Influences of Ethnic Group Identification on Earnings Capacity

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Abstract

Ethnic groups differ in their ability to perform in the economy. There are many explanations for this in the previous work done on the topic, but this paper finds that parents of different ethnic groups differ in their ability to transfer human capital to their children. This ethnic effect on the ability to raise children provides an explanation for how ethnicity impacts the development of human capital, and possibly for why inequality exists between ethnic groups. These findings reveal the importance of using a generational approach to ethnic inequality, as the success of one generation is dependent on their parental generation.

I. Introduction

Inequality of the economic performance of ethnic groups remains an issue today as it has over the course of American history. Ethnic groups can be identified in various ways, but will be studied in this paper based on their identification as white, black, Hispanic, and Asian. Many scholars have strived to answer why certain groups have been able to succeed, while others have floundered. Arguments based in all areas of study have surfaced, pointing to a multitude of explanations for the persistent performance gap between groups. For the most part, studies have taken place to examine what characteristics of the external environment limit the convergence of ethnic group performance. This paper will take an approach that will identify the reasons for why belonging to a particular ethnic group influences an individual's potential for economic success.

The previous work done on this subject has answered many of the questions about the influence of ethnicity on economic success. This work will be used to develop a theoretical model for earnings capacity based on the factors that are influenced by a person's ethnicity. Through the development of the theoretical model, certain gaps in the relationship between ethnicity and economic success are revealed to be missing in the previous literature. The next step then is to fill in these gaps, and to identify how these relationships fit into or change the theoretical model.

The intent of this method is to initially take a high-level approach, then to focus on the areas that the historical work has not exhausted. This process revealed that the relationship between ethnicity and the impact of an individual's family on economic

success had not been fully examined. The main finding of this paper shows this to be a significant relationship when determining the potential success of an individual.

II. Theoretical Model

The overarching model used in this paper will be the earnings capacity of an individual. An individual's earnings capacity is their potential earnings if they use their stock of human capital to its fullest. Garfinkel and Haveman (1977) demonstrate that earnings capacity portrays a much more accurate picture of poverty than real income. Earnings capacity essentially measures the human capital stock in an individual that allows them to generate income. Higher levels of human capital in an individual will provide higher earnings potential. Garfinkel and Haveman (1977) assert that the use of real income essentially underestimates the levels of poverty relative to the use of earnings capacity. According to their model, the proportion of poor individuals who are black, live in large families, have low levels of education, or between the ages of 22-65 are understated by other measures of poverty (Garfinkel and Haveman, 1977).

They go on to discuss how differences in earnings capacity and real income can be interpreted. When an individual has a higher earnings capacity than their income, we would expect for them to generate higher levels of income in the future. If these two measures of economic status match up, then we would expect them to remain in their current position. Earnings capacity is independent of individual preference of leisure over work, and other external influences to an individual's current income (recent college graduates for example). For these reasons, and the argument made by Garfinkel and

Haveman (1977), this paper will examine the influence of ethnicity on earnings capacity rather than other measurements of poverty.

Through the development of their model, Garfinkel and Havemen create a set of expectations for the relationship between earnings capacity and their independent variables that work together to create a capacity for lifetime earnings. As the quantity of on-the-job training, job experience, and education increases an individual's earnings capacity will increase (Garfinkel and Haveman, 1977). They also anticipate that factors like age, sex, ethnicity and location will also impact an individual's earnings capacity. These variables are all responsible for making up an individual's human capital. Therefore, it will be necessary to examine ethnicity's impact on the creation of human capital to determine how it impacts earning capacity.

Human capital is generated over the course of a lifetime. Individuals can create human capital in a similar way to a firm creating physical capital (Shultz 1961). If a firm adds to its stock of machinery and tools, its potential output is increased. Investing in capital is expensive, and firms differ in their decisions to invest in their capital. Similar to firms, humans also possess a form of capital, and can directly invest in this capital through expenditures on education, training, health and internal migration (Shultz 1961). As with firms, humans can invest in their form of capital differently, and it is important to recognize that human capital can differ on an individual basis depending on the opportunities and decisions that they have faced over their lifetime.

