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FERTILITY, EDUCATION, LABOR FORCE OUTCOMES, AND CULTURAL ACCULTURATION OF IMMIGRANTS

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ABSTRACT

Previous studies show that there are cultural factors associated with economic outcomes such as employment and labor force participation and non-economic outcomes such as education and fertility. Using immigration as a semi-natural experiment and using the Current Population Survey (1994-2020), we reexamine the link between labor force outcomes, fertility, and education of immigrants and their home country respective characteristics. We documented that an additional year of schooling in the home country is associated with a 0.45 and 0.24 years increase in education of first and second generation females, respectively. Moreover, a 1 percent higher female labor force participation in the home country is associated with a 0.26 and 0.16 percent increase in labor force participation of first and second generation females, respectively. Since the female labor force participation, education, and fertility are considered to contain cultural components, we interpret the results as intergenerational transmission of culture. However, the links are limited for second generations suggesting some cultural integration and acculturation to the new environment. We discuss the policy implications of the results.

Contribution/Originality: This study contributes to existing literature by examining the link between labor force outcomes, fertility, and education of immigrants and their home country respective characteristics.

1. INTRODUCTION

We live in a world with astonishingly different cultures in different timelines. Every society has a unique way of interacting with other timelines and with its own history. Tabellini (2010) points to the fact that culture evolves by two forces: First, the inheritance of traditions from previous generations, and second all contemporaneous interactions. Geertz (1973) defines culture as "*a historically transmitted pattern of meanings embodied in symbols, a system of inherited conceptions expressed in symbolic forms by means ... of which men communicate, perpetuate, and develop their knowledge about and attitudes toward life*". These transmitted patterns and inherited concepts evolve as a response and pose restrictions to other human institutions. On a historical horizon, war[1], famine[2], religion[3], political institutions[4],

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[1] Fernández, Fogli, and Olivetti (2004) uses the shock to FLFP caused by world war proxied by draft rate across states, as an exogenous variable and find that the wives of men whose mothers worked during this time are significantly more probable to participate in labor market.

[2] Mu and Zhang (2011) find evidence of different long impacts of Chinese Great Famine on women and men, e.g. Lower literacy rates of survivors women could be attributed to the culture of son preference.

economic pressures[5], geographical elements[6], and even environment and ecological factors[7], all create the ground, the seed, and all nutrition of what we may call culture[8]. A cultural trait could be a rational response to an economic need or religious belief or vice versa. Thus, reaching a Pareto optimal state of society is the aim of cultural evolutions. However, compared to other evolutionary traits of society, culture is highly momentous. Singing the Belavezha Accords or Ceausescu's last speech happened in one day which changed the whole political aspects of the eastern bloc in one day, but could the cultural beliefs of people who had evolved in socialist shadow keep up? To answer such question, Stanfield and Fuchs-Schündeln (2007) seeks differences in people's preferences among East Germans who migrated to West German states in years 1997 and 2002 and find significant differences between their viewpoint about the role of the state in different areas of social security and even concepts like luck and fate. However, there is a reverse effect that takes place in the shorter horizons. If the evolution of culture is slower than that of economic or political circumstances, then once isolated, it could be considered exogenous in economic decisions. In a world of extraordinary diversification in their civilizational timeframes and henceforth cultural disparateness, immigration leaves us with a good opportunity to investigate this reverse effect. Moreover, the broad variation in cultural origins among immigrants, and the probable deviation in their pace of cultural evolution, and the transmission of their cultural traits to the next generations, could be a reasonable baseline to assess the degree of assimilation among first and second generations which is a hugely debated and controversial topic, with so much implication regarding immigration policies. The sociological studies in cultural transmission and research that try to capture the cultural factors in economic outputs of individuals, intersect (at least at one point) at studying the degree of socalizability, assimilation, and conformity of second generations of immigrants in the host country. This cloverleaf of research is of great importance for the United States as one of the most, if not the most, important destination countries and a failure of such assimilation, as highlighted by Bisin and Verdier (2000) will pose the question on America as a melting pot. Although, immigration literature has experienced a shift towards studying the integration of immigrants and more essentially their offspring, their earnings, native-immigrant pay gap,

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[3] Herberg (1983) study the effect of religion in marriage decisions in US and finds no evidence of assimilation among Three Great Faith disciples. Bisin, Topa, and Verdier (2004) revisit this issue using 1972-96 General Social Survey and finds evidence consistent with religious homogamy, suggesting that followers of three great faith (Catholic, Protestant, and Jews) have strong preference for children of their own religious cast.

[4] The inter-correlation of culture and political institutions can be seen in these two papers: Fisman and Miguel (2007) studies how different levels of corruption among countries can facilitate the corruption behavior of individuals. It utilizes the failure of United Nations diplomats to pay parking tickets in Manhattan as a proxy for individual corruption and shows that cross country difference in corruption measured by a composite corruption index which is highly correlated with the transparency international ratings for each country could strongly explain the tickets for these officials. In another paper, Alesina and Giuliano (2011) establishes a causal effect of family ties in immigrants to different host countries on their civic engagement and political participation. It concludes that more dependency of individual on one's family as a financial security option will lead to less political participation.

[5] Individual preferences can be formed by macroeconomic circumstances. Alesina, Giuliano, and Nunn (2013) exploits different data sets at US and across countries to show that individuals who had experienced recessions and economic disasters at their early adulthood were more likely to believe in luck for success than effort and supported more state intervenes in economic distribution.

[6] Alesina et al. (2013) seeks the historical origins of preferences about role of women in society. Decedents and immigrants of societies in which traditionally practiced plough agriculture have less equal gender norms today. As noted by Pryor (1985) plough agriculture requires large tracts of land and soils that are not shallow, not sloped, and not rocky. Hence, a geographical coordination can be attributed to the view of gender equality in the current period and even for immigrants who has been born and raised in another society.

