

Modeling the Model Minority:
Educational Investment and Returns for Asian Americans

DongWon Song
Jennifer T Wang
Duke University
Durham, North Carolina
April 25, 2003

* DongWon Song and Jennifer T Wang are Economics and English B.A. double majors who will graduate from Duke University in May 2004.

Acknowledgements

We would like to thank our *fabulous* Economics of the Family professor,
Marjorie McElroy.

1. Introduction

In the 1960s a stereotype appeared in the mass media describing Asian Americans as the “model minority.” Asian Americans and recent Asian immigrants were held up as an example of a minority group that excelled in academics, translating into greater economic mobility. Presented at the height of the Civil Rights movement, some reporters speculated that the “model minority” stereotype was developed to silence dissenting voices. They implied that institutional racism was impossible given the apparent success of Asian Americans (Lee, Suzuki). In 1966, *US News and World Report* published an article, “Success Story,” which cast Chinese Americans as the better-behaved than African Americans, in that they were a silent, uncomplaining, and essentially successful minority (Lee 6). But relatively little research exists on Asian American’s reputed economic success, largely limited by the difficulty in acquiring a large enough group from a random sampling of the US’ population. Only after immigration was opened to Asians in the 60s was there a sufficient number present to appear in the Census data.

In May 2002, the Census Bureau reported that 44% of Asians and Pacific Islanders age 25 and over in the United States had a bachelor's degree or higher in 2000; the corresponding rate for all adults 25 and over was only 26%. The median income in 2000 of Asian and Pacific Islander households was \$55,525—the highest median income of any racial group. The possible relationship between greater educational investment in human capital and higher returns to education has been demonstrated in a number of studies, and we would like to specifically examine Asian Americans, comparing their situation to those of other minority groups—particularly Hispanic Americans. On a broader level of social

significance, we will look at how educational investment has contributed to the “model minority” myth.

This paper steps away from the anecdotal evidence and general perception that the majority of Asian Americans seem to value education more highly than other ethnic groups, and as a result, have higher returns to education. This paper attempts to understand the situation of Asian Americans’ educational choices by offering a picture of schooling’s effect from a purely economic standpoint. We examine the model minority stereotype within the context of human capital investment (years of schooling) and returns to education (in terms of income/ wage in relation to years of schooling). Then we take a step back to look at the stereotype within the context of immigration decision and self-selection. We show that the stylized facts used to support the model minority stereotype are explicable within standard economic modeling techniques. Our comparison is two-fold: First, we compare the Asian situation to that of the Hispanic situation due to similarity in immigration history; secondly, within the Asian American racial group, we look specifically at the differences between Filipinos and Chinese/Japanese because of interesting disparities in levels of investment and return. For the purposes of this paper, we define “model minority” as having greater years of schooling and higher returns to education than Hispanics, and at least competitive values compared to Whites. We define the racial group Whites as non-Blacks, non-Hispanics, and of course, non-Asians.

A number of studies have been done on the effects of schooling in earnings for different racial groups. In the 1980’s, Barry R. Chiswick did early work on the earnings and human capital investments of Asian Americans males and individuals from other ethnic groups. Chiswick’s work in *An Analysis of the Earnings and Employment of Asian American*

Men (1983) and *Differences in Education and Earnings Across Racial and Ethnic Groups: Tastes, Discrimination, and Investments in Child Quality* (1988) forms the foundation of our investigation.

In 1993, George Borjas published an article entitled *The Intergenerational Mobility of Immigrants*. In this article, he detailed a model for immigration based on the parents' decision to immigrate based on maximizing a "dynastic income." Hence, they take into account their children's options in the new country. Borjas incorporated intergenerational skill-transfers into this model, leading to the conclusion that a source-country's characteristics impact the first generation's performance. He generally found that certain ethnic groups outperformed others in the first generation, but that performance tended towards that of native-born Americans as time progressed and successive generations grew up and entered the labor force. (Borjas) The Borjas study does not specifically address the immigration of Asians; however, the data from the aforementioned Chiswick studies seem to be consistent with Borjas' proposed model. Furthermore, Borjas' model appears to explain findings in these other studies that seem to be consistent with our definition of the model minority.

