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INTERGENERATIONAL TRANSFER OF HUMAN CAPITAL AMONG IMMIGRANT FAMILIES

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ABSTRACT

While immigrants in the United States tend to earn less than comparable natives, their children close the earnings gap. The purpose of this study is to determine how differences in intergenerational transfer of human capital between immigrant families and native families affect different earning outcomes for respondents of each group. Specifically, this study uses a human capital framework to analyze both the direct effect of parental education on respondent earnings and the indirect effect on earnings by first affecting respondent education, which in turn affects respondent earnings. Data from the 1979 National Longitudinal Survey of Youth allows background variables within a family from 1979 to be related to respondent earnings in 2006. Thus, human capital investments made by parents can be linked to respondent outcomes several years later. The analysis shows that while parental education is a strong predictor of respondent education and earnings in the native population, it is weaker for second generation immigrants. Perhaps second generation immigrants overcome deficiencies in their parents' human capital through higher levels of motivation.

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In 1970 the foreign-born population in the United States was 4.7%; in 2003 it had increased to 11.7% (Census, 2009). Since revisions to the Immigration and Nationality Act began in 1965, relaxing the 1920's quota system, the number of immigrants has climbed to new heights. An important implication of the increasing number and diversity of immigrants is the increasing number of immigrant descendants. As this number grows, it becomes increasingly important to study the differences in human capital that immigrants offer compared to natives, and how that human capital benefits their children. This study will compare the intergenerational transfer of parental human capital from parents to children for native and immigrant families. The major focus is on how the human capital of immigrant parents affects the earnings of their children.

1 Review of the Literature

The statistical phenomenon of "regression towards the mean" accounts for some of the improvement in earnings second-generation immigrants experience over their parents. Theoretically, second-generation immigrants should naturally do better than their parents who perform below the native mean, but they should not, due solely to statistics, perform above the native average (Borjas, 2006). Previous research can be divided into two schools of thought on this issue. Some work, especially early research, supports the theory that second-generation immigrants outperform natives, while other studies conclude that second-generation immigrants do not perform above the mean but merely regress towards it.

Advocates of regression beyond the mean assume there is something unaccounted for that gives second generation immigrants the extra boost to outperform comparable natives (Borjas, 2006). Djajic (2003) proposes that while immigrants are at the mercy of discrimination and are likely to settle for a low-wage job, their children will not accept discrimination, thus earning higher wages than their parents. Complementing this line of reasoning is the theory that immigrants have very high levels of motivation and pass them on to their children. This, along with assimilation into the U.S. labor force, accounts for second-generation immigrants earning more than natives, thus surpassing the mean.

These conclusions, however, are misleading because early experimental designs considered members of different generations (immigrants and second-generation immigrants) within the same census year. The problem here is that because different cohorts often have different characteristics, the results may be confounded (Borjas, 2006).

Subsequent research gathered cohort data from different census years (immigrant data from 1940 and second generation data from 1970). Thus, it was assumed that many of the second-generation immigrants were direct descendents of the 1940 immigrants (Borjas, 2006). Hum and Simpson (2007) concluded that early single-census research found second-generation immigrants to outperform their parents and their children (regression beyond the mean), while later multi-census research found the second- and third- generation immigrants inherit the disadvantage faced by their ancestral immigrants (regression toward the mean but not beyond). Multi-census designs still have inherent confounds, including changing social patterns. For example, research has found a large increase in labor force participation among second-generation women over time, but this does not account for the societal increase for all women across the society. To this end, the factual difference between the two cohorts is probably overstated with this design (Borjas, 2006).

Chiswick and Miller (2009) found that immigrants are more likely to be over-educated or under-educated for their jobs than are natives. Over-education among immigrants is due to the imperfect transferability of human capital across nations and diminishes over time as the workers can prove their qualifications. Under-education occurs when immigrants specialize in a specific skill or substitute immense motivation to accommodate for their lack of education (Chiswick & Miller, 2009). For example, if an immigrant and a native have the same job and level of education, the immigrant may supplement his or her education

with other skills or work harder and longer so that the immigrant will be the employee to get a raise. This theory does not allow for all second-generation immigrants to improve beyond natives, but does allow under-educated workers to specialize and appear to rise above the mean for natives with the same education.