[7] In the working paper, Giuliano and Nunn (2017) an evolutionary anthropological hypothesis is being tested based on which societies with more stable environments are more likely to transmit their culture from one generation to the next. Hence, it constructs a data set for temperature levels of different part of glob from 500-1900 and finds that historical temperature stability of one country has strong explanatory power for the degree of cultural transmission among decedents of immigrants. Such populations exhibit more cultural persistence over time.

[8] The very word of *Culture* is originated from Latin word Culture which means cultivation (Dictionary, 2007).

educational achievements, labor market behavior and intergenerational mobility of their economic and non-economic outcomes has been widely investigated whether in case of US (Abramitzky, Boustan, & Eriksson, 2014; Angrist, 2002; Babacar, 2020; Bellido, Marcén, & Molina, 2016; Bhalotra & Rawlings, 2013; Black, Devereux, & Salvanes, 2005; Bleakley & Chin, 2010; Borjas, 1992; Borjas, 1993; Borjas, 1995; Borjas, 2015; Card & Peri, 2016; Carliner, 1980; Casey & Dustmann, 2008; Chiswick, 1977; Chiswick, 1983; Chiswick, 1988; Fernández & Fogli, 2006; Furtado, Marcén, & Sevilla, 2013; Houseworth & Chiswick, 2020; Manz, Sapienza, & Zingales, 2006; NoghaniBehambari, Noghani, & Tavassoli, 2020; Noghanibehambari, Tavassoli, & Noghani, 2020; Nollenberger, Rodr\'\iguez-Planas, & Sevilla, 2016; Tabellini, 2010; Tomes, 1981), European host countries (Algan, Dustmann, Glitz, & Manning, 2010; Bauer & Riphahn, 2007; Bozzano, 2017; Casey & Dustmann, 2010; Ekberg & Rooth, 2003; Heath, Rothon, & Kilpi, 2008; Riphahn, 2003; Schüller, 2015; Tabellini, 2010), Australia (Meng & Gregory, 2005), and Canada (Aydemir, Chen, & Corak, 2009; Bleakley & Chin, 2008).

Immigration provides a natural experiment to study the impact of social norms on economic and non-economic outcomes. To assess the effects of prevailing social beliefs in the home country, a model imposed on immigrants' outcomes would control for political and institutional factors and isolate cultural factors assuming many slow movements in cultural traits from one generation to the next. However, due to some reasons such as work permits for new arrival immigrants, citizenship barriers, and language proficiency deficiencies[9], a study on second generations seems more promising since such restraints are expected not to bind for them.[10] Fernández (2010) provides a review of recent research on the effects of cultural heritage and social norms on economic and non-economic outcomes of immigrants. As defined in this paper *"The epidemiological approach studies the variation in outcomes across different immigrant groups residing in the same country."*. The epidemiological approach applied in this paper had been widespread in the economics of immigration since the last two decades and more commonly last decade. In one of the earliest attempts, Carroll, Rhee, and Rhee (1994) tries to find a relationship between culture and saving rates among Canadian immigrants in 1982-86 Survey of Family Expenditure using cultural disparities in saving rate across countries between 1970-85. It finds no evidence of such a connection. Fernandez and Fogli (2009) tries to capture the role of culture to explain the large variations of economic outcomes among different ethnic groups and origins. It proxies culture by female labor force participation and fertility rate of immigrants home country at 1950 and shows that assuming these proxies reflect not only purely economic and institutional factors but also cultural preferences, they have strong explanatory power for variation of female labor supply behavior and fertility rates among second generation immigrants using 1970 Census Metro sample data. In one robustness check, it construct a measure of ethnic human capital as average education of immigrants group to gauge the externalities in human capital in originated in their ethnic group and finds that although the aggregate ethnic variables could explain part of the variation[11] in working hours and number of children, past female labor force and fertility still remained significant. Fernandez (2007) follows the same path for female working hours among second generation immigrants. Using 1970 Census data for second generation immigrants, it extract pertinent proxy variables in home country at 1990 assuming that many slow movements in cultural traits and beliefs in the home countries must give similar results as 1950. Furthermore, to obtain a more isolated proxy for culture, at least free of any reverse causality from economic and institutional environments, it uses the World Value Survey and the answers to two specific questions regarding the female role in the household and the role of a job in the independency of a woman and finds that cross country answers to those questions could explain second generation

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[9] Association of language proficiency and employment probability is investigated by Dustmann and Fabbri (2003). It finds evidence language expertise of non-white immigrants in UK has a significantly positive effect on likelihood of employment and lack of such competences is associated with earning losses.

[10] However, as shown by Casey and Dustmann (2008) there are evidences lead to intergenerational transmission of language capital and English fluency of the immigrants' offspring is highly affected by their parents' proficiency conditional on parental and family characteristics

[11] As noted in the paper, this notion had been shown before by Borjas (1992) and Borjas (1995).

American women working hours. Moreover, Issues in the gender pay gap, gender difference in labor supply, and gender gap in human capital investment have previously demanded a huge strand of literature (Bailey & Dynarski, 2011; Blau & Kahn, 1997; Blau & Kahn, 2000; Blau, Kahn, Liu, & Papps, 2013; Buchmann, DiPrete, & McDaniel, 2008; Cobb-Clark & Moschion, 2017; Goldin, 2014; Goldin, Katz, & Kuziemko, 2006; Lavy & Sand, 2015; Stanfield et al., 2007).

In this paper, we update the previous findings in this literature by providing evidence of intergenerational transmission of culture among immigrants. We proxy culture by female labor force participation, fertility, female education, and female employment status. Using Current Population Data over the years 1994-2020 and applying a difference-in-difference identification strategy, we show that cultural values and social norms in the home country can explain the behavior of first and second generation immigrants in the US. Having one additional child in the source country is associated with 0.37 and 0.16 more children among first and second generations, respectively.

The results of this paper have important policy implications regarding immigration and family planning. The fact that parts of labor force participation and fertility are driven by cultural norms help policymakers design optimal laws regarding family planning and immigration visas and to focus those policies that attempt to promote labor force participation towards individuals originating in countries with historically lower rates of female labor force participation and higher rates of fertility.