In section 2, Chiswick's research will be reviewed and summarized. Chiswick himself admitted that there had been relatively little research done on Asian Americans, but nevertheless, the conclusions from these studies should offer insight into whether or not the model minority myth holds true. In section 3, Borjas' economic model of immigration will be presented and explored in greater detail. The previous research will be re-examined, re-interpreted, and synthesized in section 4 to draw conclusions about the presence of the model

minority stereotype within Asian American communities. Section 5 will include our discussion of biases and assumptions. Section 6 will conclude our paper.

2. Chiswick: Studies on Asian American Educational Investment and Returns

In 1988, Barry R. Chiswick, in his article “Differences in Education and Earnings across Racial and Ethnic Groups: Tastes, Discrimination, and Investments in Child Quality,” used Census data from the 1970’s and 1980’s to look at differences in earnings, schooling, and rates of return among several racial and ethnic groups, including Whites, Blacks, Asians, and Hispanics; all groups were further subdivided into “native-born” and “foreign-born” categories. On a general level, Chiswick demonstrated that groups with higher levels of schooling also had higher earnings—higher investment levels in human capital resulted in higher rates of return.

Table 1 shows that, on average, Hispanics, Filipinos, and American Indians have lower levels of earnings and schooling than Whites, and Chinese and Japanese Americans have higher levels of earnings and schooling. (Chiswick, 574) Looking at Hispanics in comparison to Chinese and Japanese, a startling disparity is evident. Average wages are over \$300 higher for Chinese Americans, and their average schooling exceeds Hispanic Americans by over 4 years. The rates of return to schooling for Chinese and Japanese American-born men are 0.016 higher and 0.014 higher, respectively. These differences are particularly significant because though the immigration patterns of both minority groups are similar, their respective indicators of economic mobility are strikingly disparate. The first three columns contain averages calculated using 1970 Census data. The fourth column contains estimates for each racial group from the linear regression of the natural logarithm of

earnings in 1969 on schooling, experience, experience squared, marital status dummy variable, geographic distribution, and weeks worked.

TABLE 1
Earnings, Schooling, and Other Characteristics of Adult Native-Born Men By Race and Ethnic Group, 1970

Race and ethnic group	Earnings 1969	Age (years)	Schooling (years)	Rate of return to schooling	Sample size
White (All)	9653	42.7	11.9	0.070 (0.0013)	33878
White Native-born parents	9441	41.7	11.9	0.069 (0.0015)	27512
White Foreign-born parents	10567	47.1	11.9	0.073 (0.0008)	6366
Jewish	16176	49.2	14	0.080 (0.0042)	3719
Black (All)	6126	42	9.9	0.044 (0.0013)	26413
Black Native-born parents	6110	42	9.9	0.044 (0.0013)	26137
Black Foreign-born parents	7719	39	11.8	0.068 (0.0145)	276
Mexican/Hispanic origin	6638	39.5	8.9	0.051 (0.0029)	5197
Japanese	10272	43.4	12.7	0.065 (0.0050)	2063
Chinese	10406	41.4	13.1	0.067 (0.0078)	627
Filipino	7173	37.3	11.3	0.045 (0.0118)	335
American-Indian	5593	40	9.9	0.054 (0.0048)	1894

(Table taken from Page 574 of B. Chiswick’s “Differences in Education and Earnings Across Racial and Ethnic Groups: Tastes, Discrimination, and Investments in Child Quality”)

For adult native-born men of Mexican/Hispanic origin, we see that their annual earnings (\$6,638) are much lower than that of Whites or Asians. They also appear to have the least years of schooling of all the groups (8.9); clearly, when compared with Hispanics, Asians do evince the characteristics of the model minority—higher levels of schooling and rates of return to that schooling (shown also as annual earnings).

However, looking at years of schooling, earnings, and rate of return to schooling for Chinese Americans versus all Whites, we see two interesting issues that potentially weaken

the model minority idea. First, the average annual earnings for Chinese (\$10,406) may be higher than that of Whites (\$9,653), but the disparity is less impressive when the ‘years of schooling’ characteristic is taken into account. On average, Chinese Americans receive 13.1 years of schooling, while Whites only receive 11.9. Chiswick estimates that the returns to schooling for Chinese (0.067) and Japanese (0.065) are actually lower than returns for Whites (0.070). This seems consistent with decreasing returns to successive additional years of education, but could also point to factors such as discrimination in the labor force and the need to include Asian Americans—who actually *are* disadvantaged according to Chiswick’s data with lower returns despite higher years of schooling—in policies that reduce racial inequality.