Shultz (1961) focuses on five major categories of self-investment that contribute to an individual acquiring capital: health and services, on-the-job training, formal education, study programs for adults, and migration to adapt to changing labor

conditions. An individual may invest differently in these categories for several reasons. Shultz argues that in our economic system there are a variety of hindrances to the investment of human capital. These hindrances include our tax system, discrimination towards groups of people, government regulation, and low earnings of a particular racial group. He asserts that like other forms of capital, the human form requires maintenance over time, and that our current tax system does not account for this actuality. He also believes that racial and religious discrimination alongside government regulation hinders free choice of profession, therefore keeping the level of investment in these areas below the optimal amount. Shultz discusses how the investment in human capital can be more difficult for racial groups such as African Americans, Puerto Ricans, and Mexicans, many who have low incomes and frequently face this discrimination. The implication of Shultz (1961) is human capital can be invested in, but certain factors, some external, some demographic, inhibit the investment and maintenance of human capital.

Hanushek (1978) also concludes that ethnicity of an individual can influence their investment in human capital. He discovers that income returned to educational attainment differs based on one's ethnicity and location. When comparing groups of white, black and Spanish individuals, he finds that a Spanish individual receives 5.22% more income for each additional year of schooling through 12^{th} grade, and an increase of 11.88% per year after 12^{th} grade. The average white individual in his study increased their expected income by 4.44% per year through 12^{th} grade, and 9.81% after 12^{th} grade. The average black individual received the lowest returns to education with an increase of 3.66% in early education, and 9.02% in higher education (Hanushek, 1978). These results indicate

that there is an uneven return to human capital investment based on ethnicity because ethnic groups receive different returns to their education.

When investigating this relationship further, however, Hanushek finds that much of this effect is due to the quality of education received by the individual. An introduction of an adjustment to control for the quality of education received by the individual led to a different set of results. With this adjustment the white group now received the least return to lower levels of education with their earnings increasing by just 4.55% per year of additional education. The black group's returns to lower levels of education increased from 3.66% to 5.08%, and the Spanish group increased from 5.22% to 7.12%. This adjustment demonstrates the returns to education if these three groups all received the same quality of education. Hanushek interprets the impact of this quality adjustment to say that the black group received a lower quality education than the white group, and this is the cause for them generating less return per year of lower education.

In addition to discovering the differing returns to education, Hanushek (1978) also finds that the returns to education differ on a regional basis. He performs a similar regression to the model previously discussed, but for nine separate regions of the United States, the Northeast, Mid-Atlantic, E. North Central, W. North Central, South Atlantic, E. South Central, W. South Central, Mountain and Pacific regions. The results from this model show that the white group received a higher return to education than blacks in every region, even when adjusted for school quality. The Mid-Atlantic and Southern regions yielded the highest returns. Within these regions, Hanushek also finds that local labor markets have an important impact on expected earnings. He finds that for individuals without a college level education, the condition of their local labor market

plays a much more significant role in determining their expected income than someone with a college education. He achieves this through the use of an aggregate explanatory power of earnings. The importance of local labor markets was especially prevalent for the black and Spanish groups, explaining 8.4% and 11% of their expected earnings respectively. The corresponding white group comparatively relied less heavily on local market conditions, with only 3% of their expected earnings explained by this variable. The reliance on local market conditions drop significantly for those with a college education in all three ethnic groups, indicating that the available labor market for a college educated individual extends across regional lines, becoming a national labor market. Hanushek concludes that the importance of local market conditions significantly impacts returns to education, possibly more so than ethnicity.

The work by Hanushek (1978) has important implications for modeling earnings capacity of an individual. His work indicated that all investment in human capital does not yield equal returns. The race and location of an individual can lead to their investment in education returning different levels of expected income. This conclusion indicates that education's contribution to human capital in an individual will differ based on the location of the individual, the conditions of their local labor market, and their ethnicity. Therefore, Hanushek's findings must be included with the previously discussed model for an individual's earnings capacity. To this point in the literature, the theoretical model for earnings capacity must also include an individual's educational attainment $\mathfrak{x}_1$, the quality of schooling $\mathfrak{x}_2$, their ethnicity $\mathfrak{x}_3$, and locational impact such as neighborhood or labor market characteristics $\mathfrak{x}_4$.

$$\mathcal{Y}_i = \beta_1\mathfrak{x}_1 + \beta_2\mathfrak{x}_2 + \beta_3\mathfrak{x}_3 + \beta_4\mathfrak{x}_4 + \ell$$