The rest of the paper is organized as follows: Section 2 reviews the data sources. In section 3, we provide the empirical strategy and econometric framework. Section 4 discusses the main results. We depart some concluding remarks in section 5.

2. DATA SOURCES

In order to analyze different aspects of the intergenerational transmission of culture, we use Current Population Survey files from January 1994 (the first year that CPS starts to ask mother and father birthplace) to September 2017 extracted from Flood et al. (2018). To avoid any double-counting, we eliminated all waves in which it is the second or more times that an individual is participating in the survey. The fertility rate is the number of own birth children to women. Consistent with the literature, we exclude women below 20 and above 50 for all analyzes of the fertility rate, so the number of children would more likely reflect the number of own birth children. The international average fertility rate data is extracted from DESA (2013) which covers around 132 countries that have sufficient matched observation in CPS and that contains data in all years between 1950-2000. We calculate ten-year average fertility rate for each country for decades following 1950 and then merge the resulting data set with CPS based on the country of birth for first generation immigrants and based on mother or father (foreign) country of ancestry for second generations.

Panel information on international education is withdrawn from two distinct sources. The first one is extracted from Lutz, Goujon, KC, and Sanderson (2007), in which educational attainments are calculated in five-year intervals between the years 1970-2000 and categorized for different genders in different age groups; a projection of educational levels for the population for different gender-age groups based on this dataset is presented in Samir et al. (2010). It reports the share of people with no education, only primary education, only secondary and only tertiary education in their selected sub-population based on sex and gender group in a way that the accumulated share equals 1 in each subpopulation. We exclude all subgroups with ages below 20 and above 64 years old.

The second dataset to be linked with CPS observations is withdrawn from Barro and Lee (2001). It builds up the dataset for populations over 15 and 25 years old for different male, female, and total population based on the years of schooling from 1960-2000 in five-year intervals. The years of schooling varies from 0 to 17. The data contains 142 countries with at least one observation of which 107 have complete information between the specified intervals among which 106 are matched with CPS and have enough observations. Moreover, we excluded data for

people less than 25 and we eliminated total variables since the gender-specific and gender-difference effects are variables of interest in this paper.

We exploit the Census Data in the years 1950, 1960, 1970, and 1980 to compute a proxy of cross-country panel for labor force outcomes based on labor force participation of first generation immigrants at their first 10 years of arrival. We excerpted the repeated cross-sectional data in an integrated form from Ruggles, Genadek, Goeken, Grover, and Sobek (2017). Consistent with the literature, we exclude all individuals less than 25 years which is a threshold age for completion of education. We exclude people above 55 which is considered a cut-off age of retirement and in addition, to eliminate systematic mortality rates that are more likely for people in the excluded age-range. All individuals with the unmatched birthplace (BPL) are taken out. Those who match but have observations less than 50 for each gender are excluded, too. This set is then combined with CPS based on BPL (Birth-Place) for first generations, and MBPL (Mother's Birth-Place) for second generations.

The state covariates are extracted from the following sources: income and Gross State Product (GSP) data are from NoghaniBehambari et al. (2020). The unemployment date is from the Bureau of Labor Statistics. Finally, the population composition data is extracted from SEER (2019).

3. ECONOMETRIC METHOD

We attempt to capture intergenerational transmission of education, fertility, and labor force participation among different generations of immigrants in the U.S. using 1994-2017 CPS files implementing the following equation:

$$y_{iscbt} = \alpha_0 + \alpha_1 Y_{cb} + \alpha_3 X_i + \alpha_4 Z_{st} + \eta_c + \zeta_s + \gamma_t + \lambda_b + \epsilon_{iscbt} \tag{1}$$

Where y is the outcome (labor force status, fertility, and education) of individual i in state s from source country c who belongs to birth cohort b observed at time t. The parameters η, ζ, γ, and λ are home country, state, year, and birth cohort fixed effects. In X, we include some individual characteristics. Individual controls include personal income, family income, sex, race, age, and marital status. In Z, we include some state covariate. State controls include average wage, income per capita, unemployment rate, percentage whites, percentage blacks, percentage foreign nationals, percentage males, percentage population aged 25-65, and GSP per capita. Y includes the average characteristics (labor force status, fertility, and education) of the home country computed from different methods and sources explained in section 2. Therefore, α_1 is the parameter of interest to capture the intergenerational transmission of social norms. Finally, ϵ is an error term.