Secondly, while the numbers are comparable between Chinese Japanese Americans and Whites, another Asian American ethnic group, the Filipinos, do not fare quite as well in comparison. Their average annual earnings (\$7,173) come after a mean of 11.3 years of schooling; their rate of return is subsequently lower than their Chinese and Japanese counterparts. Even more interesting is that rate of return to schooling for Filipinos (0.045) is even smaller than that of Hispanics (0.051) by a noticeable amount. Perhaps because Asian Americans are held under the umbrella of the model minority—unfairly it seems—certain Asian ethnic groups are negatively impacted. From Table 1, it appears that Filipinos are a disadvantaged minority, comparable to Hispanics in schooling returns and wages. Filipino Americans do have higher years of schooling; however, they receive none of the benefits that Hispanics do because they are classified as a “model minority” alongside Chinese and Japanese Americans.

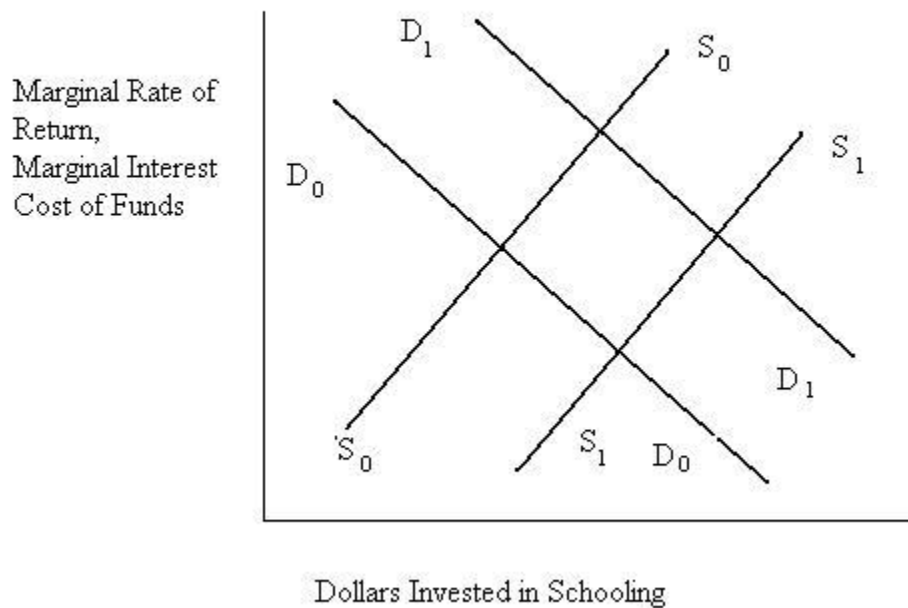
Chiswick attempted to answer why racial and ethnic groups differed in their levels of educational investment, and presented a number of hypotheses—“different tastes for schooling, different time preferences, the Diaspora effect, discrimination, and differential investment productivity”—as possibilities. Chiswick touched on group differences in intergenerational transfers of private income, where other family members (primarily the mother) can invest in “child quality” by working less while children are young. Chiswick referred to a study that concluded that “other things the same, Filipino women have a greater supply than Chinese and Filipino women [and] the presence of children under age six in the home has a smaller depressing effect on labor supply for the Filipino women.” He also cited another study that demonstrated that the depressing effect for children under age 12 on labor supply was smaller for Hispanics in comparison to non-Hispanic white women. (Chiswick, 588) Not surprisingly, the groups who made greater parental investments in young children also invested more in young adult children in terms of education. In turn, these young adult children would receive higher rates of return on education. (Chiswick, 589)

The “different tastes” hypothesis is especially relevant to the case of Asian Americans. Chiswick’s theory behind it is that higher levels of schooling arise from a greater preference or taste for schooling, and perhaps a higher value is placed on future consumption as opposed to current consumption. Having a higher preference for schooling simply means that if the pecuniary benefits and costs of schooling are equal, the group in question will invest more in education at any given interest cost; for these groups, the non-pecuniary consumption benefits are deemed substantially important. (Chiswick, 577)