The impact of location is also important on the neighborhood level. As a complement to Hanushek's work with local labor markets, Edin, Fredriksson and Aslund (2003) find that ethnic neighborhoods have an effect on the economic success of its inhabitants. They find that ethnic neighborhoods create labor networks for the individuals living there, called network effects. These effects create extra labor opportunities for the inhabitants of an ethnic neighborhood that they would not receive if they did not live in that neighborhood. Edin, Fredriksson and Aslund discover that network effects are important for less skilled individuals. As the concentration of ethnicity increases in the neighborhood, expected earnings increases for these less skilled individuals. This conclusion is similar to Hanushek's (1978) findings that lower skilled individuals are highly dependent of local labor conditions. Edin, Fredriksson and Aslund find that ethnic neighborhoods can be beneficial for lower skilled individuals, like recent immigrants, as they are provided with additional labor connections from residing that they would not otherwise receive.

Borjas (1994) also finds that ethnic neighborhoods impact economic outcomes but in a different capacity than Edin, Fredriksson and Aslund (2003). In his previous work, he found that the socioeconomic performance of an individual is partially dependent on the skill level of their parents and the skill level of the ethnic group of their parents' generation. Borjas (1994) uses a two-sided approach to examine socioeconomic performance, testing both educational attainment and future income. He finds that ethnic neighborhoods act as mechanisms to transfer ethnic capital from one generation to the next. For ethnic individuals who live in highly concentrated ethnic neighborhoods (over 15% of their ethnic group), ethnic capital is more influential on the future performance of

these individuals than if they did not reside in an ethnic neighborhood. He concludes that this effect was increased due to the more frequent social, cultural, and economic ethnic group contact that would occur as concentration of this ethnic group increases.

In addition to neighborhoods acting as transfer mechanisms for ethnic capital, Borjas also finds ethnic neighborhoods can take over some of the parental effect on their children's socioeconomic performance. In neighborhoods with large concentrations of an ethnic group, as the impact of ethnic capital on individual socioeconomic performance increased, the impact of parents became less significant. These results provide some explanation for why the skill levels of different ethnic groups tend to not converge towards each other. The conclusions from Borjas (1994) indicate that the formation of ethnic neighborhoods will benefit highly skilled groups, and hurt less skilled groups. When highly skilled ethnic groups clustered into neighborhoods, the ethnic capital of that group increased the expected socioeconomic performance of the next generation. This worked in the opposite way for low skilled ethnic groups, who will project their low levels of ethnic capital to the next generation, lowering their expected level of socioeconomic performance. Ethnic neighborhoods act as an intra-generational transmission mechanism for ethnic capital, and are an important reason for why some ethnic groups continue to succeed over time, and some groups continue to struggle.

Another important factor for the creation of human capital is the theory of social capital. Coleman (1988) finds a relationship between the development of human capital and social capital. He finds that human capital in parents is important in the development of human capital in their children, and can be transferred to their children through social capital. Coleman refers to this form of social capital as social capital in the family. This

form of social capital exists in the relationship between the parents and the children in a particular family. Coleman bases his work on the theory that social capital in a family could be represented by the amount parental attention received by a child. Therefore, the more time a parent has to spend with a child, the more social capital exists in the family. The time parents spend with their children allows for the transfer of human capital to occur from parent to child (Coleman, 1988). His theory generally states that if social capital does not exist within the family, the level of human capital possessed by the parents will not have any impact on the children, as it cannot be transferred.

Coleman tests this theory and found that social capital in the family influenced the tendency for someone to drop out of high school. He uses three variables as a proxy for social capital: single or two parent household, number of siblings, and whether the parents expected their child to attend college. He assumes that there would be less social capital in the family if there were only one parent, as there would be less attention given to each child. Then, with more siblings, the attention given to each child would be diluted with additional brothers or sisters. Finally, with higher expectations of their kids, parents would be more invested in their education and would lead to higher social capital in the family. The results show that with higher levels of social capital in the family, students were less likely to drop out of high school.

Coleman (1988) provides an example of how social capital can be identified in a non-theoretical situation. In a case study on a public school district in the United States, it was discovered that Asian immigrant families purchased two copies of the student's required textbooks. The reason for this behavior was to allow the mother to learn the curriculum along with their child in order to provide assistance when needed. Many of

these Asian families were immigrants, without much experience working or learning in the United States. Coleman points to this case as an example of parents without much human capital, but the high level of social capital in their family helped their children succeed in school.