4. MAIN RESULTS

First, we start by visualizing our data. Figure 1 shows the geographic distribution of education based on quintiles of the state average of education over the sample period. Figure 2 shows the geographic distribution of the share of immigrants (both first and second generation immigrants combined) across US states. Figure 3 shows the correlation between labor force participation rate and education across countries for four exemplary years.
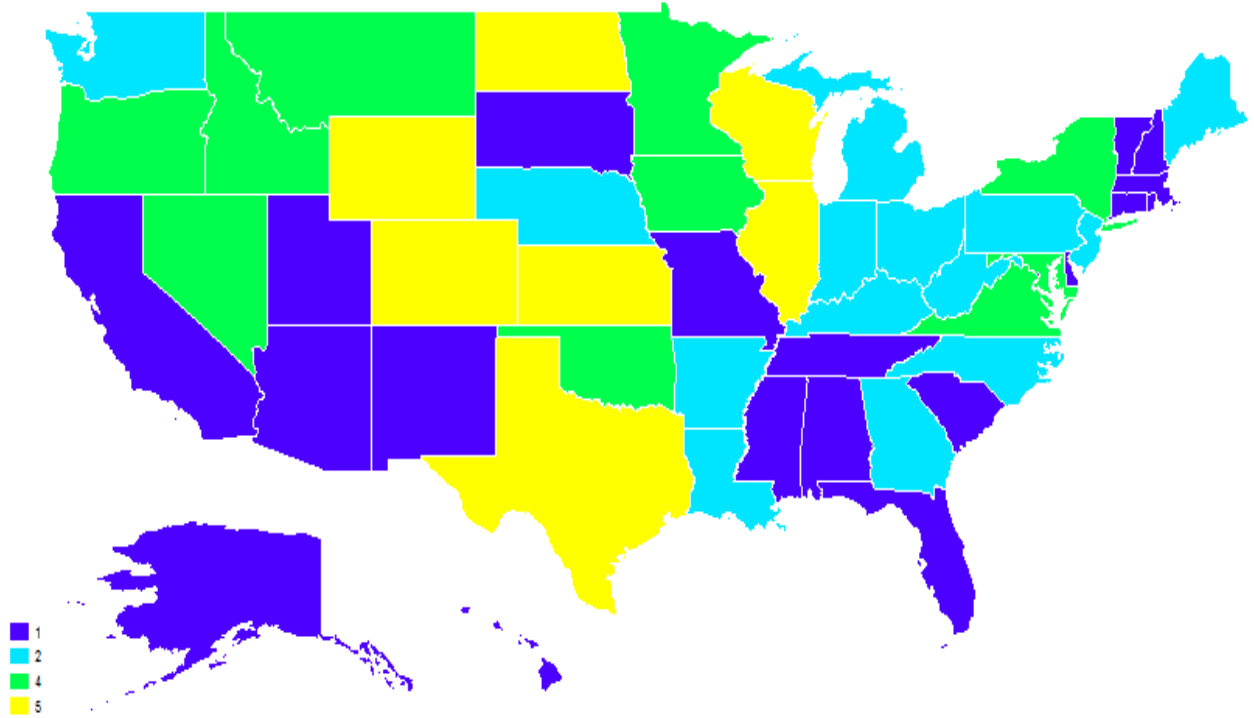
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Quintiles of Education

Figure-1. Geographic distribution of educational levels across US States.

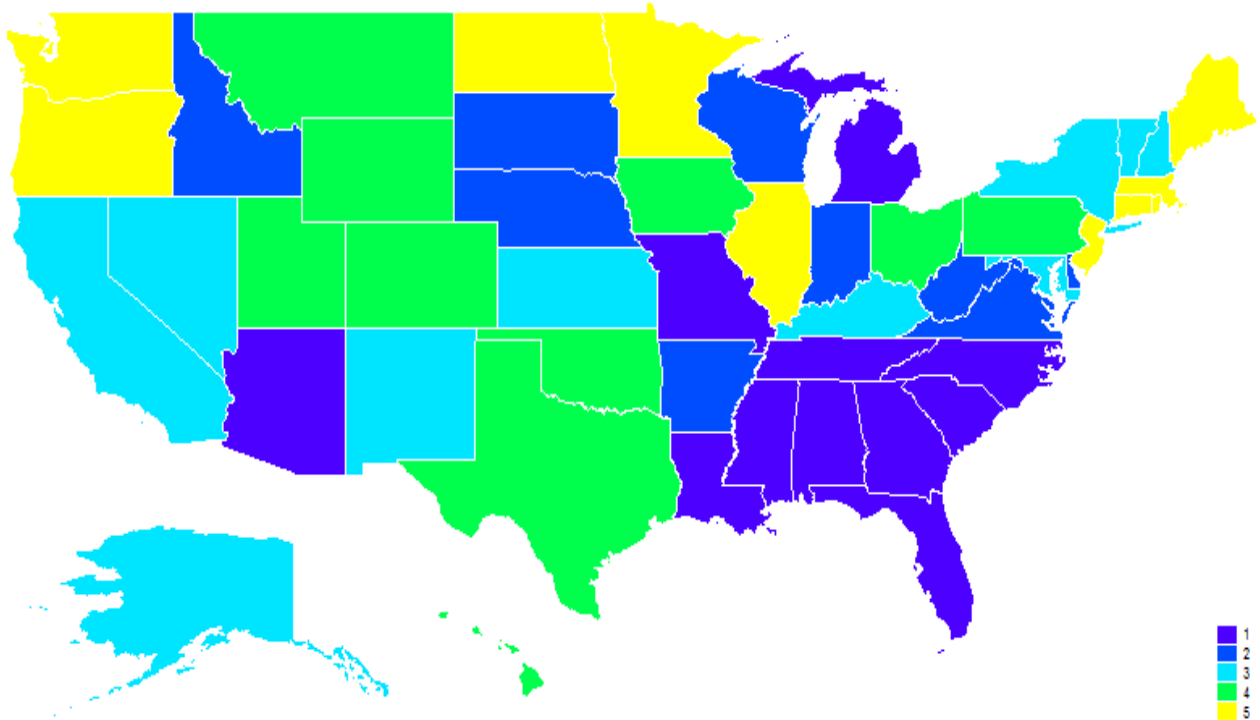## Quintile of Share of Immigrants in Population