Figure 1 shows the graphic representation of an individual’s supply and demand for funds for investment in schooling. From what Chiswick assumed here, the supply of funds

schedule would be further to the right for Chinese and Japanese Americans than for otherwise similar White Americans. Filipinos and Hispanics would fall to the left of Whites. In other words, the taste hypothesis assumes that the demand schedules for all individuals of all groups is the same, and the supply curve would be S_1 for a Chinese/Japanese American and S_0 for Whites, and in the second comparison, S_1 for Whites and S_0 for Filipino/Hispanic Americans. Since demand conditions do not vary across groups, the graph depicts a higher level of schooling and the expectation of lower returns to schooling. (Chiswick, 577)

Figure 1
Schematic Representation of Supply and Demand for Funds for Investment in Schooling



(Graph taken from Page 577 of B. Chiswick's "Differences in Education and Earnings Across Racial and Ethnic Groups: Tastes, Discrimination, and Investments in Child Quality")

The most convincing alternative proposed by Chiswick to the taste hypothesis relies on differences in the demand schedule of the individual. In this “productivity of schooling” hypothesis, because of some aspect of culture or history, certain individuals (and groups by extension) are more “efficient” in converting schooling into earnings for each dollar of investment. In the graph, the supply schedule would remain the same (either S_0 or S_1), but the demand curve D_0 would represent Whites and D_1 would represent Chinese/Japanese Americans. When discussing Filipino/Hispanic Americans, they are represented by D_0 , and Whites by D_1 —the higher demand curve. The graph of this would predict higher levels of schooling, as well as higher rates of return. It follows also that supply and demand for schooling investment funds of an entire racial group—such as Asian Americans—would increase with this level of success, and the group as a whole would be more inclined to demand and invest in schooling. Both hypotheses, however, are inconsistent with the data Chiswick gathered. (Chiswick, 578)

Chiswick proposed two conditions of the “taste” hypothesis: Highly educated minorities have a “cultural taste or preference for schooling,” and that they place a relatively higher value on future consumption. This implies a negative relationship between years in school and rates of return to schooling. While the trend of the data across groups revealed a positive relation between years of schooling and rates of return, a comparison between Whites and Chinese supports the ideas of traditional ethnic studies literature. If returns to education are actually lower for Asians despite their higher levels of education, what motivates Asian Americans to invest so much in schooling? Chiswick’s proposal for any anomalies was that the “differences may be a consequence of parental investments (implicit and explicit) in the home-produced components of child quality.” He discussed the issue of

parental human capital investments and encouraged the idea that Asian American families were prompted to invest more in education to get better quality children, not necessarily the higher rates of return via higher earnings. (Chiswick, 590) In the next sections of our paper, we attempt to examine more closely the relationship between intergenerational transfers among first/second-generation Asian Americans and their resulting economic performance. Looking at the Borjas immigration model, we propose possible reasons for investment and return trends for schooling that may shed some light on why and how the model minority stereotype arose.

Earlier, in 1983, Chiswick published “An Analysis of the Earnings and Employment of Asian American Men,” a focused study on this particular racial group; it was an analysis that examined Asian American earnings compared to white earnings. Using the same data set from the study we previously discussed, he broke down the experience of Asians in terms of earnings and employment via demographic and socio-economic variables; he also broke down Asian Americans into ethnic categories, Chinese, Japanese, and Filipinos. Chiswick explored the sharp contrast between the higher success of Chinese and Japanese Americans as a group relative to Filipinos. The inter-racial exploration was important because it revealed differences (and consequences) in schooling choices between groups that had a roughly comparable historical experience. What Chiswick suggested after viewing the data between the three ethnic groups was that the parents of the more successful groups had “sharply reduced their fertility and...invested more parental time and other resources in each child, while the Filipinos maintained a high birthrate, which may have implied smaller investments per child.” (Chiswick, 212)

Another of Chiswick’s purposes was to examine how well American born Asians truly performed (Chiswick 1983). Interestingly, Chiswick found that the country of origin had a large impact on earnings of the first generation. Chinese and Japanese Americans outperformed whites on both earnings and years of schooling. However Filipino Americans under-performed relative to whites. As a result the category of all Asians misleadingly seemed comparable to whites. This is seen in Table 2.

