Culture:
An Empirical Investigation of Beliefs, Work, and Fertility

Raquel Fernández*
New York University, CEPR, NBER

Alessandra Fogli
New York University, Minneapolis Fed, CEPR

March 2005

Abstract

We study the effect of culture on important economic outcomes by using the 1970 Census to examine the work and fertility behavior of women 30-40 years old, born in the U.S., but whose parents were born elsewhere. We use past female labor force participation and total fertility rates from the country of ancestry as our cultural proxies. These variables should capture, in addition to past economic and institutional conditions, the beliefs commonly held about the role of women in society, i.e. culture. Given the different time and place, only the beliefs embodied in the cultural proxies should be potentially relevant to affecting women's behavior in the US in 1970. We show that these cultural proxies have positive and significant explanatory power to explain individual work and fertility outcomes, even after controlling for possible indirect effects of culture (e.g., education and spousal characteristics). We examine alternative hypothesis for these positive correlations and show that neither unobserved human capital nor networks are likely to be responsible. We also show that the effect of these cultural proxies is amplified the greater the tendency for ethnic groups to cluster in the same neighborhoods.

JEL Nos.: J13, J21, Z10.

Keywords: female labor force participation; fertility; cultural transmission; immigrants; neighborhoods; networks; family; marriage.

*We thank Oriana Bandiera, Chris Flinn, David Levine, Fabrizio Perri, Jonathan Portes, Frank Vella and seminar audiences at the SED, NBER, NYU, CERGE at Charles Univesity, University of Cyprus, UC Berkeley, Stanford, University of Iowa, Essex University, EUI, and IGIER.

1. Introduction

As economists, we tend to study how individuals, with a given set of preferences and beliefs, interact with economic incentives (provided mostly by markets), to produce outcomes. More recently, we also emphasize the role of institutions, particularly in the longer run and at the aggregate level.[1] Thus, when we seek to explain variations in economic outcomes, we look primarily at differences in components of individual or national budget sets (e.g., at variables such as prices and incomes and at policies such as tax rates) and at differences in institutions (e.g., the extent of property protection or whether a political system is parliamentary or presidential). This approach leaves out the fact that preferences and beliefs, broadly speaking, themselves have a systematic component that reflects old interactions of preferences, beliefs, markets, and institutions. What these preferences and beliefs are, and how they vary across time and space can have important economic consequences.[2]

With a few notable exceptions, the consequences of systematic differences in beliefs and preferences have not been considered an appropriate topic for modern economic inquiry. In fact, to attempt to explain differences in economic outcomes by appealing to differences in preferences (and presumably beliefs) is often considered unscientific at best. As stated by Stigler and Becker in their influential 1977 article "De Gustibus Non Est Disputandum:"

> "We also claim, however, that no scientific behavior has been illuminated by assumptions of differences in tastes. Instead, they along with assumptions of unstable tastes, have been a convenient crutch to lean on when the analysis has bogged down. They give the appearance of considered judgement, yet really have only been ad hoc arguments that disguise analytical failures."

This approach, while sensible when variations in preferences and beliefs cannot be studied in a rigorous fashion, is unnecessarily narrow if this variation is amenable to empirical analysis.[3] This paper seeks to address this deficiency by attempting to show that systematic variation in preferences and beliefs–which we will call culture–matters to important economic phenomena.

Culture is a rather hazy concept.[4] Although developing a dynamic model of culture is beyond the scope of this paper, it is useful to discuss some of the features of culture that are important to our analysis. First, we should make it clear that we do not consider culture to be any more or less "primitive" than markets or institutions. In our view, all three interact

[1] See Acemoglu, Johnson, and Robinson (2004) for the general thesis and a review of this literature. See also Persson and Tabellini (2003).

[2] See Fernández, Fogli, and Olivetti (2004) for a model of endogenous preference evolution through family experience and the role of these preferences in increasing female labor force participation.

[3] It is unclear whether Stigler and Becker regarded their criticism as also applying to differences in beliefs which, at a reduced form level, are indistinguishable from differences in preferences. Furthermore, to be fair, it is quite likely that the authors would agree that culture can and should be studied. They would interpret culture, however, as arising from a deeper level of preferences (e.g., from a preference to be similar to one's neighbors), or from costs in processing information that give rise to persistance in behavior even if the environment changes. This is, in fact, how the authors think of habits or customs or style. We have no quarrel with this interpretation, and in this sense we will not be trying to show that individuals differ in their "deeper" preferences, but rather in their reduced form appearance.

[4] As defined by the Merriam-Webster dictionary, culture is a) "the integrated pattern of human knowledge, belief, and behavior that depends upon man's capacity for learning and transmitting knowledge to succeeding generations"; b) "the customary beliefs, social forms, and material traits of a racial, religious, or social group".

with one another over time and mutually condition each other. Whether and how a market or institution operates, for example, may depend on beliefs (e.g. on whether it is considered acceptable to buy and sell individuals as under slavery, or whether women should count as full citizens and be allowed to vote in a "democracy") and these beliefs themselves change in response to the experiences afforded by the economy and the interests it creates.

Beliefs are a fundamental component of culture. These include not simply religious beliefs, which are not for the most part empirically verifiable, but also beliefs that may be, in principle, testable. Take, for example, the belief that children are better off if their mother does not work but rather takes care of them at home. This is a question about which, even today, people hold very different beliefs. These beliefs are not based necessarily on scientific studies, but experimenting to obtain more information is quite costly for any individual woman, and the counterfactual–how her child will turn out otherwise–is difficult to establish. Thus, these beliefs evolve often quite slowly over time in society but can also suddenly shift as new information or new anecdotes become more widely diffused.[5] We will not, in any case, attempt to provide a more abstract and rigorous definition of culture here, but rather attempt to identify, in individual behavior, something that we can think of as beliefs or norms that operate in a systematic fashion.[6]

We choose to investigate the effect of culture on important economic decisions by studying women's work and fertility decisions. The focus on women is not accidental. Women's participation in the formal labor market and fertility vary widely across time and space. The hypothesis that a significant part of this variation can be explained by different beliefs as to the appropriate role of women in society, i.e. by culture, as opposed to solely economic and institutional variation, seems a particularly apt one in this context and the economic importance of these decisions is incontrovertible.[7]

A challenge in the analysis of culture is to separate its effects from those due to markets and institutions. One way around this problem is to study outcomes for women born in one country (the United States, in our case) but whose parents were born in another country. It can be argued that these women share similar markets and formal institutions but have possibly different cultural heritages as reflected in their parents' country-of-origin. Furthermore, rather than use a dummy variable for the woman's country of ancestry as a proxy for culture (which does not make explicit why it matters to be of Mexican ancestry, say, relative to Swedish), we take past labor force participation and fertility variables from the country of ancestry as our cultural proxies. These variables should reflect, in addition to whatever economic and institutional factors were prevalent in the country at that time, the cultural beliefs that then reigned as to the appropriate role for women in society. While the economic and institutional factors should no longer be relevant for the women's decisions we are examining in the US (as neither the country nor the time period is the same), the beliefs embodied in these variables may still matter if the family transmitted them to their children.

We use the 1970 Census to study work and fertility outcomes for women and use 1950

[5] Empirically it may be difficult to distinguish between beliefs, information, and preferences. We will not attempt to distinguish therefore between culture as a system of beliefs/preferences and culture as a system of knowledge.

[6] For a discussion of social norms (and some definitions) see, for example, Elster (1989).

[7] Pencavel's (1998) study of women's market work and wages from the mid 1970s to the mid 1990s, for example, concludes that changes in wages can at most account for half of the observed change in work behavior across cohorts. See Goldin (1990) for a history of women and work in the US.

values of female labor force participation (LFP) and total fertility rates (TFR) in the country of ancestry as the cultural proxies.[8] In addition to age, we also control for variables that themselves are likely to be influenced by culture, such as a woman's education, or the education and income of her spouse. Since we cannot observe the financial and educational backgrounds of parents, including these variables is important even if it restricts our analysis to the direct effects of culture. We also control for local geographic variation in markets and institutions by including metropolitan standard area fixed effects and we cluster observations at the country-of-ancestry level. In all cases, we find that culture as reflected in our proxy variables of LFP or TFR in 1950, is a quantitatively and statistically significant determinant of women's work and fertility outcomes. A one standard deviation increase in LFP in 1950 is associated with about a one week increase in weeks worked per year (or about a 7.5% increase in hours worked) in 1970; a one standard deviation increase in TFR in 1950 is associated with approximately 0.4 extra children, a 14% increase in the number of children in 1970.[9]

The major concern our analysis needs to address is whether there exists some omitted variable that is driving our results and that is unrelated to culture but correlated with LFP and TFR in 1950 in the country of ancestry. The main suspects for this role are unobserved human capital or the "quality" of the networks available to these women. Unobserved human capital may be a culprit if differences in parental education levels lead to differences in unobserved human capital in ways not captured by the formal education level of children. Alternatively, if the human capital of one's ethnic group is an important input in the formation of own human capital (as argued by Borjas (1992,1995)), or if it is an input in the ethnic network that helps individuals find employment, then systematic differences across ethnic groups may be responsible for our results. We address these concerns by using the General Social Survey (GSS) to control directly for the parent's level of education. Our results survive these additional controls. We also construct measures of ethnic human capital by using the 1940 Census to calculate the average education of immigrants. This variable should proxy both for parental human capital and for the human capital embodied in the ethnic network available to the woman. We find that this variable is significant in explaining how much women work (though not fertility) but the effect of the cultural proxy remains robust. We also construct a similar measure of ethnic human capital for second-generation immigrants from the same generation as our sample and obtain similar results.

Our most revealing test, however, is related to men. We show that our cultural proxies are not able to explain men's work behavior though they have explanatory power for the number of children men have. This is reassuring since, if female LFP in 1950 were able to positively and significantly explain the work behavior of the male counterparts of our women (i.e., men born in the US whose parents were born in a foreign country), this would cast serious doubts as to whether the cultural variable was primarily capturing attitudes towards women rather than some unobserved economic difference by country of ancestry. The fertility variable, on the other hand, is able to capture cultural preferences towards family size which may be shared by men and women.