Figure-2. Geographic distribution of share of immigrants across US States.
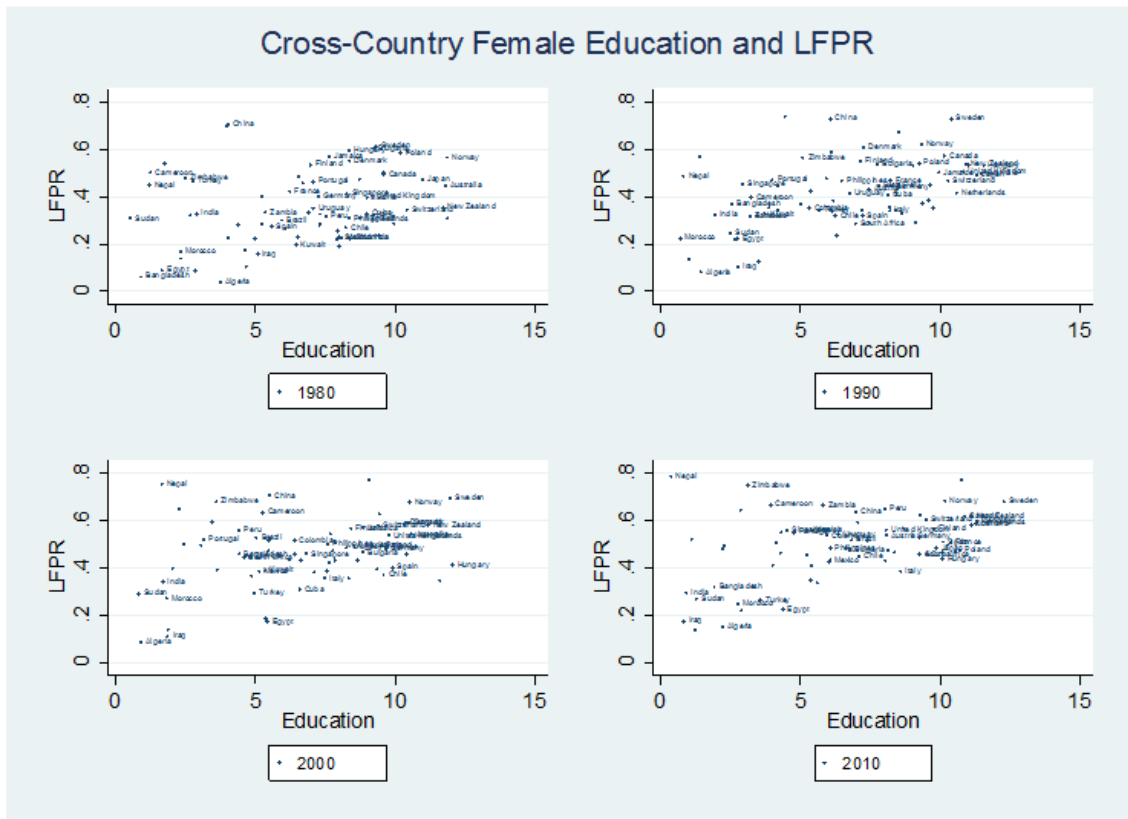
Figure-3. The link between labor force participation and education across Countries.

Table 1 provides summary statistics of the final sample. On average, 66 percent of the sample individuals are active in the labor force and 63 percent of them are employed. Total personal income is $37,224 and total household income is $75,101.

Table-1. Summary Statistics.

Variable	Observations	Mean	Std. Dev.	Min	Max
Gender	210,365	0.527	0.499	0	1
Is White	210,365	0.842	0.364	0	1
Is Black	210,365	0.097	0.296	0	1
Is Married	210,365	0.631	0.482	0	1
Is Second Generation	210,365	0.070	0.255	0	1
Is First Generation	210,365	0.102	0.302	0	1
Is Native	210,365	0.827	0.377	0	1
Hourly Wage	210,365	3.955	7.552	0	99
Total Personal Income	210,365	37224.539	51205.165	-28796	1712933
Education	210,365	13.298	2.996	0	21
Labor Force Participation	210,365	0.665	0.471	0	1
Is Employed	210,365	0.632	0.481	0	1
Hours Worked Last Week	210,365	24.592	22.655	0	198
Family Income	210,365	70152.485	76445.876	-37040	2289913
Household Income	210,365	75101.805	79421.366	-37040	3299997
Family Size	210,365	2.750	1.489	1	16
Number of Children	210,365	0.814	1.130	0	9

Notes. All dollar values are converted into 2000 dollars to reflect real values.

The main results of the paper are reported in Tables 2 and 3 for first and second generation immigrants, respectively. For each outcome, we show the results without including any controls and then with including the individual and state controls. However, the marginal effects are quite robust to both specifications. Looking at female education as the outcome, an additional year of schooling in the home country is associated with a 0.45 and

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0.24 years increase in education of first and second generation females, respectively. This is equivalent to an increase of 3.4 percent and 1.7 percent from the mean of the outcome for first and second generations, respectively (column 2 in Tables 2 and 3).

Table-2. The Effect of Home Country Characteristics on Labor Outcomes of First Generation Immigrants.

	Outcome: Female Education		Outcome: Female Labor Force Participation		Outcome: Female Employment Status		Outcome: Female Fertility	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female Education, BPL	0.405*** (0.154)	0.452*** (0.148)						
Female Labor Force Participation 1950-1970			0.268*** (0.096)	0.257*** (0.089)	0.248*** (0.068)	0.239*** (0.070)		
Female Fertility BPL							0.348*** (0.079)	0.376*** (0.120)
Individual Controls	No	Yes	No	Yes	No	Yes	No	Yes
State Controls	No	Yes	No	Yes	No	Yes	No	Yes
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.025	0.029	0.14	0.16	0.23	0.26	0.095	0.098
Observations	210,365	210,365	210,365	210,365	210,365	210,365	210,365	210,365

Notes: State controls include: average wage, income per capita, unemployment rate, percentage whites, percentage blacks, percentage foreign nationals, percentage males, percentage population aged 25-65, and GSP per capita. Individual controls include: personal income, family income, sex, race, age, and marital status. Standard errors are clustered on the state level. All regressions are weighted using personal CPS weights.

Table-3. The Effect of Home Country Characteristics on Labor Outcomes of Second Generation Immigrants.

	Outcome: Female Education		Outcome: Female Labor Force Participation		Outcome: Female Employment Status		Outcome: Female Fertility	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female Education, MBPL	0.289*** (0.047)	0.245*** (0.052)						
Female Labor Force Participation 1950-1970			0.178*** (0.046)	0.156*** (0.051)	0.135*** (0.039)	0.139*** (0.042)		
Female Fertility MBPL							0.295*** (0.047)	0.156*** (0.053)
Individual Controls	No	Yes	No	Yes	No	Yes	No	Yes
State Controls	No	Yes	No	Yes	No	Yes	No	Yes
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.015	0.019	0.11	0.15	0.21	0.22	0.074	0.076
Observations	125,687	125,687	125,687	125,687	125,687	125,687	125,687	125,687

Notes: State controls include: average wage, income per capita, unemployment rate, percentage whites, percentage blacks, percentage foreign nationals, percentage males, percentage population aged 25-65, and GSP per capita. Individual controls include: personal income, family income, sex, race, age, and marital status. Standard errors are clustered on the state level. All regressions are weighted using personal CPS weights.