Table 2
Earnings and schooling for different Asian American ethnic groups

	Filipino	Chinese	Japanese	Total Asian	White
Earnings	\$7,172.54	\$10,405.59	\$10,271.69	\$9,956.30	\$9,855.22
Schooling	11.3	13.06	12.68	12.61	11.89

(Table taken from Page 205 of B. Chiswick’s “An Analysis of the Earnings and Employment of Asian American Men”)

Even before, focused mostly on earnings and employment of Asian American men rather than schooling, Chiswick ultimately reached the conclusion that it was invalid to consider the pan-Asian group of Asian American as one unit. According to his findings, we suggest that it would be invalid to consider Chinese and Japanese as subject to the same systematic discrimination that is commonly associated with ethnic minorities. Filipinos, however, drastically under-perform when compared to other Asian Americans. The differences between these racial groups compensate for one another and tend to mask the true nature of Asian American economic performance as a whole group; clearly, generalizations are inadequate.

Chiswick's work prompted us to consider methods and alternatives to modeling the model minority phenomena. We see that the taste hypothesis is not satisfactory given that the data for certain groups contradict it. Chiswick himself admitted that the taste hypothesis was inconsistent with his empirical findings; the productivity hypothesis, though more consistent, is not easily measurable from an economic standpoint. Therefore, we likewise discard the productivity hypothesis. We believe that there is a model that better describes why particular groups of Asians do better relative to other ethnic minorities. We believe that the economic motivations can be described by external factors, and we use Borjas' immigration model in the attempt to evaluate the validity and source of the model minority stereotype.

3. The Immigration Model: an Intergenerational Roy Model

The question of how to model the model minority hypothesis is central to this paper. To do so, we will examine a model of immigration presented by Borjas in his 1993 article, "The Intergenerational Mobility of Immigrants." Here, Borjas presented a modified Roy Model of immigration that allows for intergenerational skill transfers, which will be the crux of our argument.

To start, however, we will examine the single-person household and their immigration decision. The log income distributions for a person residing in countries x (the source country) and country y (the US) are:

$$(1) \quad \log w_{xI} = \mu_{xI} + \eta v_I$$

and

$$(2) \quad \log w_{yI} = \mu_{yI} + v_I$$

where w_{jt} is the income in country j and time-period t . μ_{x1} is the mean income in the source country and μ_{y1} is the mean income in the US as if the entire population of the source country emigrated to the US. v is a random, continuous variable that represents the individual differences in skill between members of the society. η is the ratio of the variances of the wage distribution in country x to that of country y .

Assume that the costs of migration are a constant fraction of income. $\pi = C/w_{x1}$ Where π is the time equivalent cost of migration to the US. This is an important difference from the more generic human capital migration model as described by Chiswick in his 1999 article “Are Immigrants Favorably Self-Selected?” However it does not greatly impact our analysis for the purposes of this paper.

The solution that Borjas derived was:

$$(3) \quad I = \log [w_{y1}/(w_{x1} + C)] \approx (\mu_{y1} - \mu_{x1} - \pi) + (1 - \eta) v_1$$

Where immigration occurs when $I > 0$. This model implies that the immigration decision is inherently based on the relative means and variances of the source and destination country. For positive selection to occur, the agent must be highly skilled (coming from the right-hand tail of the distribution) and moving from a highly equal society (one with low variance) to a more unequal society ($\eta < 1$) (see figure 2). This creates the phenomenon colloquially known as “brain drain.” By contrast, a low skilled agent (coming from the left-hand tail of the distribution) would immigrate to the US if he/she is coming from a relatively unequal society (see figure 3). Moving to a society with an income distribution with a lower variance would mean that they would be closer to the mean than in their home society, thereby raising their real income.