In support of the over- and under- education theory, Roy's Model argues that immigrants tend not to be average representatives of their origin countries. Because the move to America is not geographically difficult or expensive, immigrants from nearby and poor nations likely possess less education and general human capital than the average citizen of their countries (Borjas, 2008). In the case of negative selection, for instance, a poor person who receives little government assistance can move to America and receive higher income through work and transfers, thus benefiting despite lower-than-average human capital and a low-skill job.

People from faraway nations, demonstrating positive selection, tend to represent above-average levels of human capital, relative to their own nation. With regard to social institutions, citizens of more socialist countries will benefit if they are among high wage earners in America due to lower taxes (Borjas, 2008). Thus, Roy argues that second-generation immigrants from some countries perform above the native mean due to positive selection.

2 Theoretical Model

To analyze the earnings of second-generation immigrants, the most appropriate theoretical framework to use is human capital theory. The basic theory is that, as with a firm, individual people invest in themselves, through education for example, in the hopes of reaping higher returns, often in the form of income. These investments in human capital produce all the income generating skills and productive knowledge the person has.

Of special importance to the analysis of second-generation earnings is Alfred Marshall's work, which stated that human capital investments are long-term and emphasized the function of the family as a unit in acquiring these skills and knowledge (Rosen, 2008). This results from the motivation of parents to invest in their children in the hopes of securing them higher earnings in the future. The present project will use human capital theory in predicting the success (measured in earnings) of second-generation children based on the human capital of their parents.

One implication of human capital theory is that as the second generation acquires more U.S.-specific human capital than their parents, they should experience upward income mobility and some sort of regression toward the mean earnings of natives. Chiswick studied intergenerational mobility of human capital among immigrants and their native-born children and found that while immigrants earn much less than comparable natives, their second-generation children earn more than comparable natives (Rosen, 2008).

The work of Chiswick acts as a foundation for the current analysis of second-generation earnings. Using his findings along with previous work in the field, the intergenerational mobility of immigrant and native human capital can be further analyzed. Based on

previous literature and an understanding of the theory of human capital, it is hypothesized that second-generation immigrants will attain higher levels of education and thus record higher earnings than immigrants, and possibly natives, due to their high level of human capital contributed by their immigrant parents.

3 Data

The data used in this study is from the National Longitudinal Survey of Youth beginning in 1979 (National Longitudinal Survey, 2009). The data set follows 12,686 men and women who were between the ages of 14 and 22 years old in 1979, and contains information about family history, education, and labor force participation. It is assumed that most of these participants lived at home at the time of the 1979 interview and thus reflect the direct influence of their parents. The most important aspect of the NLSY is that it is longitudinal. This allows respondents to be tracked from a young age, when they are presumably inheriting human capital from their parents, through adulthood when they are settled into the labor market.

An initial problem with the data, however, is that there is no direct racial information. The question offered included political affiliations, nationalities, and race within the same set of answers. Thus, the thirty possible responses to this question were divided into two distinct categories: Close to the U.S. and Not Close to the U.S. Close includes Cuban, Chicano, Mexican, Mexican-American, Puerto Rican, and Other Hispanic, so that all other responses are coded as Not Close. This strategy reduces the immediate problems with the variable in that the original coding mixed places of origin and ethnic/racial identity. In the context of Roy's Model, the Close category represents immigrants who tend to underperform natives and the averages of their heritage nations, though geography is not the only variable in Roy's theory (Borjas, 2008). This is due to the negative selection of immigrants from places near the U.S.

The dependent variable used throughout this paper is usually Respondent Earnings (the dollar amount earned in 2005 from wages, salaries, and tips before taxes). The Immigrant Parents variable (defined as 1 if one or both of the parents was born outside of the U.S.) measures the effect of having immigrant human capital available on future earnings, and thus, is the primary variable of interest in this study. Parent Education (the higher of either the mother's or father's education measured from 1 to 20) is predicted to be the most powerful variable in predicting respondent earnings due to extensive literature showing a strong correlation between it and child earnings (Perreira, Harris, & Lee, 2006). Respondent Education (Highest grade completed from 1 to 20 as of May 2006) is important as a control for most analyses but is also the dependent variable in one regression. The presence or absence of a Library Card (defined as 1 if there was a library card present in the respondent's household at the age of 14) serves as a proxy for parental motivation. Having a library card signifies motivation by an adult either to increase his or her knowledge, or possibly to increase that of the entire family. Family Size (the number siblings the respondent has) is included to control for competition for resources within the family. Parents can offer all their spare time to a single child while they must divide their time if they have several

children. Thus respondents with more siblings may have less interaction with their parents and may receive less of their parents' human capital (Lynn, 1996). A dummy variable for sex (defined as 1 for females) is included as an important control because males and females tend to earn different amounts. The final variable, Close, is included as a control in view of Roy's Theory (Borjas, 2008).

