon first entry into the US. Those with work visas – as a result of their stellar performance in their country of origin – might be recruited by US employers prior to immigration to work in a closely related field consistent with the global "brain drain" phenomenon. In the stratified models, for majors that feed into occupations that have stringent requirements (e.g. law or medicine), such as in the form of licensures, there might be less congruity between major and occupation for foreign-educated immigrants. But for majors that feed into occupations that are highly technical, it is possible that the major-occupation pathway is more normative and similar to those with US degrees.

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