Figure 2
Income distributions for country x and y resulting in positive selection or “brain drain”

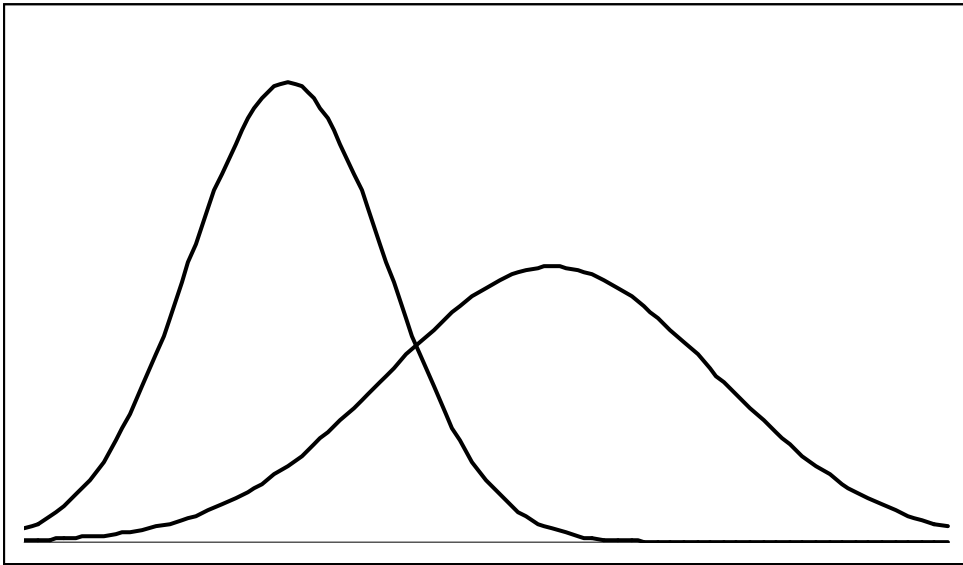
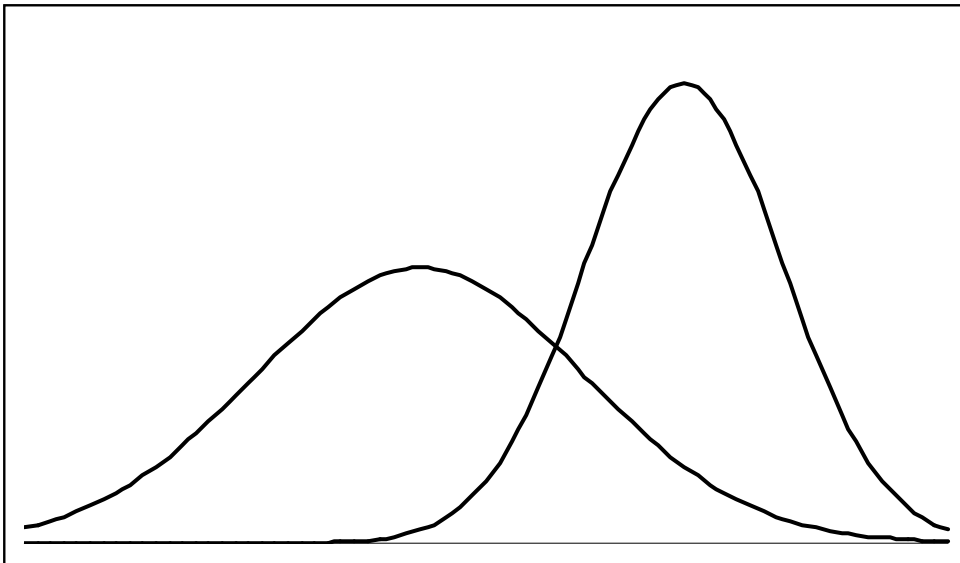


Figure 3
Income distributions for country x and y resulting in negative selection



The crux of our argument and the key modification that Borjas made to the Roy Model is the inclusion of intergenerational skill transfers. So far, the model satisfactorily explains the behavior of the immigrating generation, but the model minority stereotype applies largely to the next generation, the children of the immigrating generation. However, by allowing for the skills of the prior generation to be passed on to the next, and considering that a household now maximizes dynastic income as opposed to solely their own income, it becomes more evident where the trends observed in Asian Americans find their source.

Skills are transferred from generation $t - 1$ to generation t according to the Markov equations:

$$(4) \quad v_{xt} = \alpha_{xt} + \delta_x v_{x,t-1} + \varepsilon_{xt}$$

and

$$(5) \quad v_{yt} = \alpha_{yt} + \delta_y v_{y,t-1} + \varepsilon_{yt}$$

where v_{jt} is the skill variable for a person in country j and generation t , δ_j is a parameter between 0 and 1, and the ε_{jt} is a random variable with a mean of zero and finite variances. δ is the parameter describing the extent to which skills are transferred from one generation to the next.