4 Analysis

The research in this paper will use longitudinal data so that the second-generation immigrants can be linked directly to their immigrant parents. The data base allows exact matching of immigrant parents with their second generation children. This will reduce cohort bias found in cross-sectional census studies that were critiqued by Borjas (2006).

4.1 Descriptive Statistics

Simple descriptive statistics shown in Table 1 compare second generation immigrants to natives. Within the data set, second-generation immigrants do earn significantly more than natives and obtain significantly higher education levels. The low significance of the earnings difference (probability equals .017) may be due to high variation of earnings in the second generation immigrant population, possibly reflecting different characteristics based on country of origin. This supports the observations of much of the previous research, notably Djajic (2003) that show second-generation immigrants surpass the native average level of education, thereby regressing beyond the mean on this measure. Table 1 also shows that immigrant parents have significantly lower levels of education than natives. This undermines the assumption offered that parental education is a strong predictor of respondent education (Perreira, Harris, & Lee, 2006). Thus, second-generation immigrants appear to be propelled into above-average earnings by something other than parental education.

One implication of Roy's theory of negative and positive self-selection is that immigrants from nations close to the United States will underperform natives while immigrants from faraway nations will outperform natives (Borjas, 2008). Though Roy also considers several other factors of self-selection, including income equality in both the origin and target countries, social institutions among others, this analysis will only consider geographic relation of the origin country to the U.S. Comparing education levels of the parents of second generation immigrants who are from places close to the U.S. to those who are from places that are not close will identify whether positive and negative selection occur in this limited form of Roy's theory. Furthermore, a comparison of Close and Far second generation immigrants will determine whether negative and positive selection (from the limited definition of Roy's theory used) of immigrants is stable into the next generation. These three comparisons are presented in Table 2, and each one of them supports Roy. The largest difference is, as expected, found in the Parent Education variable. The Close and Far groups begin to converge in the second generation, showing smaller differences, and may converge completely after many generations in the United States. This supports the

above-mentioned precaution that the second generation immigrant sample may have more variation than natives. These conclusions require precaution because the identification of place of origin was subjective—both in initial selection and group assignment—but they do make it apparent that this distinction (Close or Far) should be used as a control variable throughout the rest of analysis.

Table 1: Descriptives of Second-Generation Immigrants and Natives (Standard Deviation)

	Second-Generation Immigrants		**Natives**		**Mean Difference t-test**
Dependent Variable:					
Wages and Salaries	$51,465.07	(48588)	$45,689.44	(46428)	-2.378*
Independent Variables:					
Parent Education	10.29	(4.580)	11.96	(3.048)	11.18***
Respondent Edu EduEEducation	13.52	(2.617)	13.29	(2.436)	-2.08*
Library Card	75%	(0.435)	71%	(0.455)	-1.92
Family Size	3.96	(2.734)	3.83	(2.623)	-1.09
Close	58% 494	(0.494)	8.9%	(0.285)	-34.88***
Female	50%	(0.500)	51%	(0.500)	0.63
Approx. Sample Size	379		4872		

*** significant at.00 level ** significant at.01 level * significant at.05 level

Table 2: Descriptives of Close and Far second generation immigrants (Standard Deviation)

	Close		**Far**		**Mean Difference t-test**
Parent Education	8.36 years	(4.33)	12.90 years	(3.50)	12.389***
Respondent Edu	13.15 years	(2.56)	14.03 years	(2.62)	3.794**
Earnings	$46,330.94	(41541.18)	$58,990.88	(56680.75)	2.567**

*** significant at .001 level ** significant at .01 level * significant at .05 level

4.2 Oaxaca Decomposition

Having identified a difference in earnings between second generation immigrants and natives, a Oaxaca Decomposition is performed to explain the cause of this gap. According to the Oaxaca Decomposition, this difference in earnings is the result of two causes: different means and different returns (Oaxaca, 1973). First, there can be different characteristics between natives and second generation immigrants that cause part of the difference in earnings. For example, the average educational attainment of natives is lower than it is for second generation immigrants. Second, a portion of the earnings gap could be due to differences in returns from these characteristics. For example, an additional year of education could produce a larger increase in earnings for one group than the other.