The theory of social capital in the family from Coleman's work is important in examining whether ethnic groups attain education differently. This raises the question: Does the ethnicity of a parent influence how they raise their children? Guiso, Sapienza, and Zingales (2006) find that parents belonging to different cultural groups tend to impart different beliefs to their children. This paper finds the link between religion, and parents teaching a preference to save, or thriftiness, to their children. They discover significant differences between parents belonging to different religious groups in their tendency to teach thrift to their children. For example, Catholics, Protestants, Buddhists, and Hindus are all more likely to pass on a preference to save than nonreligious groups. There were also differences between these groups, with Hindus and Buddhists being the most likely to pass on thriftiness at 7.2%, Jewish at 6.4%, Catholics 3.8%, and Protestants 2.7%. Although this is not directly related to ethnic parents transmitting human capital to their children, this finding proves that the identification to a particular social group influences the way parents raise their children.

Guiso, Sapienza, and Zingales' findings indicate there is cause to examine whether belonging to a particular ethnic group influences the way parents raise their children. This relationship has important implications for how ethnicity influences earnings capacity because of the ability of group identification to influence the way parents raise their children. The finding that group identification of parents influences

how children are raised has important implications for how ethnicity influences earnings capacity.

III. Econometric Model

The purpose of the econometric model is to determine whether parents' identification with an ethnic group impacts the effectiveness of transmitting human capital between generations. A standard OLS regression will be used to identify the impact of variables on the human capital development of individuals. This will answer a similar question as the one answered by Guiso, Sapienza, and Zingales (2006), but from an ethnic group perspective rather than a cultural group perspective. Through controlling for other family related variables, income, sex, and region, the model will isolate the effect that ethnicity alone has on the transmission of human capital from parents to their children. The econometric model that will be used to test this relationship follows.

$$\mathcal{Y}_i = \beta_1(\mathfrak{x}_{1mj} * \mathfrak{x}_{med}) + \beta_2(\mathfrak{x}_{dj} * \mathfrak{x}_{ded}) + \beta_3\mathfrak{x}_c + \ell$$

$\mathcal{Y}_i$ is a proxy for educational performance of the given student. The coefficients β_1 and β_2 measure the transmission of human capital from parents to their children. $\mathfrak{x}_{1mj}$ represents a mother of type j ethnic group combined with $\mathfrak{x}_{med}$, which gives the highest level of education attained by the mother. The combined dummy variables show the ethnicity of a mother, and their highest level of education attained. $(\mathfrak{x}_{dj} * \mathfrak{x}_{ded})$ has the same meaning, but for the fathers in the study. $\mathfrak{x}_c$ is a representation of the control variables included in the final regression. The combinations of dummy variables on β_1

and β_2 are both compared against the control group: white parents with no high school diploma. These coefficients will display the impact that each respective mother or father had on the educational success of their child in comparison to the control group. This variable configuration allows the comparison of the ethnic effect on human capital transmission from parents to children to occur across all ethnic groups.

The dependent variable in this model Y_i is a proxy for the educational success or commitment of the given student. This proxy is the score on the mathematics portion of a standardized test taken in high school. While this is not a perfect measure of educational success or commitment, it will allow the comparison of students at their current stage in their education. One benefit of the use of this particular measurement is the natural progression students must go through when learning mathematics. In order to succeed on the mathematics portion of a standardized test, a student will either have needed to study the required subjects prior, or to have already taken the required math classes. Both of these cases could be attributed to a greater parent commitment to their child's education, which can be examined in the results of this model.

IV. Data

The data set that will be used to test this model was taken by the National Center for Education Statistics. The particular study that will be used is the High School Longitudinal Survey of 2009. The study surveyed over 23,000 students across the nation to find information about their demographic characteristics, economic standing, education, and family. The original data set of 23,000 students was comprised of 51%

white respondents, 15% Hispanic respondents, 11% black respondents, 8% Asian respondents, 11% other identification and 4% missing this information.

This raw data set, however, contained severe amounts of missing data points, to the severity that it would have influenced regression results. In order to mitigate this influence, I sorted the dataset by the respondents with most missing responses in their survey. When looking at the set in this form, I discovered that the data had consistencies in the missing responses, as in those respondents with the most missing variables were mostly missing the same variables. These consistencies in missing variables remained present in all the respondents except for those with one or less variable missing from their responses. Looking at this remaining portion of the data, the consistencies of missing information no longer existed making this portion usable for a regression.