The investigation of culture and men rather naturally leads us to examine a related question:

[8] Later decades of the Census do not ask for the country of birth of a respondent's parents and 1950 is as far back as one can go to obtain female LFP and TFR for a non-trivial number of countries.

[9] We have also used country dummies in our analysis. We show that our cultural proxies are able to explain a significant portion of the variation in that exists in the coefficients take on by these dummy variables.

Whose culture is important in deciding a married woman's work and fertility–her own or her husband's? We show that the cultural proxies of both spouses play an important role. We also investigate whether variation across ancestry in the average proportion of individuals from the same ancestry in a neighborhood matters for cultural transmission. In particular, is the impact of culture larger for those groups that tend to cluster in the same neighborhoods? We find that the answer is yes, strengthening our prior that culture is transmitted both by family and by local society (e.g. neighborhood, schools, church, etc.).

Our paper is organized as follows. The next section contains a brief review of the empirical literature.[10] Section 3 presents our empirical strategy and Section 4 our results. We examine robustness to sample selection and estimation techniques in Section 5. Section 6 examines competing explanations. Section 7 investigates whether it is a woman's or her husband's culture that matters for her outcomes and section 8 studies the role of ethnic density in the neighborhood. Section 9 concludes.

2. A Brief Literature Review

The idea that culture can influence economic outcomes is, of course, not a new one. Max Weber's celebrated thesis at the beginning of the 20th century argued that a specific culture–the "Protestant ethic"–was conducive to capitalist accumulation.[11] More recently, culture plays a central role in Landes' (1998) explanation for differences in economic growth across countries, and Putnam (2000) stresses the role of trust, and more generally of "social capital", in facilitating economic exchange and efficient governance.[12]

There is little quantitative evidence, however, that culture is a significant determinant of important economic outcomes and many of the results also have alternative explanations that are difficult to disregard. Not surprisingly, the relatively small literature in this field has focused either on immigrants or on individuals from different ethnic backgrounds to investigate the effect of culture. Using ethnic dummy variables, Reimers (1985) is an early attempt to examine the role of ethnicity in married women's labor force participation in the US. She finds mixed evidence in favor of ethnic background mattering, which perhaps is not surprising given that ethnic groups vary substantially in the length of time they have been in the US. Employing a similar strategy, but focusing solely on immigrants which allows them to ensure a greater degree of homogeneity, Carroll, Rhee, and Rhee (1994) examine whether culture can help explain different savings rates by comparing saving patterns of immigrants to Canada. They find no evidence of cultural effects on savings. Their analysis, however, faces important data limitations: they control only for broad regions of origin and they do not have data on individual wealth.

Giuliano (2004) and Antecol (2000, 2001) both use quantitative home-country variables to study the effect of culture. Giuliano attempts to show that Western European second-generation immigrants to the US tend to replicate the family living arrangements of their country of origin. Her main thesis is that the sexual revolution interacted with different family models in the early 1970s to increase the proportion of individuals who live at home in Southern European countries

[10] See Bisin and Verdier (2000) for a model of the family and endogenous cultural transmission and Cole, Mailath, and Postlewaite (1992) for a model of endogenous social norms and how these affect savings and growth.

[11] More recently, Barro and McCleary (2003) examine the effect of religion on economic growth.

[12] See Weil's (2004) very nice chapter that reviews the research on culture and growth.

but not in Northern ones, and that this differential pattern of behavior should be reflected in the behavior of second-generation individuals in the US. Giuliano shows that individuals from Southern Europe on the whole tend to have a higher probability of living at home in the year 2000.

Antecol (2000) studies the effect of male and female LFP in the country of ancestry on male and female labor force participation in the US. She is primarily interested in determining how the inclusion of these quantitative home country variables changes the weighted standard deviation (WSD) of the inter-ethnic gender gap in LFP.[13] Although her results are interesting and suggestive, they are also rather difficult to interpret. For first generation immigrants, for example, Antecol finds that labor force participation in the US increases for women and decreases for men as a function of female LFP in the home country. For second-and-higher-generation immigrants (she is unable to distinguish among them) the total effect of female LFP appears to be positive for both men and women.[14]

In addition to the above studies focussing on immigrants, there has also been work using measures of attitudes towards women's role within a country. Levine (1993), for example, by using responses to questions in the GSS, finds that attitudes are an important predictor of whether any particular woman works in a given year, but that the attitude variables are not able to explain the increase in women's labor force participation during the 70s and early 80s. Vella (1994) uses Australian data and likewise finds that attitude variables are important determinants of the extent of women's involvement in market work.

There is also a small literature on cultural effects on fertility. Guinnane, Moehling, and O Grada (2004) have a very interesting study on Irish fertility in the US in 1910. They find that although Irish fertility fell in the US relative to couples in Ireland, Irish immigrants still had larger families than the native-born population in the US (conditional on differences in other observable population characteristics). This points to culture playing a role, both for first and second generation Irish-Americans. Interestingly, they do not find that to be the case for second generation German immigrants. Our analysis, which will be based on a much larger set of countries, will allow us to study whether such a cultural effect exists more generally.

Blau (1992) examines whether (and why) the fertility behavior of first-generation immigrant women differs from that of the native born in the US. This is a difficult question to analyze as she must face issues such as who selects into immigration, and the possible disrupted and delayed fertility behavior that may result from immigration. Interestingly, she finds that the home country variable (TFR) enters positively and significantly into explaining the fertility behavior of immigrant women in 1970 and 1980. By examining second-generation women in the US, our analysis will allow us to focus on questions of cultural transmission with fewer concerns about selection and disruption due to immigration.

3. The Empirical Strategy, Datasets, and Sample Selection

As discussed in the introduction, our empirical strategy is to isolate the effect of culture from those of markets and institutions by studying the work and fertility outcomes of women who were born in and reside in the US, but whose parents were born in another country. Our

[13] Antecol (2001) conducts virtually the same study for the gender wage gap, with similar conclusions.

[14] It is not clear why a theory about culture would predict this pattern.

main data set is the 1% 1970 Form 2 Metro Sample of the U.S. Census. We use the 1970 Census since this is the last year in which individuals were explicitly asked where their parents were born.[15] The 1970 Census does not provide the country of birth of an individual's mother when both parents were born outside U.S. Hence, we use the father's birthplace to assign a country-of-ancestry culture to the second-generation women in our sample.

Our main sample consists of married women who are 30-40 years old. Women in this age range have completed their education but are still far from retirement considerations. We exclude women living in farms or working in agricultural occupations, as well as those living in group quarters (e.g. prisons, and other group living arrangements such as rooming houses and military barracks).[16] There are 87,305 women who are born in U.S. and satisfy these criteria.[17] About 11% of them have fathers who were born outside U.S. and are thus included in our sample. From this group we eliminate those who respond to the question about their father's birthplace with a continent or a geographical area from which a country cannot be identified.

To study women's labor outcomes we mainly use either the number of weeks worked in the previous year or the number of hours worked in the previous week. In the 1970 Census, information on weeks and hours worked is reported in intervals.[18] We compute our measure of weeks and hours worked by assigning the midpoint of each interval. The Census also asks women to record the number of children ever born to them. We use the response to this question to study fertility.

For our cultural proxies we want to use variables that would capture the beliefs as to the appropriate role of women and, relatedly, the ideal family size, for the woman's country of ancestry. Female labor force participation and the total fertility rate of women are a priori good candidates for this. Ex ante, however, it is not clear for what year we should choose to measure female LFP and TFR for the country of ancestry. As the women in our sample are 30-40 in 1970 and were born in U.S., their parents must have been in the US by 1930-1940, depending on the precise age of the woman. Thus, on the one hand, it could be argued that the values of the culture proxy variables around 1930-40 would best reflect the culture of the country of ancestry. On the other hand, one could argue that the values that parents and society transmit are best reflected in what the counterparts of these women are doing in the country of ancestry in 1970. Of course, in both cases the values of the variables reflects not only culture, but the economics and institutions of the country over time. The point is, however, that neither the economy nor the institutions should have particular relevance to explain the work and fertility outcomes of the women in our sample as they were born and raised in the US.

[15] In subsequent decades, individuals were asked to declare their "ancestry" and thus it is impossible to distinguish between individuals whose families have been in the US for many generations from those that are second-generation Americans. Using earlier decades, on the other hand, runs into the problem that we cannot obtain female LFP and TFR for more than a handful of countries prior to 1950.

[16] We exclude the following occupations (based on the 1950 Census definition): farmers (owners and tenants), farm managers, farm foremen, farm laborers as wage workers, farm laborers as unpaid family workers, and farm service laborers as self-employed.

[17] We exclude from the sample women born in U.S. outlying areas and territories (American Samoa, Guam, Puerto Rico, U.S. Virgin Islands, Other US Possessions). We also exclude from the sample women who were born in U.S. but in an unidentified state. Their inclusion does not alter the results.

[18] The number of weeks worked in the previous year are recorded in 6 intervals: 1-13 weeks, 14-26, 27-39, 40-47, 48-49, 50-52. All other observations are coded as N/A and treated as zeros in this work. The number of hours worked in the previous week are recorded in 8 intervals: 1-14 hours, 15-29, 30-34, 35-39, 40, 41-48, 49-59, 60+. All other observations are coded as N/A and treated as zeros in this work.

Data limitations, in any case, do not permit us to use years prior to 1950 since values for neither variable are available for more than a handful of countries prior to that year. Consequently, we choose female LFP and TFR in 1950 in the country of ancestry as our benchmark cultural proxies but also explore 1960 and 1970 values as well.

The cross-country data for 1950 female LFP and TFR are from the International Labor Organization (ILO) and the United Nation's Demographic Yearbook, respectively. Female LFP is the rate of economically active population for women over ten years of age.[19] The TFR is the average number of children a hypothetical cohort of women, from the ages of 15 to 49, would have at the end of their reproductive period if they were subject during their whole lives to the fertility rates of a given period and if they were not subject to mortality. It is expressed as number of children per woman.