The basis of the Oaxaca Decomposition are Ordinary Least Squares (OLS) regressions for both natives and second generation immigrants that predict earnings as a function of

family background characteristics and Respondent's own Education.

Native Earnings = $\alpha + \beta_1$ (Parental Education) + β_2 (Library Card) + β_3 (Female) + β_4 (Family Size) + β_5 (Respondent's Education) + u

Second Generation Immigrant Earnings = $\alpha + \beta_1$ (Parental Education) + β_2 (Library Card) + β_3 (Female) + β_4 (Family Size) + β_5 (Respondent's Education) + u

The Oaxaca decomposition requires that only one of the two equations presented above be chosen for estimation purposes. It is also sensitive to changes in coefficients; therefore, an insignificant coefficient is a strong threat to the accuracy of the technique. The demographic variable identifying how geographically close the respondents' ancestors were from the United States was initially included in this regression, as in Model 1 from the OLS Regression, but was dropped because it was not statistically significant. The native regression was chosen for estimation because all of its coefficients were statistically significant once Close was removed.

The native regression has highly significant results so that the decomposition will not be compromised, but the second generation regression has fewer significant variables. This is a preliminary indication that these variables are not equally important for both groups.

Table 3: Earnings regressions for Natives and Second Generation Immigrants

	Native Coefficients	t-statistic	Second Generation Immigrant Coefficients	t-statistic
Constant	-41682.118***	-10.176	-48308.017***	-3.578
Parental Education	1167.876***	4.939	1079.931*	1.982
Library Card	4570.328***	3.262	-1650.725	-0.308
Female	-24373.302***	-20.303	-31704.399***	-7.330
Family Size	-696.834**	-2.784	245.365	0.282
Respondent Edu	6265.159***	22.488	7612.725***	8.255
Sample Size	4872		379	
Adjusted R^2	.207		.272	
Durbin-Watson	1.87		2.06	
White's Test	384.89		67.08	

*** significant at .001 level ** significant at .005 level * significant at .05 level

The White's Test for the Second Generation Immigrant regression found heteroscedasticity.

The Oaxaca Decomposition proceeds in five steps.

1. (Second Generation Immigrant Earnings - Native Average Earnings); Earnings Gap = $51,465.07 - $45,689.44 = **$5,775.63**

2. The native and second generation immigrant earnings equations are presented in Table 3.
3. The estimated earnings for second generation immigrants assuming the native reward structure is calculated: -41,682.118 +1,167.876*(10.29 Parental Education) + 4,570.328*(0.75 Library Card) – 24,373.302*(0.5 Female) – 696.834*(3.96 Family Size) + 6,265.159*(13.52 Respondent Education) = **$43,521.91**. This is the difference due to returns.

4. To find the difference in earnings between the children of immigrants and those of natives that is due to different average characteristics, the earnings number calculated from the Oaxaca regression (in step three) is subtracted from the average earnings for native children. $45,689.44 - $43,521.91 = **$2,167.53**

5. Differing returns, as measured by coefficients, on these characteristics must cause the rest of the difference in earnings between second generation immigrants and natives. The difference due to means (step 4) is subtracted from the observed difference in average wages (step 1). $5,775.63 - $2,167.53 = **$3,608.10**

In sum, $2,167.53 of the $5,775.63 earnings gap can be attributed to differences in characteristic averages. These may include different average levels of parental or respondent education, different probabilities of having a library card, different ratios of males to females, or different average number of siblings. This only makes up 37.5% of the earnings gap, so the reward structures (i.e., returns) must be operating differently for the two groups.

Over $3,500—62.5%—of the earnings gap is due to differences in the returns the children of natives and those of immigrants receives on the included variables. Somehow second generation immigrants acquire more from each additional unit of some or all of these characteristics than comparable natives.