After this adjustment, I was left with just over 6,000 students in the set. To ensure there was no bias included in trimming the data, I checked to see how the ratios of ethnic groups changed. After the change, there were 56% white respondents, 15% Hispanic respondents, 10% black respondents, and 8% black respondents, with about 10% of the observations missing the ethnicity of the student. In addition to checking the proportions of students, I also discovered that the average income levels of each student did not experience any major changes. The edited data set does not appear to portray any bias in eliminating a significant portion of the original set.

The survey produced the following information about the students: score on the math portion of nationally administered standardized test, sex of student, ethnicity, general region of schooling, income of their family, poverty status, number of siblings, single or two parents in the home, ethnicity of parents, highest level of education attained

by each parent, and other variables that were less relevant to this model. The test score variable was normalized to a mean of 50, which according to the surveyors, allows better comparison of students. The other variables were presented as scales with each number representing a different meaning. For example, parents' education was on a scale of one through seven with one meaning no high school diploma, three meaning he or she achieved a high school diploma and so on up to higher levels of education. These variables were separated into dummy variables representing the highest level of education attained by each parent.

V. Results

To determine whether there is an ethnic effect, beyond the control variables, on the transmission process of human capital to parents to children, I used the ethnicity of the parent, and their highest level of education attained to determine their effect on their child's standardized test score. The regression model controlled for variables such as family income, poverty status, number of siblings, number of parents, ethnicity of child, and sex of child in order to determine the impact of the parents. The regression results are displayed in Appendix 1.

The model features an R-squared value of .2549, indicating the included variables only explain 25% of the expected variation of the test scores. This particular regression is intended to discover the impact of ethnic parents on their children. In order to do this, the variables that were included controlled for factors that would influence the ability of parents to raise the observed child. Therefore, variables about family, and economic status were included while school and specific locational information was not included.

The R-squared value indicates that this model predicts enough of the variation in educational success to examine the ethnic parental impact.

The interacted dummy variables of mother or father, ethnicity, and highest level of education attained are set against the control group: white parents with no high school diploma. This format will allow the cross comparison of ethnicities relative to this control group, and the comparison of how each ethnic group leverages their differing levels of education. The results are displayed in the following summary of the regression results.

Table 1: Mother's Education impact on test score (all in comparison to white parents without a high school diploma)

Mother	Asian	(t val)	Black	(t val)	Hispanic	(t val)	White	(t val)
No HS	6.15	3.53	-0.05	-0.03	0.63	0.61	control	control
HS	5.60	4.8	0.94	0.95	3.14	3.75	0.73	1.72
Assoc	5.62	3.62	3.53	2.86	1.52	1.38	1.55	3.06
Bach	5.84	5.48	4.17	3.41	5.79	5.42	4.26	8.77
Higher Ed	9.54	7	4.50	3.28	4.23	2.99	4.80	8.46

Insignificant difference btw control group

Ethnic Impact on Education
(test group impact - white group impact)
Mothers

	Asian	Black	Hispanic
HS	4.87	0.21	2.41
Assoc	4.07	1.99	-0.03
Bach	1.58	-0.09	1.53
Higher Ed	4.74	-0.30	-0.58

Both coefficients compared are significant

Table 2: Father's Education impact on test score (all in comparison to white parents without a high school diploma)

Father	Asian	(t val)	Black	(t val)	Hispanic	(t val)	White	(t val)
No HS	0.42	0.21	-2.27	-1.1	-0.55	-0.59	control	control
HS	1.32	1.09	-0.22	-0.27	0.79	1.01	0.62	1.65
Assoc	4.57	2.82	-0.12	-0.09	-0.51	-0.39	1.72	3.15
Bach	5.78	4.99	3.36	2.65	2.42	2.24	3.72	8.3
Higher Ed	8.33	6.62	3.38	2.38	5.21	3.54	5.39	10.12

Insignificant difference btw control group

Ethnic Impact on Education
(test group impact - white group impact)
Fathers

	Asian	Black	Hispanic
HS	0.70	-0.84	0.17
Assoc	2.86	-1.83	-2.23
Bach	2.07	-0.36	-1.30
Higher Ed	2.94	-2.02	-0.18

Both coefficients are significant

These tables display the coefficients of the interacted dummy variables previously mentioned. The interpretation of these coefficients is fairly simply. In Table 1, we see that an Asian mother with a bachelor's degree would expect to raise their child's test score by 5.84 points. In comparison, we see that a white mother with a bachelor's degree would expect to raise their child's score by 4.26 points. The ethnic effect at this level of education of having an Asian mother instead of a white mother is a positive 1.58 points on this exam. The sub-tables labeled "Ethnic Impact on Education" summarize the difference between a mother and father of that ethnicity with the specified level of education, against the white parent of that same education level. This comparison demonstrates that the effectiveness in which a parent can leverage their education to the benefit of their child changes based on their ethnicity.