The primary implication of this modification is that “national origin groups that do well in the US labor market in the first generation will tend to do well in subsequent generations. Similarly, the offspring of national origin groups that do poorly will tend to do poorly” (Borjas 1993, 116).

4. Borjas and the Model Minority

To apply the reasoning found within the Borjas model, it must hold that the populations under consideration are the children of immigrants. However, Chiswick points

out that due to the nature of Asian immigration Asian Americans are “predominantly the racially identifiable children of immigrants” (Chiswick 1983, 199). Therefore, Borjas’ findings on the nature of first generation American born minorities hold for the other studies presented in this paper.

Chiswick, however, did not come to a clear conclusion on why Filipinos and Latinos under-performed relative to whites and other Asians. “The reasons for the superior performance of the Chinese and Japanese and the poorer performance of the Filipinos are not fully understood” (Chiswick 212). He cites a “quantity-quality trade-off for children” as a potential cause for this discrepancy. Ultimately, he rejects the treatment of Asian Americans as one homogeneous group that is economically disadvantaged.

Borjas’ modified Roy Model, however, appears to give a more satisfactory explanation of the inter-nationality group differences within the pan-Asian label of Asian American. Under the model presented here, the Filipino immigrants are low-skilled workers thereby implying that the Philippines has an economy with a lower mean wage and a greater variance in income distribution than in the US. Data from a study undertaken in 1998 indicates that this is a reasonable conclusion. From 1961 to 1991 the Philippines had an average Gini coefficient of 0.49 (on a scale from 0 to 1 with 0 being perfect equality) compared to the 0.37 average of Western Europe, North America and Oceania (Oshima 361, Milanovic 66).

The performance of Japanese and Chinese Americans would similarly indicate that they are emigrating from more equal societies, with high skilled workers comprising the bulk of the immigrant pool. The same study finds that Japan and China both have average Gini

coefficients of 0.33 again compared to the 0.37 of Western Europe, North America, and Oceania (Oshima 361, Milanovic 66).

Thus, the implications of Borjas' model are somewhat borne out by Chiswick's data and indicators of the characteristics of the source economies. This provides a more satisfactory explanation of the mechanics of the model minority stereotype and the inherent flaws in broadly applying it to all Asian Americans.

5. Discussion: Biases and Assumptions

For the purposes of this paper, we chose to compare the Asian American groups to Latino/Mexican immigrants in our primary Chiswick section because of a similar immigration history. Comparing Asians to African-Americans was difficult because the majority of the African-American population was forced immigration hundreds of years before the population of Asians being considered here. Jews were also disregarded even though they are often cast in the same light as Asian Americans (i.e. having higher returns to education and greater human capital investment). However, their ethnic identity is both religious in nature and is relatively independent of the source country, complicating analysis significantly. They might be seen as a potential weakness in the model presented here as it does not sufficiently explain why a group that is independent of nationality falls under the same auspices as Asian Americans. A further study of the empirical data on Jewish Americans might prove fruitful in further developing this model, particularly since Chiswick found data on this group contradictory to his hypotheses. Whites were chosen as the benchmark as the basic premise of the model minority stereotype is that Asians do not need government assistance to compete with Whites (Chiswick 1988).

Furthermore, there has been a general paucity of literature specifically dealing with Asian Americans. Due largely to scarcity of data, studies on Asian Americans have only recently become available. Chiswick calls for “more data and more studies of...the understudied “successful” minorities.” (Chiswick 1988, 592) As the quantity of literature is limited, this somewhat complicates drawing conclusions from a survey of the literature. However, we believe that the studies described herein are sufficient to give some idea of the condition of Asian immigrants in the American economy.

The final complication that this paper faced was the inherent difficulty in defining a stereotype in economic terms. As a sociological phenomenon, the model minority stereotype has far-reaching effects that are not easily defined in terms of economics. Assumptions about physical stature and ability, pressures on Asian Americans in the classroom and workplace, as well as day-to-day interactions are impacted by what we have here defined as higher human capital investment and returns to education over other disadvantaged minorities. However, we were interested in the economic impact of this stereotype and applying a scientific method of modeling such a nebulous concept. Therefore substantial limiting of the definition was an unfortunate necessity.