Finally, two simple decompositions are executed to determine the effect of each of the education variables. To find the effect Respondent Education has on the earnings gap, the difference in averages (average Second Generation Immigrant Education – average Native Respondent Education) is multiplied by the coefficient obtained from the native regression. Again, the native regression is used. This (0.23*6,265.159) yields a positive $1,440.99, or 24.95% of the total earnings gap. Thus, Respondent Education is responsible for second generation immigrants earning approximately $1,500 more than natives. Using the same technique, the effect of Parental Education was found to be a negative $1,950.35, or -33.77% of the gap (-1.67*1167.876). The negative sign means that second generation immigrants earn about $2,000 less than natives because of this variable. This is largely due to the higher average of native Parental Education.

4.3 Path Analysis

Thus far, the Oaxaca Decomposition determined that most of the difference in earnings between second generation immigrants and natives is due to differing returns (rather than differing mean characteristic values). Further decompositions found parental and respondent education to both be highly responsible for these differing returns. Thus, the next step is to investigate the path of returns by determining the relationship between Parental Education and Respondent Education in regard to Respondent Earnings. While parental human capital (especially parental education) can affect respondent earnings directly, it is likely that it also works through the intervening variable of respondent education.

The direct effect maps the relationship between the parents' human capital to the respondent's 2006 earnings. This path indicates the effect that background variables,

specifically parental education and characteristics of the respondent's childhood home, have on the respondent's future earnings. Directly, a parent may teach his or her child at home, thereby increasing the child's human capital. With increased human capital, the child will be more valued in the labor market and should earn more.

The indirect path is mapped in two steps: the first step measures the effect of parental human capital on respondent education, and the second step measures the effect of respondent education (with parental capital characteristics held constant) on respondent earnings. Thus, there are two regressions needed to measure the indirect path and a single regression to measure the direct path. Parents can indirectly affect a child's earnings by affecting the child's educational attainment. A parent's high education level, for example, may increase the education level of the child. The higher educational attainment of the child will, in turn, cause that child's earnings to be higher, regardless of parental human capital.

The path analysis, based on the work of Israel and Seeborg (1998), will determine the importance of both the direct and indirect paths of transmission for natives and second generation immigrants using three equations.

The first equation predicts Respondent Earnings from parental human capital background variables. It accounts for both the direct and indirect paths of intergenerational transfer of human capital, thus offering an estimate of the overall effect of Parental Education on Respondent Earnings. Thus, this regression model focuses on the impact of background characteristics without controlling for the respondent's own investment in human capital (for example, their own education). By not controlling for Respondent Education, the coefficient of Parental Education will pick up its own effect on Respondent Earnings along with any indirect effect it might have through Respondent Education. The **Background Regression** is:

$$\textbf{Respondent Earnings} = \alpha + \beta_1 \textbf{(Parental Education)} + \beta_2 \textbf{(Library Card)} + \beta_3 \textbf{(Female)} + \beta_4 \textbf{(Family Size)} + \beta_5 \textbf{(Close)} + \textbf{u}$$

The second equation includes a control for Respondent Education and provides two important details. Firstly, it gives an accurate prediction of the direct effect of Parental Education on Respondent Earnings because all other variables, including the respondent's own education, are controlled for. Secondly, the coefficient of Respondent Education explains how much one year of respondent education affects his or her own earnings. This value will be crucial in translating years of education into earnings. The **Direct Effect Regression** is:

$$\textbf{Respondent Earnings} = \alpha + \beta_1 \textbf{(Parental Education)} + \beta_2 \textbf{(Library Card)} + \beta_3 \textbf{(Female)} + \beta_4 \textbf{(Family Size)} + \beta_5 \textbf{(Close)} + \beta_6 \textbf{(Respondent Education)} + \textbf{u}$$

The final regression estimates the first part of the indirect path, predicting Respondent Education from Parental Human Capital. This equation explains how Respondent Education

reacts to one additional year of Parental Education. The **Intervening Regression** is:

$$\textbf{Respondent Education} = \alpha + \beta_1 (\textbf{Parental Education}) + \beta_2 (\textbf{Library Card}) + \beta_3 (\textbf{Female}) + \beta_4 (\textbf{Family Size}) + \beta_5 (\textbf{Close}) + u$$

The regression results of all three equations (Direct, Controlled, and Intervening) for natives and second generation immigrants are displayed in Tables 4 and 5 respectively, and the four empirical steps of the path analysis are carried out below each table.