We conclude our selection by eliminating from our sample all women whose fathers were born in countries that became centrally-planned economies around World War II.[20] The rationale for doing this is that the parents of our women must have been in the US by 1940. Hence, the parents did not live through the profound transformations in the economies, institutions, and cultures that these countries experienced over that period and using data from the 50s and later would thus not capture the correct culture for these individuals. We also excluded Russia since the revolution was in 1917 and the parents may or may not have been there for any substantial length of time thereafter. For robustness, we have also run our regressions with Russia and our results are unaffected. Lastly, solely in order to be able to make meaningful comparisons across averages of women by country of ancestry, we also eliminated those countries with fewer than 15 observations.[21] Since our regressions are all run at the individual level, including these small number of observations does not affect our results. Our final sample consists of 6774 women and 25 countries of ancestry.

In Table I we report the summary statistics at the country level. Our countries are mainly European (17 countries), with a few countries in the Americas (Canada, Cuba, and Mexico), some in Asia (China, Japan, and the Philippines), and some in the Middle East (Syria and Lebanon). Female LFP in 1950 is on average 24.4 with a standard deviation of 11.4. It varies dramatically by country: from 7% in Lebanon to over 50% in Turkey. The TFR in 1950 also shows large variation: from 6.9 children in Turkey and Mexico to 2.1 in Austria. The average across countries is 3.7 with a standard deviation of 1.8. Interestingly, the cross-country correlation of female LFP and TFR in 1950 is practically zero (0.002).

The women in our sample are on average 35.7 years old, have 3.1 children and worked on average 15.2 weeks in the previous year and 10.2 hours in the previous week. There is large dispersion in the number of weeks and hours worked: the standard deviation of weeks worked is 20.9 and the standard deviation of hours worked is 16.3. The standard deviation in the number of children is 1.8. Comparing the women in our sample with their counterparts whose fathers were born in U.S., the latter have a similar number of children on average (3.0). Women with

[19] The active population includes: persons in "paid" or "unpaid" employment, members of the armed forces (including temporary members) and the unemployed (including first-time job seekers). "Unpaid" employment includes: employers, own-account workers and members of producers' cooperative; unpaid family workers, persons engaged in the production of economic goods and services for own and household consumption, and apprentices who receive pay.

[20] We eliminated Albania, Bulgaria, Czechoslovakia, Hungary, Poland, Romania, Yugoslavia, Estonia, Latvia, and Lithuania.

[21] Iceland, Luxemburg, Korea, India, Iran, and Jordan.

fathers born in the US on average worked more: 18.2 weeks a year and 13.1 hours a week. The standard deviation is also slightly higher: 21.8 and 18.0 for weeks and hours, respectively. The summary statistics for the women in our sample are reported in Table A1 of the Appendix.

The differences across work and fertility in 1970 for the women in our sample can also be seen when we group observations by country of ancestry, as done in Table 1. Women with Cuban fathers worked 27.6 weeks (15.2 hours) on average, while women with Syrian fathers worked 9.5 weeks (5.1 hours) on average. Women with Mexican fathers on average have 4.2 kids whereas women from Turkey have 2.2. The standard deviation in work and fertility by country of ancestry (3.9 and 2.6 for weeks and hours worked, respectively, and 0.4 for children) is considerably smaller than the standard deviation in these variables across all women. It is also smaller than the standard deviation by country of ancestry in the levels of 1950 LFP and TFR.

Figure 1 plots the average number of hours worked in the previous week by the women in our sample by country of ancestry against the logarithm of the female LFP in 1950 in the same country. Figure 2 plots the average number of children of the women in our sample by country of father's birthplace against the logarithm of the TFR in 1950 in that country. The correlation between hours worked and female LFP is 0.25 (0.06 for weeks) whereas that between children and TFR is 0.13. From the fertility graph, one can clearly see two groups of countries: one which has undergone the fertility revolution and another which has yet to do so.

For our analysis to be meaningful, culture should evolve relatively slowly over the time period in which we are interested. Otherwise, in general, the beliefs transmitted from parents to children would not be captured by past values of female LFP and TFR. Although we cannot examine the values for our cultural proxies twenty years earlier to verify this, we can look at them 20 years later, i.e., in 1970. The rank (Spearman) correlation across countries for female LFP in 1950 and 1970 is 0.93; the rank correlation for those same two decades in TFR is 0.85. Figures 3 and 4 show the evolution of female LFP and TFR for each of our 25 countries (and the US as well) from 1950 to 2000. With the exception of Turkey, which shows a dramatic decrease in female LFP for several decades, most countries show an increase in female LFP with little change in their relative ranking. The Pearson and rank correlations for our set of 25 countries between 1950 and 2000 is 0.51 and 0.50, respectively. Over time, TFR has decreased in all countries. The Pearson and rank correlations in TFR from 1950 to 1995 remain remarkably high: 0.86 and 0.70, respectively.

4. Results

We estimate the following model:

$$Z_{isj} = \beta_0 + \beta_1^{'} X_i + \beta_2 \widetilde{Z}_j + f_s + \varepsilon_{isj} \tag{4.1}$$

where Z_{isj} is the work/fertility decision of woman i who resides in the Standard Metropolitan Statistical Area (SMSA) s and is of ancestry j.[22] In X_i we include a set of individual characteristics which varies with the specification considered, f_s is a full set of dummies for the

[22] A SMSA is an area consisting of a large population center and adjacent communities (usually counties) that have a high degree of economic and social interaction with that center. A total of 117 SMSAs (including not residing in an SMSA) are identified in the data.

metropolitan area of residence and $\widetilde{Z}_j$ is the proxy for culture–our variable of interest–which is assigned by the country of father's birthplace. Since the key variable on the right-hand side only varies by country of ancestry, all the standard errors we report are corrected for clustering at the country-of-ancestry level.

Tables II and III present our main results. In the first column, the amount worked (either weeks worked in the previous year or hours worked in the previous week, depending on the table) by individual i is regressed on the cultural proxy for work—female LFP in 1950 assigned by country of ancestry—and on a full set of dummies for the woman's metropolitan area of residence.[23] The coefficient on the cultural variable is positive and strongly significant, indicating that women whose parents were born in countries where women participated less in the work force tend to work less themselves.

There may be many reasons for the positive partial correlation above that have little to do with culture. In particular, women's parents may differ in a systematic fashion by country of origin, in a way that affects their daughter's propensity to work. For example, if higher levels of education increase the incentives to work, and if it is less costly for a woman to become educated if her parents come from a high female LFP country (e.g., because these parents are themselves more educated or because they have higher income or wealth), then this correlation would be due to the correlation between parental characteristics by country of origin and female education. This would suggest that, if information on parental characteristics is unavailable, we may want to control directly for a woman's level of education. By doing so, we are left however only with the direct effect of culture on how much a woman works.

The regression results from including a series of female characteristics, in particular the woman's age, her age squared, and a set of dummy variables to capture her level of education (below high school (omitted), high school degree (High School), some college, and at least a college degree (College +)) are reported in the second column. As expected, more educated women tend to work more. The direct effect of culture remains positive and statistically significant, albeit somewhat smaller in magnitude indicating that a woman's education and female LFP in her country of ancestry tend to be positively correlated.

It may also be instructive to include the characteristics of a woman's husband in our regression analysis. In part, this may allow us to distinguish between the effect of a woman's education and that of her husband's (or of her husband's income) on her degree of participation in the formal labor market. How a woman's desire to work may itself affect her choice of husband is unclear. On the one hand, if higher levels of male education tend to be associated with a more positive attitude towards women working, then that may lead to a positive relationship between culture and male education. On the other hand, if a woman plans to work, she may be less concerned with her husband's income level and more concerned with other idiosyncratic features.[24]

The third column in Tables II and III presents the results for what we call the "full specification" in which we also include the following characteristics of a woman's husband: his age (as given by 10 different age range dummies), his education (as captured by the same four dummy

[23] We examine hours in addition to weeks as the former may be considered a better variable since it may correspond more closely to the choices individuals make (how many hour to work rather than a number of weeks).

[24] See Fernández, Guner, and Knowles (2005) for an analysis of the potential tradeoffs between love and money in household formation.

variables as for the woman), and his total income.[25] The husband's characteristics are important determinants of a woman's labor supply: a woman whose husband has at least a college degree, everything else equal, works on average 6 weeks less than a woman whose husband did not complete high school, over half the mean labor supply of the women in our sample. Marriage to a man with ten thousand dollars more income over the mean is associated, on average, with a woman working 4 weeks less over a year. The effect of culture remains positive and statistically significant at the 1% level, with the coefficient increasing significantly in magnitude (as do the coefficients on female education). The latter indicates that there is a positive correlation between a woman's education and her husband's education and total income as well as between these characteristics and female LFP in her country of origin. When we do not control for the husband's characteristics, the woman's education picks up both the positive effect of her cultural heritage and the negative effect of husband's income and education, lowering the coefficient on her own education. Similarly, when we omit the husband's characteristics, the culture proxy also picks up the negative effect of women from higher LFP countries tending to marry men with higher education and income.

In the full specification an increase in the level of female LFP in 1950 of one standard deviation (across countries) is associated with an increase of 1.06 weeks of work per year which is about 30% of the variation in hours worked per week across ancestries. Given that the standard deviation of weeks worked across ancestry is equal to 3.93, this increment represents about 23% of the variation across ancestry. Similarly, an increase of one standard deviation in the level of female LFP in 1950 is associated with an increase of 0.82 hours per week, which is about 30% of the variation in hours worked per week across ancestries.

Our analysis of women's fertility behavior in Table II repeats the same regression strategy used to analyze work, as shown in columns (v) through (vii). For all our specifications, the culture proxy–the TFR in 1950 in the country of ancestry–is positive and statistically significant. Unlike for our work results, however, the magnitudes on all the variables remain more or less constant through the different exercises. Higher levels of education–both her's or her husband's–are associated with fewer children whereas higher total income is associated with higher fertility. Having a husband who makes 10 thousand dollars more over the mean increases the number of children by 0.12.

In the full specification, an increase of one standard deviation in 1950 TFR is associated with an increase of 0.40 children which represents over 95% of the standard deviation of number of children across ancestry. It appears, therefore, that cultural differences across countries may explain a large part of the variation one sees across ethnic groups.