The Asian mothers and fathers in this model used their level of education more

effectively to benefit their children than the rest of the ethnic groups. At each level of education, both Asian mothers and Asian fathers had a higher positive impact on their child's expected score than any other group. Besides their child receiving more benefit than their peers from the other groups, the Asian parents also saw increasing returns with each passing degree, showing their incentive for Asian parents to seek higher degrees in order to improve the achievement of their child.

The black parent group displays a much different story than the Asian parent group. First, black parents do not make a significantly different impact than the control group, until the mother receives at least an associate's degree, or the father receives at least a bachelor's degree. This means that a black father does not make a significantly different impact on their child's educational success than a white parent who has no high school diploma until he receives a bachelor's degree. When receiving a bachelor's degree, black mothers and fathers only make slightly less of a positive impact on their children's performance than white parents, indicating they have a similar ability to white parents to leverage bachelor's degrees into their children's educational success. Like Asian parents, the black parental group generates more expected educational success for their child as they receive higher degrees, but the increase from bachelor's degree to higher education for both black parents is much smaller than the increase Asian parents receive.

The Hispanic parent group displays similar trends to the black parent group in relation to the control group with a few minor discrepancies. Hispanic mothers are the only group besides Asian mothers to have a significant impact from receiving their high school degree. As the Table 1 indicates, Hispanic mothers with a high school degree

would expect to increase their children's performance on the test by 3.14 points over the impact of the control group. Hispanic mothers were also very effective at leveraging their bachelor's degree to improve the performance of their children: receiving only .05 less benefit than Asian mothers.

Hispanic fathers display a much more similar story to black fathers than Hispanic mothers do to black mothers. Their impact on their child's performance only becomes significant after receiving a bachelor's degree, however, their impact is less beneficial than black fathers. After receiving their bachelor's degree Hispanic fathers benefit their children more than black fathers from receiving a higher education.

VI. Conclusion

The results provide an explanation for the inequality in human capital development of ethnic groups. As seen in these results, the Asian and white parents generally provide benefits for their child's educational achievement at lower levels of education, and provide more benefits at higher levels of education than the Hispanic and black parents. These findings provide reasoning for the persistent gap between skills of ethnic groups. If black and Hispanic parents were required to invest more in their education than white and Asian parents to only receive the same, or less increase of earnings capacity of the next generation, then it would explain why groups might lag behind others over time.

The theoretical model indicates that as parental human capital increases, the earnings capacity of their child will also rise. The findings in this paper indicate that this relationship is altered when ethnicity is included in the model. Individuals should expect

to receive varying levels of human capital based on the ethnicity of their parents. For example, individuals with Asian parents can generally expect to receive a higher level of human capital transmission from their parents than the other groups in this study, giving them an advantage in the development of their own human capital. This general conclusion is consistent with the previous literature on the subject, which indicated that ethnicity significantly impacts the socioeconomic performance of individuals.

These findings lead to the discussion of why a person's ethnicity alters their ability to transfer human capital to their children. When discussing social capital in the family, Coleman (1988) provides a basis for answering this question. The different levels of social capital in families can explain the varying levels of parental impact on educational attainment across ethnic groups. The example that exhibits this relationship particularly well is the case study on Asian families discussed by Coleman (1988). These families demonstrated very high levels of social capital, and potentially provide an explanation for why the Asian group in this study returned more benefits for their children. One explanation is the Asian culture might have a deeper commitment to education than the other groups in this study. This would indicate that being a part of the Asian ethnic group leads parents to place a high importance on their child's education, but identifying with the black ethnic group would lead parents to place less importance on their child's education.

This explanation could possibly be interpreted with Borjas' (1994) theory of ethnic capital. If an ethnic group is relatively highly skilled, parents might be led to have higher expectations for their children because of the success of their peer group and therefore be more committed to their education. Examining the relationship between

parental commitment to education and the success of their ethnic peer group might reveal why ethnic capital is so important in the economic development of new generations.