Table 4: Path Analysis Regressions for Natives (t-statistic)

	Background (Earnings in $)		Direct (Earnings in $)		Intervening (Education in yrs)	
Constant	15865.71***	(4.65)	-42841.83***	(-10.27)	9.30***	(64.12)
Parental Edu	3287.78***	(13.81)	1256.53***	(5.15)	0.32***	(31.26)
Library Card	7294.54***	(4.97)	4494.19***	(3.21)	0.52***	(8.33)
Female	-22086.04***	(-17.58)	-24391.92***	(-20.32)	0.33***	(6.04)
Close	4326.53	(1.83)	3311.83	(1.47)	0.09	(0.88)
Family Size	-1169.93***	(-4.47)	-700.18**	(-2.80)	-0.08***	(-6.91)
Respondent Edu			6256.94***	(22.46)		
Sample Size	4872		4872		6307	
Adjusted R^2	.125		.207		.220	
Durbin-Watson	1.82		1.87		1.72	
White's Test	253.34		384.89		113.53	

*** significant at .001 level ** significant at .005 level * significant at .01 level

The Intervening D-W statistic was inconclusive at 5% and found autocorrelation at 1%. The White's test for the Intervening regression found heteroscedasticity at the 5% and 1% levels.

1. Each of the three regressions (Background, Direct, and Intervening) is estimated for the native respondents and shown in Table 5.
2. The direct effect of Parental Education (from the Direct Regression) is $1,256.53 of increased respondent earnings for every additional year of parental education.

3. For natives, the intervening regression model shows that one additional year of parental education causes about an additional one-third of a year of respondent education. Because one extra year of respondent education leads to a $6,000 increase in earnings, the additional one-third year of respondent education caused by the additional year of parental education translates into an estimated increase in earnings of: 0.32 years * $6,256.94 = **$2,002.22**. This is the calculated indirect effect for natives.

4. Adding the indirect effect of parental education on respondent earnings (calculated in step two) with the direct effect of parental education (from the Direct regression) yields the overall effect of parental education on respondent earnings. $2,002.22 + $1,256.53 = **$3,258.75**. This is slightly lower than the $3,287.78 effect predicted with the Background Regression.

Table 5: Path Analysis Regressions for Second Generation Immigrants (t-statistic)

	Background (Earnings in $)		Direct (Earnings in $)		Intervening (Education in yrs)	
Constant	39896.26***	(3.60)	-46338.38***	(-3.17)	10.84***	(21.36)
Parental Education	2143.46***	(3.43)	997.51*	(1.68)	0.17***	(5.76)
Library Card	6410.23	(1.11)	-1907.85	(-0.35)	1.15***	(4.38)
Female	-30.179.47***	(-6.42)	-31686.79***	(-7.32)	0.27	(1.21)
Close	-1869.92	(-0.33)	-1853.36	(-0.02)	0.15	(0.59)
Family Size	272.43	(0.29)	287.21	(0.33)	-0.03	(-0.63)
Respondent Edu			7612.60***	(8.25)		
Sample Size	379		379		484	
Adjusted R^2	.140		.271		.144	
Durbin-Watson	2.02		2.06		1.69	
White's Test	40.93		74.66		14.04	

*** significant at .001 level ** significant at .005 level
* significant at .01 level

The Intervening regression has autocorrelation at the 5% level and the D-W test for the Background regression is inconclusive at 5% and not autocorrelated at 1%. All three equations are heteroscedastic.

In order to compare the path of transmission in native families with that in immigrant families, it is necessary to repeat the path analysis for second generation immigrants.

1. Each of the three regressions (Background, Direct, and Intervening) is estimated for the second generation respondents and shown in Table 5.
2. The direct effect of Parental Education (from the Direct Regression) is $997.51 of increased respondent earnings for every additional year of parental education.

3. For second generation immigrants, one additional year of parental education leads to an additional one-fifth of a year of respondent education. Because one extra year of respondent education leads to a $7,000 increase in earnings, the additional one-fifth year of respondent education caused by the additional year of parental education translates into an estimated increase in earnings of: 0.17 years * $7,612.60 = **$1,294.14**.