Exploring female fertility as the outcome, having an additional child in the home country is associated with a 0.38 and 0.16 units increase in the number of children among first and second generation females, respectively. This is equivalent to an increase of 45.5 percent and 18.5 percent from the mean of the outcome for first and second generations, respectively (column 8 in Tables 2 and 3). There are two takeaways from these results. First, home country characteristics can strongly explain the attitudes of immigrants suggesting the presence of intergenerational transmission of culture. All marginal effects are statistically significant and economically

meaningful. Second, the marginal effects are smaller among second generations compared to first generations implying some integration and acculturation among second generations.

5. CONCLUSION

To design policies that aim to promote the integration and acculturation of immigrants, it is important to understand how social norms and cultural values influence immigrants' economic and non-economic outcomes. In this paper, we provided evidence that there are some cultural factors associated with fertility, education, and labor force participation that can be transmitted from home country to immigrants through the intergenerational transmission process. We implemented an epidemiological econometric approach that compares the outcomes of those immigrants who come from countries with higher (lower) education, labor force participation, and fertility to those with lower (higher) levels of these outcomes and found a statistically significant relationship. Using Current Population Survey data over the years 1994-2020, we documented that an additional year of schooling in the home country is associated with a 0.45 and 0.24 years increase in education of first and second generation females, respectively. Moreover, a 1 percent higher female labor force participation in the home country is associated with a 0.26 and 0.16 percent increase in labor force participation of first and second generation females, respectively. Since the females' outcomes such as education and fertility have some cultural components, the fact that immigrants' outcomes are correlated with their home country characteristics can be explained as evidence of intergenerational transmission of culture.

REFERENCES

Abramitzky, R., Boustan, L. P., & Eriksson, K. (2014). A nation of immigrants: Assimilation and economic outcomes in the age of mass migration. *Journal of Political Economy, 122*(3), 467–506.Available at: https://doi.org/10.1086/675805.

Alesina, A., & Giuliano, P. (2011). Family ties and political participation. *Journal of the European Economic Association, 9*(5), 817–839.Available at: https://doi.org/10.1111/j.1542-4774.2011.01024.x.

Alesina, A., Giuliano, P., & Nunn, N. (2013). On the origins of gender roles: Women and the plough. *The Quarterly Journal of Economics, 128*(2), 469–530.Available at: https://doi.org/10.1093/qje/qjt005.

Algan, Y., Dustmann, C., Glitz, A., & Manning, A. (2010). The economic situation of first and second-generation immigrants in France, Germany and the United Kingdom. *The Economic Journal, 120*(542), F4-F30.Available at: https://doi.org/10.1111/j.1468-0297.2009.02338.x.

Angrist, J. (2002). How do sex ratios affect marriage and labor markets? Evidence from America's second generation. *The Quarterly Journal of Economics, 117*(3), 997–1038.Available at: https://doi.org/10.1162/003355302760193940.

Aydemir, A., Chen, W.-H., & Corak, M. (2009). Intergenerational earnings mobility among the children of Canadian immigrants. *The Review of Economics and Statistics, 91*(2), 377–397.Available at: https://doi.org/10.1162/rest.91.2.377.

Babacar, D. (2020). Cultural diversity, ethnocentrism and terrorism in Mukoma WA Ngugi's Black Star Nairobi (2013). *Britain International of Humanities and Social Sciences (BIoHS) Journal, 2*(2), 367–373.Available at: https://doi.org/10.33258/biohs.v2i2.234.

Bailey, M. J., & Dynarski, S. M. (2011). Gains and gaps: Changing inequality in US college entry and completion. NBER Working Paper No. 17633.

Barro, R. J., & Lee, J.-W. (2001). International data on educational attainment: Updates and implications. *Oxford Economic Papers, 53*(3), 541–563.Available at: https://doi.org/10.1093/oep/53.3.541.

Bauer, P., & Riphahn, R. T. (2007). Heterogeneity in the intergenerational transmission of educational attainment: Evidence from Switzerland on natives and second-generation immigrants. *Journal of Population Economics, 20*(1), 121–148.Available at: https://doi.org/10.1007/s00148-005-0056-5.

Bellido, H., Marcén, M., & Molina, J. A. (2016). The effect of culture on fertility behavior of us teen mothers. *Feminist Economics, 22*(3), 101–126.Available at: https://doi.org/10.1080/13545701.2015.1120881.

Bhalotra, S., & Rawlings, S. (2013). Gradients of the intergenerational transmission of health in developing countries. *Review of Economics and Statistics, 95*(2), 660–672.Available at: https://doi.org/10.1162/REST_a_00263.

Bisin, A., & Verdier, T. (2000). "Beyond the melting pot": Cultural transmission, marriage, and the evolution of ethnic and religious traits. *The Quarterly Journal of Economics, 115*(3), 955–988.Available at: https://doi.org/10.1162/003355300554953.

Bisin, A., Topa, G., & Verdier, T. (2004). Religious intermarriage and socialization in the United States. *Journal of Political Economy, 112*(3), 615–664.Available at: https://doi.org/10.1086/383101.

Black, S. E., Devereux, P. J., & Salvanes, K. G. (2005). Why the apple doesn't fall far: Understanding intergenerational transmission of human capital. *American Economic Review, 95*(1), 437–449.Available at: https://doi.org/10.1257/0002828053828635.

Blau, F. D., & Kahn, L. M. (1997). Swimming upstream: Trends in the gender wage differential in the 1980s. *Journal of Labor Economics, 15*(1), 1–42.Available at: https://doi.org/10.1086/209845.

Blau, F. D., & Kahn, L. M. (2000). Gender differences in pay. *The Journal of Economic Perspectives, 14*(4), 75–99.