Another explanation for why ethnic groups vary in their ability to transfer human capital between generations resides in the findings of Guiso, Sapienza, and Zingales (2006). While these authors focused on religious groups, this theory could potentially apply to parental identification to ethnic groups. Norms for ethnic group child rearing would influence the values that are passed through generations of ethnic groups. Applying the same methodology to ethnic groups as Guiso, Sapienza, and Zingales (2006) did to study cultural groups might reveal any variations in the values that parents of particular ethnic groups tend to impart on their children.

The results in this paper indicate that ethnic groups differ in their ability to transfer human capital between generations. The results, however, do not tell us why this occurs. Understanding that this transmission process severely impacts the human capital development of ethnic groups, especially those that are already struggling, reveals an important area in which to focus our studies. In order eliminate performance gaps between ethnic groups, multi-generational approaches of policy-making must be considered. In other words, in order to help the next generation, the previous generation of an ethnic group must have already been addressed. Improving the ethnic capital of a particular generation, and that group's ability to transfer that capital would theoretically allow that group to improve its economic position. Identifying the best ways to improve parent's ability to transmit human capital to their children surely provides grounds for further research.

Appendix 1:

Number of obs = 6026 R-squared = .2549 Adj R-squared = 0.2476

variable	Coef.	Std. Err	t
sex	-0.55	0.23	-2.4
south	-0.67	0.33	-2.01
northeast	0.50	0.40	1.25
midwest	0.14	0.36	0.4
blackpoverty	-3.17	1.02	-3.12
hispanicpoverty	0.25	0.79	0.32
asianpoverty	-0.90	1.42	-0.64
hispanic	-2.81	1.10	-2.57
black	-2.31	1.18	-1.96
asian	5.12	1.64	3.11
singleasianmother	-3.42	2.07	-1.65
singlehispanicmother	-1.38	1.31	-1.05
singleblackmother	-1.80	1.26	-1.43
whiteincome	0.32	0.05	6.35
hispanicincome	0.56	0.13	4.16
asianincome	0.31	0.16	1.92
blackincome	0.13	0.19	0.68
blacktwoparents	0.31	1.14	0.27
hispanictwoparents	-0.37	1.08	-0.34
asiantwoparents	-4.16	1.57	-2.64
asiandadnohs	0.42	2.04	0.21
asiandadhs	1.32	1.21	1.09
asiandadassoc	4.57	1.62	2.82
asiandadbach	5.78	1.16	4.99
asiandadhigher	8.33	1.26	6.62
blackdadnohs	-2.27	2.07	-1.1
blackdadhs	-0.22	0.82	-0.27
blackdadassoc	-0.11	1.28	-0.09
blackdadbach	3.36	1.27	2.65
blackdadhigher	3.38	1.42	2.38
hispanicdadnohs	-0.55	0.92	-0.59
hispanicdadhs	0.79	0.78	1.01
hispanicdadassoc	-0.51	1.31	-0.39
hispanicdadbach	2.42	1.08	2.24
hispanicdadhigher	5.21	1.47	3.54
whitedadhs	0.62	0.37	1.65
whitedadassoc	1.72	0.55	3.15
whitedadbach	3.72	0.45	8.3
whitedadhigher	5.39	0.53	10.12
whitemomhs	0.73	0.43	1.72
whitemomassoc	1.55	0.51	3.06
whitemombach	4.26	0.49	8.77
whitemomhigher	4.81	0.57	8.46
blackmomnohs	-0.05	1.72	-0.03
blackmomhs	0.94	0.99	0.95
blackmomassoc	3.54	1.24	2.86
blackmombach	4.17	1.22	3.41
blackmomhigher	4.50	1.37	3.28
hispanicmomnohs	0.64	1.04	0.61
hispanicmomhs	3.14	0.84	3.75
hispanicmomassoc	1.53	1.11	1.38
hispanicmombach	5.80	1.07	5.42
hispanicmomhigher	4.23	1.41	2.99
asianmomnohs	6.15	1.74	3.53
asianmomhs	5.61	1.17	4.8
asianmomassoc	5.62	1.55	3.62
asianmombach	5.84	1.07	5.48
asianmomhigher	9.55	1.36	7
_cons	49.09	0.57	86.41

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