Our two culture proxies may both have independent power to explain work and fertility, as these two variables may capture different aspects of culture. For example, both variables may reflect, in part, the belief as to the appropriate role of women in society, but 1950 TFR may also capture some independent cultural preferences for family size (recall that the correlation of these two variables across countries surprisingly is basically zero). Thus, in columns (iv) and (viii) we examine the effect of including both cultural proxies in our work and fertility regressions respectively. The effect of including both proxy variables is asymmetric across work and fertility. TFR in 1950 has explanatory power in the work regression (negative) but female LFP in 1950 does not help explain fertility. An increase in TFR 1950 by one standard deviation

[25] Income is given by the total pre-tax personal income from all sources for the previous calendar year and is measured in tens of thousands of dollars.

is associated with a 0.71 decrease in weeks worked and 0.41 decrease in hours.

Overall, our results suggest that a woman's cultural heritage is an important factor in determining her work and fertility decisions.

5. Robustness

In this section we explore modifying our benchmark regressions in various way to investigate whether they are robust to changes in sample criteria, alternative cultural proxies, and estimation techniques. We also examine the extent to which our cultural proxies are capturing an important part of the variation that would be accounted for if we had instead included country-of-ancestry as an explanatory variable.

5.1. Alternative Sample Criteria and Cultural Proxies

Tables IV and V show the results of modifying our baseline regression in various ways. Column (i) in Tables IV and Table V extends our sample to include all women, regardless of marital status, for both our work and fertility analysis. We introduce instead marital status dummies (Single, Married, Divorced/Separated, and Widowed). As shown, our cultural proxies remain positive and significant for both work and fertility. We also explored changing the sample of countries to include Russia or exclude China (as arguments can be made in both cases) and to exclude individual countries with large numbers of observations.[26] Our results remained very similar.

We also examine how our results are affected by using alternative related measures of the cultural proxies. We report results for the full specification, but obtain similar results to our benchmark ones for all specifications. Column (ii) in Table IV uses the percentage of the workforce in 1960 which is female as the proxy for culture in the work regression (data available from the World Bank's World Development Indicators). This variable is highly correlated with female LFP 1950 (the correlation is 0.93) and, not surprisingly, shows up positive and strongly significant in our regression. An increase by one standard deviation (8.65) in this alternative variable is associated with an increase of 1.1 weeks worked per year, which is of similar magnitude as that generated by our original proxy. The next column uses the age-specific labor force participation in 1950, for women 30-34 years old, as our cultural proxy. This allows us to control better for demographic differences across countries.[27] Again we obtain similar results as in our benchmark model (a standard deviation increase in our cultural proxy is now associated with an increase of 1.05 weeks worked).

Columns (iv) in Table IV and column (ii) in Table V report the results obtained, for work and fertility respectively, when we use 1960 values for female LFP and TFR rather than 1950. As discussed previously, it is not clear which decade would be the "correct" one to use, and one may also be concerned that World War II and greater measurement error may make the earlier decade more problematic (though these variables are highly correlated: 0.96 for work and 0.97 for fertility). As seen, the effect of the cultural proxies remain positive and statistically

[26] For Russia one could argue that the women's parents may not have been there after the 1917 revolution and hence that their culture may not be reflected in the 1950 variables. For China, whose revolution was in 1949, one may question the significance of 1950 data.

[27] These numbers are from ILO and are reported in Table I.

significant. A one standard deviation increase in female LFP in 1960 is associated with a 1.16 weeks increase in weeks worked; a one standard deviation increase in TFR in 1960 is associated with an increase of 0.41 children.

On the whole, our results suggest that a standard deviation increase in the work cultural proxy leads to around a 1 week increase in the number of weeks worked in 1970 (around 7%) and to a 0.4 increase (around 14%) in the number of children. This change is equivalent to going from having a French father instead of a Greek one or a UK father instead of a Syrian one for work, or a Cuban father rather than a German one for fertility.[28]

Column (iii) in Table V reports the results we obtain from the fertility regression when we change the sample age of the women to 40-50 years old. These women are more likely to have completed their fertility than our 30-40 years old group, and hence this analysis captures the effect of culture on total fertility rather than on both timing and number as in our prior regression. It is interesting to note that the effect of our cultural proxy increases markedly: a one standard deviation increase in TFR 1950 is associated with 0.52 increase in the number of children.

Next, we include per capita GDP in 1950 by country of ancestry in our regressions to allow for the possibility that our results are largely driven by another important aggregate variable at the country level.[29] The cultural proxies for both work and fertility remain positive and statistically significant for all specifications. These results are shown in columns (v) and (iv) of Tables IV and V respectively for the full specification. Per capita GDP is positive and significant in some specifications (in particular, in the full ones reported in the table). While it basically does not affect the magnitude of the work cultural proxy, it increases that of the fertility cultural proxy since TFR and per capita GDP are negatively correlated. Thus, it may be that per capita GDP is proxying for unobserved wealth or education of the second-generation women, and hence its inclusion allows us to more clearly see the effect of preferences. Alternatively, it could be that cultural preferences are better captured by the total fertility rate adjusted for child mortality and that the latter is proxied for by per capita GDP. Controlling for this variable thus allows for a better measure of the true preference for family size.[30]

5.2. Alternative Estimation Techniques

Next we explore the use of different estimation techniques on our work outcome, as the latter has several potential issues associated with it. Since weeks worked is reported as falling into one of seven intervals rather than as a continuous variable, we ran an ordered Probit with the seven possible outcomes. Table VI reports the results obtained for the full specification of the model as before.[31] The first row in the table reports the predicted probability that an observation belongs to a given interval when all variables take their mean values, (e.g., the average woman in the sample has around a 57% probability of not working in the year). The second row reports the effect on these probabilities of a marginal increment in 1950 female LFP. This effect is negative for the first category and positive for all the others, with the largest positive effect

[28] We also used 1960 and 1970 female LFP for narrower age groups as well as TFR in 1970 with similar results.

[29] GDP per capita in 1950 Geary-Khamis dollars, Maddison data. The numbers are reported by country in Table I.

[30] See Blau (1992) for a related finding.

[31] We used state fixed effects rather than SMSAs in this exercise since otherwise the estimation process did not converge.

on the interval of 50-52 weeks. The expected value of the marginal effect on weeks worked is 0.071 weeks. This implies that one standard deviation increase in the cultural proxy leads to an increase of 0.81 weeks worked over the 14.76 weeks worked at the mean of our sample. This is a similar result to the one obtained previously with OLS.

Since our sample contains a large number of women who do not work but may be very heterogeneous, we also estimate a Tobit regression for weeks worked. The results for our full specification model are reported in Table VII. Since the Tobit estimation did not converge if we simultaneously included both fixed effects and clustering at country of ancestry level, we chose to preserve the latter option. In order to provide a meaningful comparison, therefore, the first column reports the OLS coefficients without metropolitan area fixed effects. Columns (ii)-(iv) report the coefficients from the Tobit regression and the correspondent marginal effects for the unconditional expected value and the probability that the observation is uncensored, calculated at the mean of the independent variables. A one standard deviation increase in the cultural proxy is associated with a 1.1% increase in the probability of working and a 0.78 increase in expected weeks worked.

Next, we explore the effect of culture on the labor force participation decision by running a Probit regression on the probability that a woman is in the labor force (using the Census definition of labor force participation). Column (v) of Table VII reports the marginal effect evaluated at the mean. A one standard deviation increase in the cultural proxy leads to 2.3 percentage points increase in the probability of working over its predicted value at the mean of 34.5 percent.

Lastly, since a woman's work and fertility decisions are unlikely to be completely independent of one another, we estimate both models simultaneously by running a seemingly unrelated regression, permitting us to account for the correlation in the errors and leading to efficient estimates of the coefficients and standard errors.[32] The results are reported in columns (vi) and (vii) of Table VII, and are very much in line with what we have found so far: the coefficients of our cultural proxies are both strongly significant and their magnitude, albeit somewhat lower, is similar to what we find running our regressions independently.

5.3. Country Dummies and Cultural Proxies

We now turn to the more traditional approach of estimating (4.1) by using country dummies rather than the quantitative home country variables as our cultural proxies. This has the benefit of not requiring the relation between culture and outcomes to be linear in the cultural proxy. Furthermore, it may allow different features of culture to play a role in work and fertility outcomes other than those captured in LFP and TFR 1950. It has the previously discussed drawback, however, of not specifying how culture matters.

Panel A of Table VIII reports the coefficients obtained on each country dummy from running the full specification of (4.1) for weeks worked, hours worked, and number of children. For the work regressions, the omitted country is Mexico–it has the lowest value of female LFP in 1950 in the sample. For fertility, the omitted country is the one with the lowest TFR in 1950, Austria. Since we are now estimating the same number of parameters as the number of countries of ancestry in the sample, we restrict the sample to countries for which we have at least 100

[32] The Breusch-Pagan test rejects the hypothesis that the residuals from the two equations are independent.

observations, leaving us with 6191 observations and 13 countries.[33]

In our work and fertility regressions, the country dummies are jointly highly significant. The magnitude of the country-of-ancestry effect ranges from 4 additional hours worked per year by women with Japanese ancestry to essentially zero for women with Irish ancestry, as compared to their Mexicans counterparts. For fertility they range from 1.3 additional children for women of Mexican ancestry to essentially no additional children for women of Swedish ancestry, as compared to their Austrian counterparts.

The results in Panel A indicate that the country of ancestry of a woman's father matters to her work and fertility outcomes, even after controlling for both her and her husband's characteristics. To what extent, however, is our choice of cultural proxy capturing an important component of the country-of-ancestry effect? To answer this question, we run the following second-stage regression:

$$\beta_j = \alpha + \delta \widetilde{Z}_j + \varepsilon_j$$

where β_j is the coefficient on the country j dummy variable obtained in the full specification in the first-stage regression (reported in Panel A) and $\widetilde{Z}_j$ is our cultural proxy.

Panel B reports the results of the second stage regression: our cultural proxies are positive for both work and fertility and are significant at the 5% level for work and at the 1% level for fertility. An increase of one standard deviation in female LFP in 1950 is associated with an increase in a country's coefficient of 0.86 and 0.62, for weeks and hours worked, respectively. An increase of one standard deviation in TFR in 1950 is associated with an increase of 0.37 in the country fixed effect. Furthermore, the adjusted R squares are sizeable, especially for fertility, indicating that variation in female LFP and in TFR in 1950 explains an important part of the differences in the country coefficients.[34] Hence, using these variables rather than the more "black-box" approach of a country dummy, appears to be a good strategy.