Blau, F. D., Kahn, L. M., Liu, A. Y.-H., & Papps, K. L. (2013). The transmission of women's fertility, human capital, and work orientation across immigrant generations. *Journal of Population Economics, 26*(2), 405–435.Available at: https://doi.org/10.1007/s00148-012-0424-x.

Bleakley, H., & Chin, A. (2008). What holds back the second generation? The intergenerational transmission of language human capital among immigrants. *Journal of Human Resources, 43*(2), 267–298.Available at: https://doi.org/10.3368/jhr.43.2.267.

Bleakley, H., & Chin, A. (2010). Age at arrival, English proficiency, and social assimilation among US immigrants. *American Economic Journal: Applied Economics, 2*(1), 165-192.Available at: https://doi.org/10.1257/app.2.1.165.

Borjas, G. J. (1992). Ethnic capital and intergenerational mobility. *The Quarterly Journal of Economics, 107*(1), 123–150.Available at: https://doi.org/10.2307/2118325.

Borjas, G. J. (1993). The intergenerational mobility of immigrants. *Journal of Labor Economics, 11*(1), 113–135.

Borjas, G. J. (1995). Ethnicity, neighborhoods, and human-capital externalities. *The American Economic Review, 85*(3), 365-390.

Borjas, G. J. (2015). The slowdown in the economic assimilation of immigrants: Aging and cohort effects revisited again. *Journal of Human Capital, 9*(4), 483–517.Available at: https://doi.org/10.1086/676461.

Bozzano, M. (2017). On the historical roots of women's empowerment across Italian provinces: Religion or family culture? *European Journal of Political Economy, 49*, 24–46.Available at: https://doi.org/10.1016/j.ejpoleco.2016.12.002.

Buchmann, C., DiPrete, T. A., & McDaniel, A. (2008). Gender inequalities in education. *Annual Review of Sociology, 34*, 319–337.

Card, D., & Peri, G. (2016). Immigration economics by George J. Borjas: A review essay. *Journal of Economic Literature, 54*(4), 1333–1349.Available at: https://doi.org/10.1257/jel.20151248.

Carliner, G. (1980). Wages, earnings and hours of first, second, and third generation American males. *Economic Inquiry, 18*(1), 87–102.Available at: https://doi.org/10.1111/j.1465-7295.1980.tb00561.x.

Carroll, C. D., Rhee, B.-K., & Rhee, C. (1994). Are there cultural effects on saving? Some cross-sectional evidence. *The Quarterly Journal of Economics, 109*(3), 685–699.Available at: https://doi.org/10.2307/2118418.

Casey, T., & Dustmann, C. (2008). Intergenerational transmission of language capital and economic outcomes. *Journal of Human Resources, 43*(3), 660–687.Available at: https://doi.org/10.1353/jhr.2008.0002.

Casey., T., & Dustmann, C. (2010). Immigrants' identity, economic outcomes and the transmission of identity across generations. *The Economic Journal, 120*(542), F31–F51.Available at: https://doi.org/10.1111/j.1468-0297.2009.02336.x.

Chiswick, B. R. (1977). Sons of immigrants: Are they at an earnings disadvantage? *The American Economic Review, 67*(1), 376–380.

Chiswick, B. R. (1983). The earnings and human capital of American Jews. *Journal of Human Resources, 18*(3), 313–336.Available at: https://doi.org/10.2307/145204.

Chiswick, B. R. (1988). Differences in education and earnings across racial and ethnic groups: Tastes, discrimination, and investments in child quality. *The Quarterly Journal of Economics, 103*(3), 571–597.Available at: https://doi.org/10.2307/1885546.

Cobb-Clark, D. A., & Moschion, J. (2017). Gender gaps in early educational achievement. *Journal of Population Economics, 30*(4), 1093–1134.Available at: https://doi.org/10.1007/s00148-017-0638-z.

DESA, U. N. (2013). United Nations department of economic and social affairs/population division (2013). World Fertility Data 2012 (POP/DB/Fert/Rev2012). Retrieved feom http://Www.Un.Org/Esa/Population/Publications/WFD2012/MainFrame.Html.

Dictionary, O. E. (2007). *Oxford English dictionary online, OED Online*. United Kingdom: Oxford University Press.

Dustmann, C., & Fabbri, F. (2003). Language proficiency and labour market performance of immigrants in the UK. *The Economic Journal, 113*(489), 695–717.Available at: https://doi.org/10.1111/1468-0297.t01-1-00151.

Ekberg, J., & Rooth, D. (2003). Unemployment and Earnings for second-generation immigrants in Sweden. *Journal of Population Economics, 16*(2003), 787–814.Available at: https://doi.org/10.1007/s00148-003-0163-0.

Fernández, R., Fogli, A., & Olivetti, C. (2004). Mothers and sons: Preference formation and female labor force dynamics. *The Quarterly Journal of Economics, 119*(4), 1249–1299.Available at: https://doi.org/10.1162/0033553042476224.

Fernandez, R. (2007). Alfred Marshall lecture women, work, and culture. *Journal of the European Economic Association, 5*(2–3), 305–332.

Fernandez, R., & Fogli, A. (2009). Culture: An empirical investigation of beliefs, work, and fertility. *American Economic Journal: Macroeconomics, 1*(1), 146–177.Available at: https://doi.org/10.1257/mac.1.1.146.

Fernández, R. (2010). Does culture matter? *Handbook of Social Economics, 1*(2010), 481-510.

Fernández, R., & Fogli, A. (2006). Fertility: The role of culture and family experience. *Journal of the European Economic Association, 4*(2–3), 552–561.Available at: https://doi.org/10.1162/jeea.2006.4.2-3.552.

Fisman, R., & Miguel, E. (2007). Corruption, norms, and legal enforcement: Evidence from diplomatic parking tickets. *Journal of Political Economy, 115*(6), 1020–1048.Available at: https://doi.org/10.1086/527495.

Flood, S., King, M., Ruggles, S., Warren, J. R., Rodgers, R., Ruggles, S., & Warren, J. R. (2018). *Integrated public use microdata series, current population survey: Version 5.0*. Minneapolis: University of Minnesota.