   This is the calculated indirect effect for second generation immigrants.

4. Adding the indirect effect of parental education on respondent earnings (calculated in step two) with the direct effect of parental education (from the Direct regression) yields the overall effect of parental education on respondent earnings. $1294.14 + $997.51 = **$2291.65**. This is slightly higher than the $2143.46 effect predicted with the Background Regression.

The direct effect of parental education on respondent earnings is larger for native than immigrant families ($1,256 > $997). This signifies a difference in the effect of parent's education between natives and immigrants. An immigrant's additional year of education may lead to a lesser increase in children's earnings because the parent's education is not

fully applicable to America.

The indirect effect of human capital transfer is also larger for natives ($2,002 > $1,294). The main reason for this is that an additional year of education by immigrant parents causes a much smaller increase in the educational attainment of their children compared to the larger effect that native parents have on their children's educational attainment. This could easily be another argument for imperfect transferability of international human capital in America, but it may also have to do with preferences. Because many immigrant parents have relatively low levels of education, they may choose to stress aspects of their human capital other than education. Immigrants may transfer time management, work ethic, or motivation to their children that is independent of their own educational attainment. Native parents, however, may use their own education level as a goal for their children to meet or surpass.

This is an important conclusion because it requires further consideration of what causes second-generation immigrants to obtain higher levels of education than natives (Table 1), if it is not due to their parents' education.

Finally, the Path Analysis finds that for both groups the Indirect path of human capital transfer consists of over half of the total effect of parental education on respondent earnings (61.44% for natives and 56.47% for second generation immigrants). Both paths are stronger in the native population, due to the larger effect of native parental education on respondents in the United States. This further emphasizes the importance of culturally relevant human capital.

5 Conclusion

This study provides a detailed analysis of second-generation immigrant earnings compared to native earnings while controlling for cohort bias. Respondents with immigrant parents earn more, measured in wages and salaries, than natives. Though the exact reason for this is not identified, it is concluded that second-generation immigrants surpass their parents' levels of education and earnings, and also rise above native earnings. This does not appear to be merely regression toward the mean because the analysis suggests that second generation immigrants actively pursue higher success (i.e. receive significantly more education than natives and reap greater returns from their investments), which entails regression beyond the mean.

The Oaxaca Decomposition shows that the wage gap is mostly due to differing returns, rather than different average characteristics. This may be because the two groups have different reward structures or, following Chiswick and Miller's (2009) theory of under-education, because second generation immigrants learn to supplement their education with additional investments in human capital. A likely explanation is that second generation immigrants earn more money for each additional year of education by supplementing that education (Chiswick & Miller, 2009). One explanation, working through the idea of an "American Dream," is that because the children of immigrants are grateful for their American opportunities, such as education, they work harder to ensure that they reap as

much benefit from them as possible (Diajic, 2003). Native children, on the other hand, may see the same options of education as rights rather than privileges and may not be inclined to maximize their benefits. Another possible explanation relates to the inspiration of this paper: immigrants earn much less than comparable American-born workers. It is possible that the children of immigrants strive for higher returns on their investments so that they can financially support their parents. Contrariwise, the children of natives may not feel that responsibility, or to extend this reasoning, their parents may be able to support them financially so that they can accept less than optimal returns on previous investments.

The Path Analysis finds that both the Direct and Indirect paths of human capital transmission are stronger for native than immigrant families. While parental education is a good predictor of ultimate earnings for natives, the predictive power is not as strong for second-generation immigrants. There is a strategy among immigrant families that overcomes the low educational attainment of immigrants so that second generation immigrants regress beyond the native mean. One explanation borrowed from Diajic (2003), is that an "American Dream" motivates immigrants or their children to try harder. If they believe that America offers more opportunity, second- generation immigrants may feel obligated to take advantage of those opportunities, including education. Finally, the Path Analysis proves that the Indirect path is more important for both groups than the Direct path, emphasizing the importance of respondent educational attainment over the Direct effect of parental education on respondent earnings.

Future research could explore the level of motivation (the idea of an "American Dream") in immigrant families compared to natives. Parental assimilation and country of origin could also be controlled for. Finally, the social acceptance of immigrants and their families in America should be considered. It is important to understand the role natives play in letting immigrant families have the same opportunities as natives and accepting them into society.

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