6. Competing Explanations

The prior section established that our results are robust to a number of alternative variable definitions, sample selection criteria, and estimation techniques. The main concern facing our results, therefore, is that the positive correlations that we find between our cultural proxies and women's work and fertility outcomes are the result of variables other than culture and that these are simply correlated with our proxies. The two main suspects are unobserved differences in human capital, broadly defined, and ethnic networks.

Human capital, in addition to observable formal education, may well have an unobserved component that depends on the human capital of an individual's parents. If parental education varies with country of origin in a way that is correlated with the cultural proxies, this could explain the observed correlations. Similarly, neighborhood networks, particularly ethnic ones,

[33] Using our cultural proxies with this sample yields very similar results as for the original one. An increase of one standard deviation in female LFP 1950 is associated with 0.93 more weeks worked in a year and 0.63 more hours worked per week. An increase of one standard deviation in TFR 1950 is associated with 0.37 more children. Restricting the sample to include only countries with a minimum of 50 observations also leads to very similar results.

[34] In addition, it should be noted that the adjusted R squares obtained by using country dummies or our cultural proxies are very similar. In fact, in some cases, the cultural proxies yield higher adjusted R squares.

may also be a component of unobserved human capital or an input into obtaining a job. We next turn to examining these issues.

6.1. Parental Education: Results from the GSS

The Census does not contain information about the education of an individual's parents. Hence, we turn to an alternative data set, the General Social Survey (GSS), which in addition to providing data on the working behavior and ethnic origins of a respondent also has information on a number of spousal and parental characteristics. The GSS is a series of cross sections that have been collected annually since 1972 (except for a few years) by the National Opinion Research Center.[35] Each cross section contains about 1500 observations, and respondents are asked about their demographic background, political and social attitudes, and labor market outcomes.

Unfortunately, the GSS does not provide information on the country of birth of a respondent's parents, but it does ask "From what countries or part of the world did your ancestors come?" We use the answer to this question to determine a woman's ancestry, though we are no longer able to distinguish second-generation Americans from those who have been in the US for longer. We use observations from the years 1977, 1978, 1980 and 1982, since 1977 is the first year in which individuals were asked about their birthplace and using one year only would provide too few observations. In order to increase the sample size we also expand the age range to include all married women born in the US (and whose ancestors came from elsewhere) and who are between 29 and 50 years of age. For the same reasons as in the Census, we exclude individuals whose ancestors came from those countries that became centrally planned around World War II (and also Russia) and, to make meaningful comparisons across country averages, we exclude countries with fewer than 10 observations. Our final sample consists of 456 women from 9 countries of ancestry: Canada, Great Britain, France, Germany, Ireland, Italy, Mexico, Norway, and Sweden.[36]

During the sample years the GSS did not ask individuals how many weeks they worked in the previous year. We create instead an indicator variable that is equal to one if, during the week preceding the interview, the respondent was holding a regular job and working at least 40 hours a week; the indicator variable is set equal to zero otherwise. The summary statistics for the sample are presented in Table A2 in the Appendix. The women in our sample are on average 38 years old, have 2.5 children and about 31% of them hold a job and work at least 40 hours a week. The women's fathers on average have around 10 years of schooling and their mothers have slightly more.

We estimate the following model:

$$D_{istj} = \beta_0 + \beta_1' X_i + \beta_2 \widetilde{Z}_j + f_s + v_t + \varepsilon_{ist}$$

where the dependent variable D_{istj} is the indicator variable previously described that captures the full-time work decision of a woman residing in region s, interviewed in year t, and of ancestry j.[37] X_i is a vector of controls which varies with the particular specification considered, and f_s

[35] Davis, Smith and Marsden (1999) describes the content and the sampling frame of the GSS.

[36] We exclude from the sample 8 observations that declare themselves students.

[37] The regional variable consists of the following 9 categories: New England , Middle Atlantic, East North Central, West North Central , South Atlantic, East South Central, West South Central, Mountain, and Pacific.

and v_t are a full set of dummies to capture the region of residence and the year of the interview, respectively, and $\widetilde{Z}_j$ is the cultural proxy for ancestry j. As before, the standard errors are corrected for clustering at the country-of-ancestry level.

The marginal effects from the Probit estimation are reported in Table IX. The specifications are the same as previously, with additional controls for parental education measured in years. As can be seen in the table, the coefficient on the cultural proxy for work (as before, female LFP in 1950) remains basically constant, positive, and statistically significant for all specifications, with or without parental education. The education of a woman's father enters negative and marginally significant in the full specification, whereas the mother's education is always insignificant. As the GSS does not report the income of the spouse but only that of the respondent's and the family, for our full specification we construct the husband's income by subtracting the woman's income from the family's total income.[38]

Table IX allows us to conclude that culture appears to play a quantitatively important role even after controlling for parental education. A one standard deviation increase in female LFP in 1950 is associated with a 4.4 percentage point increase in the probability that a woman works full time. Since the predicted value of this probability, calculated at the sample mean, is 28.1 percent, this increase brings the probability of working full time to 32.5 percent.[39]

A drawback of the GSS analysis is that our sample only includes 9 countries rather than the 25 in our main sample and that our sample size is significantly smaller. An alternative to controlling for parental human capital directly is to instead use the average education of immigrants who were in the United States in the 1940s (and whose age makes them likely to be the parents of the women we observe in the 1970 Census) as a proxy for parental education. This variable also serves as a measure of the "quality" of the ethnic network that an individual may face. We next turn to this analysis.

6.2. Ethnic Human Capital

As shown by George Borjas in a number of papers (1992,1995), aggregate ethnic variables may help explain individual outcomes such as education or earnings. In particular, Borjas has shown that the earnings of children of immigrants are affected not only by parental earnings (as in the usual models of intergenerational income mobility), but also by the mean earnings of the ethnic group in the parents' generation. In his 1995 paper, he finds that the level of ethnic human capital (as measured by average wages or average education for immigrant men in the 1940 Census) and neighborhood characteristics help explain the educational attainment and wages of second generation men aged 18-64 in the 1970 Census. Borjas also used the NLSY which allowed him to control for parental education directly and found that ethnic human capital still mattered. Borjas interprets his results as showing that there are ethnic externalities in the human-capital process.[40]

[38] Family income is total family income, from all sources in the previous year and before taxes. Respondent's income is labor earnings in the previous year before taxes and other deductions. Family and respondent's incomes on 1972-1993 surveys are in constant dollars (base = 1986). These variables are based on categorical mid-points and imputations. For details see GSS Methodological Report No. 64.

[39] The standard deviation of female labor force participation across the 9 countries in the GSS sample is 6.3, with a mean of 26.4.

[40] Whether he thinks of these as being strictly economic or having a cultural component, however, is not clear.

In this section we examine the effect of the average education of the immigrant group (ethnic human capital) in 1940 on a woman's work and fertility decisions. By including this variable in our analysis, we will have a proxy both for parental human capital and, to some extent, for the human capital embodied in the woman's ethnic network.

To construct a measure of ethnic human capital, we use the 1940 Census to calculate the average years of education for all individuals not in group quarters who are between the ages of 25 and 44 and who were born in one of the twenty five countries of our sample. We select individuals in this age range as it corresponds roughly to the age interval in which we would find the parents of the women in our sample. We end up with a sample of 26,247 individuals and many observations per country.[41] Across individuals, the average education is 7.9 years; across countries of ancestry, the average is 7.8 years with a standard deviation of 1.9 years. See Table 1 for the average education of immigrants, reported by country of ancestry.

The results obtained from including this variable (denoted Human Capital 1940) in our regression analysis are given in Tables X and XI, for work and fertility respectively. Note that 1940 human capital is never significant in explaining fertility, neither on its own nor when combined with our cultural proxy–TFR 1950. The effect of TFR 1950 remains positive and statistically significant; its quantitative effect is similar to that found before. Human Capital 1940 does, however, help to explain the amount worked by women, both on its own (though only in the full specification in column (v)) and combined with LFP 1950. Note that when we include 1940 human capital, the coefficient on LFP 1950 remains positive and significant though its magnitude decreases, indicating that countries with higher female LFP also tended to have emigrants with higher human capital. This could matter, as indicated previously, either because formal education does not capture all of women's human capital or because the human capital embodied in ethnic networks matters to the probability that an individual works, and thus the 1940 human capital variable captures some component of parental or neighborhood ethnic human capital.

An alternative measure of ethnic network quality would be given by the human capital embodied in other second-generation individuals from the same country of ancestry who belong to a similar age group to the women in our sample. In this case, the network would consist of individuals within the same generation rather than across generations as previously. Tables XII and XIII repeat the same exercise as in Tables X and XI, but this time controlling for Human Capital 1970, i.e., the average years of education of second-generation immigrants from the same country of ancestry who are between the ages of twenty five and forty five.[42] We find a very similar pattern of results as for 1940 Human Capital, with the exception that human capital in 1970 is not significant when female LFP 1950 is included in the full specification for the work regression.[43]

We also explored the robustness of our results to other measures of ethnic human capital both for 1940 and 1970. In particular, we used average education only of women, only of men and, for 1940, also only of married women and only of married men. Our results were very

[41] All countries have over 75 observations with the exception of Lebanon for which we have only 4.

[42] See Table I for the value of this variable by country. The mean is 12.3 years with a standard deviation of 0.86.

[43] Note that the dependent variable in the work regression is now hours worked. We could not use weeks worked as human capital 1970 and LFP 1950 are highly correlated (over 0.7) and they both became insignificant (and the adjusted R squared decreased) when they were both included in the same specification for weeks worked.

similar across all cases.

6.3. Men and Culture

In this section we conduct what we consider a critical test of the validity of our hypothesis. In particular, we ask whether our proxy for cultural attitudes towards women working (female LFP 1950) is able to positively and significantly explain how much second-generation men work in the United States in 1970. If the explanatory power of our proxy is truly coming from culture rather than from some omitted correlated variable, then the cultural proxy should not have similar explanatory power in explaining how much men work. That is, unless something like a household substitution effect is in operation, there is no a priori reason to expect that beliefs as to the proper role of women in society should explain how much men work.[44] As we show below, our hypothesis passes this test with flying colors. The same asymmetry, however, should not extend necessarily to our cultural proxy for children. The number of children in the household is common to both spouses and thus there may be a cultural attitude towards family size that is common for men and women. Consequently, one may well expect the cultural proxy (TFR 1950) to capture cultural preferences towards family size and hence help explain the number of children of men and women. This is indeed the case, as we show below.