Furtado, D., Marcén, M., & Sevilla, A. (2013). Does culture affect divorce? Evidence From European immigrants in the United States. *Demography, 50*(3), 1013–1038.Available at: https://doi.org/10.1007/s13524-012-0180-2.

Geertz, C. (1973). *The interpretation of cultures* (Vol. 5019): Princeton University Press, Basic Books.

Giuliano, P., & Nunn, N. (2017). Understanding cultural persistence and change. NBER Wrking Papers No. w23617.

Goldin, C. (2014). A grand gender convergence: Its last chapter. *The American Economic Review, 104*(4), 1091-1119.Available at: https://doi.org/10.1257/aer.104.4.1091.

Goldin, C., Katz, L. F., & Kuziemko, I. (2006). The homecoming of American college women: The reversal of the college gender gap. *The Journal of Economic Perspectives, 20*(4), 133.Available at: 10.1257/jep.20.4.133.

Heath, A. F., Rothon, C., & Kilpi, E. (2008). The second generation in Western Europe: Education, unemployment, and occupational attainment. *Annual Review of Sociology, 34*(1), 211–235.Available at: https://doi.org/10.1146/annurev.soc.34.040507.134728.

Herberg, W. (1983). *Protestant--Catholic--Jew: An essay in American religious sociology*. USA: University of Chicago Press.

Houseworth, C. A., & Chiswick, B. R. (2020). Divorce among European and Mexican Immigrants in the U.S. *Review of Economics of the Household, 18*(1), 1–25.Available at: https://doi.org/10.1007/s11150-019-09447-0.

Lavy, V., & Sand, E. (2015). On the origins of gender human capital gaps: Short and long term consequences of teachers' stereotypical biases. *Journal of Public Economics, 167*, 263-279.Available at: https://doi.org/10.1016/j.jpubeco.2018.09.007.

Lutz, W., Goujon, A., KC, S., & Sanderson, W. (2007). Reconstruction of populations by age, sex and level of educational attainment for 120 countries for 1970-2000. Vienna Yearbook of Population Research, IIASA Interim Report. IIASA, Laxenburg, Austria: IR-07-002.

Manz, C. C., Sapienza, P., & Zingales, L. (2006). Does culture affect economic outcomes? *The Journal of Economic Perspectives, 20*(2), 23–48.Available at: https://doi.org/10.1257/jep.20.2.23.

Meng, X., & Gregory, R. G. (2005). Intermarriage and the economic assimilation of immigrants. *Journal of Labor Economics, 23*(1), 135–174.Available at: https://doi.org/10.1086/425436.

Mu, R., & Zhang, X. (2011). Why does the great Chinese Famine affect the male and female survivors differently? Mortality selection versus son preference. *Economics and Human Biology, 9*(1), 92–105.Available at: https://doi.org/10.1016/j.ehb.2010.07.003.

NoghaniBehambari, H., Noghani, F., & Tavassoli, N. (2020). Child support enforcement and child mortality. *Applied Economics Letters*, 1–12.Available at: https://doi.org/10.1080/13504851.2020.1869157.

Noghanibehambari, H., Tavassoli, N., & Noghani, F. (2020). Intergenerational transmission of culture among first- and second-generation immigrants: The case of age at first birth and nonmarital childbirth.Available at: https://doi.org/10.13140/RG.2.2.12738.40641.

Nollenberger, N., Rodr\'\iguez-Planas, N., & Sevilla, A. (2016). The math gender gap: The role of culture. *The American Economic Review, 106*(5), 257–261.Available at: https://doi.org/10.1257/aer.p20161121.

Pryor, F. L. (1985). The invention of the plow. *Comparative Studies in Society and History, 27*(4), 727–743.Available at: https://doi.org/10.1017/s0010417500011749.

Riphahn, R. T. (2003). Cohort effects in the educational attainment of second generation immigrants in Germany: An analysis of census data. *Journal of Population Economics, 16*(4), 711–737.Available at: https://doi.org/10.1007/s00148-003-0146-1.

Ruggles, S., Genadek, K., Goeken, R., Grover, J., & Sobek, M. (2017). *Integrated public use microdata series: Version 7.0 [dataset]* (Vol. 10). Minneapolis: University of Minnesota.

Samir, K. C., Barakat, B., Goujon, A., Skirbekk, V., Sanderson, W. C., & Lutz, W. (2010). Projection of populations by level of educational attainment, age, and sex for 120 countries for 2005-2050. *Demographic Research, 22*, 383–472.Available at: https://doi.org/10.4054/demres.2010.22.15.

Schüller, S. (2015). Parental ethnic identity and educational attainment of second-generation immigrants. *Journal of Population Economics, 28*(4), 965–1004.Available at: https://doi.org/10.1007/s00148-015-0559-7.

SEER. (2019). Surveillance, epidemiology, and end results (SEER) program research data (1975-2016). *National Cancer Institute, DCCPS, Surveillance Research Program, 30*(2), 126-132.

Stanfield, B., & Fuchs-Schündeln, N. (2007). Good-bye Lenin (or not?): The effect of communism on people's preferences. *The American Economic Review, 97*(4), 1507–1528.Available at: https://doi.org/10.1257/aer.97.4.1507.

Stanfield, B., Fuchs-Schündeln, N., Dustmann, C., Görlach, J. S., Fernández, R., Blau, F. D., . . . Warren, J. R. (2007). Gains and gaps: Changing inequality in US college entry and completion. *The American Economic Review, 20*(4), 23–48.Available at: https://doi.org/10.18128/D030.V5.0.

Tabellini, G. (2010). Culture and institutions: Economic development in the regions of Europe. *Journal of the European Economic Association, 8*(4), 677–716.Available at: https://doi.org/10.1111/j.1542-4774.2010.tb00537.x.

Tomes, N. (1981). The family, inheritance, and the intergenerational transmission of inequality. *Journal of Political Economy, 89*(5), 928-958.Available at: https://doi.org/10.1086/261014.