6. Conclusion

Though Chiswick never reached a satisfying conclusion as to the relatively poor performance of Filipinos (and Hispanics), Borjas provides us with a new framework in which we can reexamine Chiswick’s work. Though it is somewhat difficult to tell, since there is some interference through cohorts of differing ethnicities, Filipino immigrants tended to be unskilled and often worked seasonally (Chiswick). This would imply a low value on the skills of the immigrating generation of Filipino Americans and thereby a low transfer of

skills onto the second generation. This is further reinforced by empirical findings in Borjas' article that indicated a declining wage rate across generations and low performance relative to other Asians.

This would further imply that for the Japanese and Chinese, relatively skilled workers would emigrate due to a greater possibility for skill transfer to their children. This is supported by the high number of years of schooling attained by second generation Japanese and Chinese Americans. With the rewards for being highly skilled greater in the US than in Japan or China, it is therefore in the best interest of both the immigrating generation as well as subsequent generations to immigrate to the US.

Borjas' model seems to explain the differences in performance of the different ethnic groups within the label Asian American. Since performance of second generation Americans is linked through intergenerational skill transfer to the characteristics of the country of origin, it is expected that certain immigrant groups would outperform others. Furthermore, the implication that subsequent generations of Asian Americans would regress towards the mean of US wages indicates that the perception of Asian Americans as a "model minority" is misleading but a temporary effect. As larger cohorts of third and fourth generation Asian Americans appear, the perceived increase in education and earnings should fade as they approach the population mean.

Thus, while Chiswick somewhat debunks the concept of all Asians as a "model minority," he leaves room within his results for the perception of Chinese and Japanese as somehow superior. However, Borjas' model seems to explain the apparent success in terms of the decision to emigrate from the source country. This provides a much more consistent and rigorous world-view than Chiswick, even though his data is consistent with Borjas'

model. Stronger empirical data across different nationalities and more ethnicities would further help to evaluate the merits of the Borjas model in describing the beginning and perpetuation of the model minority title bestowed on Asian Americans in the United States.

Appendix

Mailing Address:

PO Box 99389

Durham, NC. 27708

Email Address:

Jennifer T Wang: jtw14@duke.edu

DongWon Song: djs12@duke.edu

References

- Borjas, George J., Stephen G. Bronars. "Immigration and the Family." *Journal of Labor Economics* Vol. 9 Issue 2 (1991): 123-148.
- Borjas, George J. "The Intergenerational Mobility of Immigrants." *Journal of Labor Economics* Vol. 11 Issue 1 (1993): 113-135.
- Borjas, George J. "Self-Selection and the Earnings of Immigrants." *The American Economic Review* Vol. 77 Issue 4 (1987): 531-553.
- Chiswick, Barry R. "An Analysis of the Earnings and Employment of Asian American Men." *Journal of Labor Economics* Vol. 1 Issue 2 (1983): 197-214.
- Chiswick, Barry R. "Are Immigrants Favorably Selected?" *The American Economic Review* Vol. 89 Issue 2 (1999): 181-185.
- Chiswick, Barry R. "Differences in Education and Earnings Across Racial and Ethnic Groups: Tastes, Discrimination, and Investments in Child Quality." *The Quarterly Journal of Economics* Vol. 103 Issue 3 (1988): 571-597.
- Chiswick, Barry R. "The Earnings and Human Capital of American Jews." *The Journal of Human Resources*, Vol. 18, Issue 3 (Summer 1983), 313-336.
- Chin, Frank. *Bulletproof Buddhists and Other Essays*. Honolulu, Hawaii: University of Hawai'i Press, 1998.
- Lee, Stacey J. *Unraveling the "Model Minority" Stereotype*. New York: Teachers College Press, 1996.
- Milanovic, Branko. "True World Income Distribution, 1988 and 1993: First Calculation Based on Household Surveys Alone." *The Economic Journal* Vol. 112 (2002): 51-92.
- Oshima, Harry T. "Income Distribution Policies in East Asia." *The Developing Economies*

Vol. 36 Issue 4 (1998): 359-86.

Suzuki, Masao. "Success Story? Japanese Immigrant Economic Achievement and Return Migration, 1920-1930." *The Journal of Economic History* Vol. 55 Issue 4 (1995): 889-901.