We select the men for our sample with the same procedure used to construct our sample of women. That is, we select all married men, age 30-40, born in the US, and not living on farms or group quarters and not working in agriculture. From this group we exclude all men whose fathers were born in the US (leaving us with approximately 11% of the sample), eliminate those whose replies were not countries, and exclude the European centrally-planned economies. Lastly, we drop those countries with fewer than 15 observations. Our final sample of men has 6710 observations and the same 25 countries as for our main sample of women.

In 1970, the men in our sample were working on average 41.3 hours a week (with a standard deviation of 14.9 hours) and 49.0 weeks a year (with a standard deviation of 7 weeks). As in the case of women, the individual means are basically the same as those obtained by averaging observations by country of ancestry, whereas the standard deviations are significantly smaller for the latter (3.1 and 0.9 for hours and weeks respectively). Interestingly, the men in our sample (unlike their female counterparts) work slightly more than men whose fathers were born in the US (the latter worked on average 40.5 hours per week and 48.7 weeks per year with standard deviations of 16.1 hours and 7.7 weeks respectively).

In order to easily test whether the coefficients on the cultural proxies are significantly different for men and women, we combine the sample of 6710 men with the sample of 6774 women for a total of 13,484 individuals and 25 countries. Our regressions now include a dummy variable for each gender which we in addition interact with all explanatory variables in all specifications.

We report our results both for weeks and for hours worked in Table XIV. We are particularly interested in hours as, especially for men, weeks worked may not capture the intensity of an individual's work efforts. The main variables of interest are Female x LFP 1950 and Male x LFP 1950. Note that when the observation is a woman we use her father's country of birth to assign ancestry and if the observation is a man we use his father's country of birth. As

[44] The cultural proxy could, however, have a negative and significant coefficient if individuals tend to marry others within their own ancestry and if men whose wives work less tend to work more themselves to increase household income. This, however, as we show, is not the case.

shown in the table, the culture proxy is never significant in explaining how much men work once individual characteristics are included in the work regression. As before, however, the culture proxy is positively and significantly associated with how much women work in all specifications. Furthermore, we can reject at the 1% and 5% levels for weeks and hours respectively, the hypothesis that the coefficients on the culture proxy for men and women are equal. It is interesting to note that a wife's education (coefficients not shown) has the opposite effect on the work behavior of her spouse (positive) than a husband's education has on the work behavior of his spouse (negative). The effect of spouse's income is negative across genders.

While our ability to reject the hypothesis that the culture proxy variable helps explain how much men work is not definitive evidence in favor our thesis, it does significantly decrease the probability that other omitted variables are driving our results. It also points to the fact that, if there is some omitted variable that is positively correlated to female LFP 1950, it would most likely have explanatory power for women's labor supply but not for men's. It is not easy to imagine what such a variable might be such that did not also contain a significant component of culture. If, for example, what this variable is doing is picking up the possibility that parents from low female LFP countries invest less unobserved human capital in their daughters *relative* to their sons than parents from high female LFP countries, then this bias in favor of boys is also a cultural trait. That is, while one may conjecture that this behavior may have existed for purely economic reasons in the country of ancestry, the fact that this pattern is repeated in a different economic and institutional context makes it likely that this behavior also reflects important beliefs about the role of women.

Lastly, we examine whether the cultural proxy for family size, TFR in 1950, has explanatory power for men as well as for women. We now use the number of children in the household as the dependent variable, as this allows us to treat both men and women symmetrically. The results of this analysis are presented in Table XV.

As shown in the table, the cultural proxy for children is positive and significant for both women and men. The coefficient is larger for women than for men (the hypothesis that they are equal can be rejected at the 1% level), which may indicate that women may respond more to the cultural background of their parents (or perhaps of their neighborhood) than men.[45] Interestingly, unlike for the case of work, the number of children in the household is associated negatively with the level of the spouse's education for both genders. The effect of a spouse's income, however, is now asymmetric, though this is not surprising given traditional gender roles. A man whose wife's total income is high tends to have fewer children; a woman whose husband's total income is high tends to have more children.

7. Her or His Culture?

A married woman's work and fertility outcomes are likely to be influenced not only by the factors that we have already explored–her age and education, her beliefs as embodied in the cultural proxies, and her husband's characteristics, but also by the beliefs–by the culture–of her husband. In this section we wish to explore whether the husband's cultural beliefs as to the role of women and family size affect his wife's work and fertility outcomes. Of course, a woman's culture and

[45] Whether women and men "assimilate" at a different rate is an interesting question to pursue in future research.

that of her husband's are unlikely to be random: A woman who would like to work or would prefer a larger family is presumably more likely to marry a man who would be in agreement with these choices. Nonetheless, it is of interest to ask whether it is her culture or her husband's culture or both that matter to these outcomes.[46]

In order to study whose culture matters to a woman's work and fertility outcomes, we include cultural proxies for both the woman and her husband, in each case assigned by the country of birth of each spouses' father. Note that many women will be married to men whose fathers were born in the US. To these men, therefore, we must associate US female LFP and TFR in 1950. In order to not have an asymmetric sample in which the US variables would only appear as a cultural proxy when associated with a woman's husband, we expand our sample to include women whose fathers were born in the US but whose fathers-in-law are foreign born. We follow the same procedure we described earlier: we drop those women whose father-in-law is from a European centrally planned economy or from a country for which we have fewer than 15 observations. Our final sample consists of 12,060 married women and 26 countries (including US).[47] In this sample, 32.6% of women are married to men whose father was born in the US (and thus these women's father was born elsewhere); 47.6% of the women have fathers born in the US (and hence they are married to men with foreign born fathers). The remaining 19.7% of women and their husbands both have fathers born outside the US. Only 13.7% of the couples in our sample share the same culture (i.e., have fathers born in the same country), though this is due to the fact that we have omitted those women with US fathers and US fathers-in-law. If we were to restrict our attention to couples in which neither spouse has a father born in the US, then 69.4% of these share the same culture.

To study the effect of the two spouses' cultures, we distinguish between couples who share identical cultures (i.e., their fathers were born in the same country) from those with different cultures. We create two dummy variables: Same (for same culture) and Not Same (for different cultures) and interact these with the cultural proxies. It should be noted that the number of observations for same culture is relatively small (1653). The results of our regression analysis are reported for the full specification in Table XVI.

The first column in Table XVI reports the results for weeks worked using only the wife's cultural proxy for work. As before, it is positive and statistically significant (for Not Same). The next column uses only the husband's cultural proxy which is also positive and statistically significant. The third column uses both proxies. Interestingly, the coefficient on the husband's cultural proxy is larger and more statistically significant than that of his wife's (which is no longer significant). Furthermore, in this last specification, the coefficient on the cultural proxy when the culture of the two spouses is the same is significant (at the 10% level) and larger than either of the two different cultures coefficients.

Columns (iv)-(vi) in Table XVI repeat the same specifications for fertility. The cultural proxy is positive and statistically significant when it is the wife's, the husband's, and when both are simultaneously included. When the wife and husband share the same culture, the cultural proxy is also positive and significant, this time in all three specifications. The coefficients for

[46] Once one leaves the unitary household model, there is no reason to believe that husband and wives necessarily share the same preferences over outcomes (see, e.g., Lundberg and Pollak (1996)).

[47] Another way of thinking about our sample selection is that from the universe of married women born in the US and between the ages of 30-40, we have eliminated those women who have both a US born father and a US born father-in-law.

each spouse separately are basically equal as are the coefficients for each spouse when they are entered jointly in the final specification. In this last specification, the sum of the coefficients on the wife's and the husband's cultural proxies essentially sum to the coefficient on cultural proxy when the spouses share the same culture.

We have also experimented with restricting our sample to the subset of women who have neither a US father nor a US father-in-law.[48] The results are similar to the ones above except that for the work regressions the cultural proxy when the couple shares the same culture is now much larger, positive, and significant for all three specifications.

8. Cultural Transmission

In this section we briefly explore the role of neighborhood composition in cultural transmission. An individual's neighborhood may play an important role in transmitting and preserving a set of beliefs, independently of the human capital embodied in an individual's ethnic network. A neighborhood that has a relatively high proportion of individuals from the same ancestry may help preserve that country's culture by punishing behavior that is different than the norm (by, for example, ostracizing the deviant individual). It may also keep the culture of the country of ancestry alive by providing role models and diffusing specific beliefs about how individuals, and in particular women, should act. In this section we partially explore the role of neighborhoods in cultural transmission and preservation by investigating how the propensity of an ethnic group to cluster in the same neighborhood affects the impact of culture. The hypothesis is that the greater is the proportion of an ethnic group in a neighborhood, the larger will be the effect of the cultural proxies on individual behavior. Note that this is a different type of "ethnic externality" than those explored by Borjas in his work. Here it is not the education of the ethnic group that is an input into the production of an individual's human capital, but rather the greater presence of this group in a community that facilitates the transmission and preservation of a particular set of beliefs.

To explore the role of ethnic density, we turn to data provided in Borjas (1995). Borjas uses the 1/100 Neighborhood File of the 1970 US Census to study the effect of ethnicity and neighborhoods on intergenerational transmission. He calculates the extent of residential segregation for both first and second-generation Americans by estimating the proportion of the respondent's neighborhood that is of the same ethnicity and averaging this number across respondents.[49] We use Borjas' estimates of residential segregation for second-generation Americans to attach an average ethnic density to each country of ancestry.[50] These numbers are reported by country of ancestry in Table I.

As can be seen in Table I, on average, second-generation Americans typically live in neighborhoods where the density of their own ethnic group is 4.3% with a standard deviation of 4.5% (i.e., the average second-generation American resides in a neighborhood in which 4.3% of the community is from the same ethnic group). Mexicans, Italians, and Japanese live in ethnically

[48] There are 2381 such observations.

[49] See Borjas (1995), Table 2.

[50] Borjas does not include Spain, so individuals from this country of ancestry are excluded in the analysis that follows. He also has separate entries for England, Wales, and Scotland which we aggregate to one U.K. value by weighing each separate density figure by the proportion of U.K. observations in our sample that come from each of these three countries.

dense neighborhoods (respectively, 18.1, 12.1 and 12.6), whereas Turks, French, and Lebanese live in neighborhoods with low ethnic density (0.3, 0.3, and 0.4, respectively). Note that the ethnic density number depends both on the extent to which members of an ethnic group cluster into the same neighborhoods and how large that ethnic group is in the population (since if the ethnic group is not large, then even if they tended to cluster, this could show up as a low density number). The rank correlation of the number of observations by country of ancestry in Table I and ethnic density is 0.5, showing that both elements probably play a role. In any case, from the perspective of cultural transmission, it may not matter which variable is the source of ethnic density.

In order to explore the effect of ethnic density, we include density, the cultural proxy, and density interacted with the culture proxy in our regression analysis both separately and jointly. Tables XVII and Table XVIII report the effects for hours worked and fertility respectively.[51] Across all specifications, density is only significant if the culture proxy variable is also included. The last column in each table reports the coefficients for the full specification. Note that the interaction of culture and density is positive and significant. Moreover, the full marginal effects of female LFP 1950 and TFR 1950 remain positive and significant whereas the full marginal effect of density is insignificant when evaluated at the mean. A one standard deviation increase in female LFP 1950 is associated with a 0.76 increase in hours worked (evaluated at the mean of density); a one standard deviation increase in TFR 1950 is associated with a 0.19 increase in the number of children.

From the above we conclude that the degree to which ethnic groups cluster in the same neighborhoods appears to be an important mechanism in maintaining culture: the greater is the average density of an ethnic group, the greater is the impact of culture on a woman's work and fertility outcomes.[52]

9. Conclusion

This paper argues that culture matters to important economic outcomes, namely, female work and fertility. We show that female LFP and TFR in 1950 by country of ancestry, our cultural proxies, are economically and statistically significant in explaining how much women work and how many children they have. We also examine the most likely suspects that could be responsible for our results. In particular, we have shown that neither unobserved human capital nor network quality are likely to be the driving forces. On the other hand, we find that the average propensity of an ethnic group to cluster in the same neighborhood magnifies the impact of the cultural proxies on work and fertility, which is consistent with our theory that cultural transmission through the family and neighborhood matters. Perhaps most convincingly of all, we have shown that the cultural proxy for female work has no explanatory power for the work behavior of a similar sample of men (in line with our hypothesis that this variable reflects cultural attitudes towards women in society) whereas the cultural proxy for fertility is significant in explaining the number of children they have.

There are, of course, other interpretations of the empirical evidence other than ours of culture. For example, if household skills are transmitted primarily from mothers to daughters and if these

[51] Similar results are obtained for weeks worked.

[52] Whether this has positive or negative welfare effects depends on one's view about the validity of the underlying beliefs.

are higher for mothers who do not work, than the traditional comparative advantage argument may help explain why the daughters of women from low female LFP countries tend to work less. This alternative hypothesis, however, would not explain why the impact of the cultural proxy is stronger the greater is the propensity of the ethnic group to cluster into neighborhoods.

Another hypothesis is that there are varying degrees of discrimination in the US labor market that (negatively) correlate with female LFP in the country-of-ancestry. We do not think that such a correlation is very plausible especially since most of our sample consists of women from European countries of ancestry. More importantly, we do not see this pattern for men by country of ancestry. This implies that if discrimination is responsible for the observed pattern of results, it would have to be faced only by the women and not by the men from these countries, which seems rather implausible.

We think that our estimates of the quantitative significance of culture are likely to underestimate the true significance of culture. Indeed, we find it surprising that despite the fact that we study the work and fertility behavior of second-generation immigrants to the US (who are likely never to have set foot in their father's country of ancestry), and despite the fact that we control for most of the indirect effects of culture (a woman's education and her husband's age, education, and income), we nonetheless find the direct effect of our cultural proxies to be significant. We think, therefore, that culture is likely to play an important role in explaining the large variation across time and countries in women's work and fertility.

References

[1] Acemoglu, D., S. Johnson, and J. Robinson (2004), "Institutions as the Fundamental Cause of Long-Run Growth," mimeo, MIT, April 2004.

[2] Antecol, H. (2000), "An Examination of Cross-Country Differences in the Gender Gap in Labor Force Participation Rates", *Labour Economics* 7, 409-426.

[3] _____ (2001) "Why Is There Interethnic Variation in the Gender Wage Gap? The Role of Cultural Factors",. *Journal of Human Resources* 36(1), 119-143.

[4] Barro, R. and R. McCleary (2003) "Religion and Economic Growth", NBER Working Paper No. 9682.

[5] Bisin, A. and T. Verdier (2000), "Beyond the Melting Pot: Cultural Transmission, Marriage, and the Evolution of Ethnic and Religious Traits", *Quarterly Journal of Economics*, 115(3), 955-988.

[6] Blau, F.D. (1992), "The Fertility of Immigrant Women: Evidence from High Fertility Source Countries", in: Borjas, G.J., Freeman, R. (Eds.), *Immigration and the Workforce: Economic Consequences for the United States and Source Areas,* University of Chicago Press, Chicago, 93-133.

[7] Borjas, G. (1992), "Ethnic Capital and Intergenerational Mobility", *Quarterly Journal of Economics*, 107 (1), 123-50.

[8] _____ (1995), "Ethnicity, Neighborhoods, and Human-Capital Externalities", *American Economic Review*, 85(3), 365-390.

[9] Carroll, C., B. Rhee and C. Rhee (1994), "Are there Cultural Effects on Saving? Some Cross-Sectional Evidence", *Quarterly Journal of Economics*, 109(3), 685-99.

[10] Cole, H., G. Mailath, and A. Postlewaite (1992), "Social Norms, Savings Behavior and Growth", *Journal of Political Economy*, 100, 1092-1125.

[11] Davis, J., T. Smith and P. Marsden (1999), *General Social Surveys, 1972-1998: Cumulative Codebook*, Chicago, NORC.

[12] Fernández, R., A. Fogli, and C. Olivetti (2004), "Mothers and Sons: Preference Formation and Female Labor Force Dynamics", *Quarterly Journal of Economics*, 119 (4), 1249-1299.

[13] Fernández, R. N. Guner, and J. Knowles (2005, "Love and Money: A Theoretical and Empirical Analysis of Household Sorting and Inequality," *Quarterly Journal of Economics.*

[14] Giuliano, P.(2004), "On the Determinants of Living Arrangements in Western Europe: Does Cultural Origin Matter?", mimeo, U.C. Berkeley.

[15] Goldin, C. (1990), *Understanding the Gender Gap: An Economic History of American Women*, New York: Oxford University Press.

[16] Guinnane, T., C. Moehling, and C. O Grada (2002), "The Fertility of the Irish in America in 1910", mimeo, Yale University.

[17] ILO (1988), *Current International Recommendations on Labour Statistics*, Geneva.

[18] Landes, D. (1998), *The Wealth and Poverty of Nations*, New York, W.W. Norton.

[19] Levine, D. (1993), "The Effect of Non-Traditional Attitudes on Married Women's Labor Supply", *Journal of Economic Psychology*, 14, 665-679.

[20] Lundberg, S. and R. Pollak (1996), "Bargaining and Distribution in Marriage," Journal of Economic Perspectives, 10 (4), 139-158

[21] Maddison, A. (1995), *Monitoring The World Economy 1820-1992*, Paris, Organisation for Economic Co-Operation and Development.

[22] Pencavel, J. (1998), "The Market Work Behavior and Wages of Women, 1975-94," *Journal of Human Resources*, 38(4), 771-804.

[23] Persson, T. and G. Tabellini (2003), *The Economic Effect of Constitutions*, MIT Press: Cambridge.

[24] Putnam, R. (2000), *Bowling Alone: The Collapse and Revival of American Community*, Simon and Schuster.

[25] Reimers, C.(1985), "Cultural Differences in Labor Force Participation Among Married Women", *American Economic Review Papers and Proceedings*, 75(2), 251-255.

[26] Stigler, G. and G. Becker (1977), "De Gustibus Non Est Disputandum", *American Economic Review*, 67(2), 76-90.

[27] Vella, F. (1994), "Gender Roles and Human Capital Investment: The Relationship between Traditional Attitudes and Female Labour Force Performance", *Economica*, 61, 191-211.

[28] Weil, D. (2004), *Economic Growth*, Addison Wesley

Table I

COUNTRY SUMMARY STATISTICS

Country	Obs.	Weeks Worked	Hours Worked	Children	Female LFP 1950	TFR 1950	GDP pc 1950	Human Cap. 1940	Human Cap. 1970	Avg. Ethnic Density	Female 30-34 LFP 1950
Canada	720	14.88	10.41	3.29	17.82	3.73	7291	9.60	12.10	7.40	20.95
Mexico	839	15.23	10.87	4.22	8.42	6.87	2365	4.59	9.17	18.10	11.90
Cuba	17	27.62	15.24	2.41	12.19	4.10	2046	8.13	12.50	4.70	21.33
Denmark	80	15.02	12.20	3.00	32.32	2.54	6943	9.45	12.63	0.90	38.30
Finland	54	15.36	11.07	2.56	39.56	2.97	4253	7.43	12.44	3.90	58.45
Norway	141	16.14	10.49	2.82	20.11	2.60	5463	9.00	12.44	3.00	20.11
Sweden	187	15.66	9.93	2.74	23.21	2.21	6739	8.89	12.77	1.70	27.05
U.K.	498	15.77	9.43	2.86	25.34	2.18	6939	9.77	12.86	1.20	26.85
Ireland	465	11.38	7.42	3.51	22.95	3.38	3453	8.33	12.70	3.30	27.90
Belgium	24	13.00	6.58	3.29	18.98	2.33	5462	8.52	12.08	0.70	23.90
France	66	13.83	9.74	3.14	28.28	2.73	5271	9.29	12.31	0.30	27.05
Netherlands	101	15.84	9.55	3.16	18.65	3.06	5996	8.85	12.29	3.90	18.55
Switzerland	50	22.10	12.78	3.24	25.73	2.28	9064	9.60	12.62	0.80	27.70
Greece	197	13.57	9.47	2.48	17.95	2.29	1915	7.07	12.83	1.10	25.00
Italy	1909	14.88	9.77	2.76	20.99	2.32	3502	5.91	11.76	12.10	25.05
Portugal	100	16.15	11.83	3.13	16.99	3.04	2086	5.15	10.74	6.80	22.20
Spain	65	15.23	8.71	2.58	12.56	2.57	2189	6.84	12.22	.	17.21
Austria	270	14.53	9.96	2.77	36.29	2.09	3706	7.64	12.58	2.10	44.60
Germany	616	16.27	10.82	2.87	34.23	2.16	3881	8.95	12.48	3.20	44.53
China	53	18.75	13.27	2.64	47.12	6.22	439	7.30	13.52	6.20	80.90
Japan	148	22.64	16.84	2.43	32.99	2.75	1921	9.36	13.03	12.60	49.15
Philippines	67	22.63	14.53	3.07	23.75	7.29	1070	9.08	11.72	6.50	46.39
Lebanon	27	12.94	10.50	3.04	6.90	5.74	2429	1.50	12.73	0.40	10.50
Syria	38	9.53	5.09	2.82	14.85	7.20	2409	6.97	12.35	0.80	23.59
Turkey	42	14.00	10.63	2.21	52.76	6.90	1623	7.58	13.44	0.30	77.95
Average	270.96	16.12	10.68	2.92	24.44	3.66	3938.20	7.79	12.33	4.25	32.68
Std. Dev	414.12	3.93	2.57	0.42	11.40	1.83	2289.36	1.92	0.86	4.54	18.41

Sources: 1% 1970 Form 2 Metro Sample of the U.S. Census, 1% 1940 General Sample of the U.S. Census, ILO, Economically Active Population, 1950-2010, (Geneva, 1997), United Nation Demographic Yearbook 1997, Historical supplement, Table 4 and Borjas (1995), Table 2. For variable definitions, see text.

Table II

CULTURE, WORK AND FERTILITY

	Dependent variable is Weeks Worked				Dependent variable is Children			
	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
Female LFP 1950	0.066**	0.049*	0.093**	0.061**				-0.010
	(0.024)	(0.024)	(0.028)	(0.024)				(0.008)
TFR 1950				-0.386*	0.250**	0.219**	0.219**	0.194**
				(0.167)	(0.056)	(0.041)	(0.041)	(0.051)
High School		1.598*	3.783**	3.651**		-0.415*	-0.393**	-0.378*
		(0.676)	(0.677)	(0.643)		(0.181)	(0.151)	(0.147)
Some College		-0.171	4.189**	4.111**		-0.503*	-0.485**	-0.457*
		(1.183)	(1.172)	(1.133)		(0.213)	(0.185)	(0.179)
College +		2.132**	8.909**	8.801**		-0.869**	-0.865**	-0.838**
		(0.824)	(0.881)	(0.836)		(0.214)	(0.204)	(0.195)
Husband High School			-2.530**	-2.620**			-0.218+	-0.210+
			(0.901)	(0.880)			(0.116)	(0.113)
Husband Some College			-1.647+	-1.716+			-0.184+	-0.177+
			(0.894)	(0.893)			(0.103)	(0.103)
Husband College +			-6.281**	-6.369**			-0.194**	-0.185**
			(0.750)	(0.768)			(0.050)	(0.049)
Husband Total Income			-4.067**	-4.097**			0.116*	0.118*
			(0.368)	(0.358)			(0.049)	(0.049)
Obs.	6774	6774	6774	6774	6774	6774	6774	6774
Adj. R-sq	0.013	0.020	0.052	0.053	0.059	0.098	0.105	0.106

+ significant at 10%; * significant at 5%; ** significant at 1%. SMSA fixed effects in all specifications. Age and age squared for wife and age range dummies for husband in all specifications with demographics. Robust standard errors in parentheses account for clustering at country level. Income is measured in units of $10,000. All specifications include a constant.

Table III

CULTURE AND HOURS WORKED

	Dependent variable is Hours Worked			
	(i)	(ii)	(iii)	(iv)
Female	0.047**	0.041*	0.072**	0.053**
LFP 1950	(0.012)	(0.016)	(0.015)	(0.016)
TFR 1950				-0.225*
				(0.103)
High School		0.490	2.136**	2.059**
		(0.520)	(0.575)	(0.572)
Some College		-0.147	3.205**	3.160**
		(1.078)	(1.034)	(1.024)
College +		0.815+	6.032**	5.968**
		(0.492)	(0.494)	(0.480)
Husband			-1.737*	-1.789*
High School			(0.730)	(0.716)
Husband			-1.329	-1.370+
Some College			(0.829)	(0.822)
Husband			-5.003**	-5.054**
College +			(0.452)	(0.459)
Husband			-2.844**	-2.862**
Total Income			(0.308)	(0.303)
Obs.	6774	6774	6774	6774
Adj. R-sq	0.018	0.024	0.053	0.053

+ significant at 10%; * significant at 5%; ** significant at 1%. SMSA fixed effects in all specifications. Age and age squared for wife and age range dummies for husband in all specifications with demographics. Income is measured in units of $10,000 Robust standard errors in parentheses account for clustering at country level. All specifications include a constant.

Table IV

ROBUSTNESS - WORK

	Dependent variable is Weeks Worked				
	(i)	(ii)	(iii)	(iv)	(v)
Female LFP 1950	0.057**				0.090**
	(0.013)				(0.024)
Female 30-34 LFP 1950			0.057**		
			(0.020)		
Female LFP 1960				0.114**	
				(0.027)	
% LF 1960 Female		0.128**			
		(0.031)			
GDP pc 1950					0.267**
					(0.097)
High School	3.125**	3.734**	3.846**	3.736**	3.737**
	(0.596)	(0.676)	(0.696)	(0.679)	(0.654)
Some College	2.227*	4.116**	4.260**	4.111**	4.114**
	(1.090)	(1.170)	(1.208)	(1.173)	(1.153)
College +	3.55**	8.843**	8.982**	8.828**	8.839**
	(0.522)	(0.860)	(0.916)	(0.861)	(0.846)
Husband High School		-2.572**	-2.478**	-2.570**	-2.592**
		(0.891)	(0.916)	(0.889)	(0.871)
Husband Some College		-1.681+	-1.609+	-1.678+	-1.705+
		(0.890)	(0.896)	(0.888)	(0.882)
Husband College +		-6.335**	-6.224**	-6.332**	-6.356**
		(0.753)	(0.743)	(0.750)	(0.752)
Husband Total Income		-4.077**	-4.046**	-4.075**	-4.092**
		(0.366)	(0.371)	(0.367)	(0.362)
Obs.	8280	6774	6774	6774	6774
Adj. R-sq	0.142	0.053	0.052	0.053	0.053

+ significant at 10%; * significant at 5%; ** significant at 1%. SMSA fixed effects in all specifications. Age and age squared for wife and age range dummies for husband in all specifications with demographics. Marital status dummies included in the first specification. Robust standard errors in parentheses account for clustering at country level. GDP pc is measured in units of $1,000. Income is measured in units of $10,000. All specifications include a constant.

Table V

ROBUSTNESS - FERTILITY

	Dependent variable is Children			
	(i)	(ii)	(iii)	(iv)
TFR 1960		0.245**		
		(0.038)		
TFR 1950	0.203**		0.286**	0.236**
	(0.037)		(0.071)	(0.038)
GDP pc 1950				0.048**
				(0.016)
High School	-0.404*	-0.380*	-0.175+	-0.393**
	(0.157)	(0.147)	(0.106)	(0.151)
Some College	-0.477*	-0.465**	-0.195	-0.491**
	(0.190)	(0.177)	(0.134)	(0.184)
College +	-0.817**	-0.836**	-0.220	-0.869**
	(0.176)	(0.195)	(0.177)	(0.202)
Husband		-0.211+	-0.109*	-0.224+
High School		(0.113)	(0.050)	(0.116)
Husband		-0.180+	-0.071	-0.190+
Some College		(0.101)	(0.094)	(0.105)
Husband		-0.192**	-0.018	-0.202**
College +		(0.048)	(0.076)	(0.049)
Husband		0.114*	0.069+	0.114*
Total Income		(0.048)	(0.040)	(0.049)
Obs.	8280	6774	10744	6774
Adj. R-sq	0.235	0.109	0.083	0.107

+ significant at 10%; * significant at 5%; ** significant at 1%. SMSA fixed effects in all specifications. Age and age squared for wife and age range dummies for husband in all specifications with demographics. Marital status dummies included in the first specification. Robust standard errors in parentheses account for clustering at country level. GDP pc is meaured in units of $1,000. Income is measured in units of $10,000. All specifications include a constant.

Table VI

ORDERED PROBIT

	Dependent variable is Weeks Worked						
Category	0	1 - 13	14 - 26	27 - 39	40 - 47	48 - 49	50 - 52
Predicted Probability	0.5762	0.0825	0.0562	0.0569	0.0458	0.0238	0.1585
Marginal Effect Female LFP 1950	-0.0016	0.0001	0.0001	0.0002	0.0002	0.0001	0.0010
Obs.	6774						
Pseudo R-sq	0.023						

Female LFP 1950 significant at 1%. Marginal effects are calculated at the mean, and refer to full specification model, state fixed effects included. Marginal effects for other controls not reported. Robust standard errors account for clustering at country level.

Table VII

ALTERNATIVE ESTIMATION TECHNIQUES

	Weeks Worked OLS	Weeks Worked Tobit			Labor Force Probit	Weeks and Children SUR	
		Coeff.	Unconditional Exp. Value	Pr(y>0)			
	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
Female TFR 1950							0.213**
							(0.041)
Female LFP 1950	0.081*	0.152*	0.068	0.001	0.002**	0.076*	
	(0.033)	(0.070)			(0.001)	(0.037)	
High School	3.645**	7.183**	3.227	0.070	0.064**	3.834**	-0.396**
	(0.630)	(1.453)			(0.014)	(0.684)	(0.151)
Some College	4.487**	9.620**	4.702	0.095	0.108**	4.262**	-0.488**
	(1.140)	(2.597)			(0.029)	(1.177)	(0.185)
College +	9.207**	22.199**	12.034	0.215	0.240**	8.984**	-0.868**
	(0.840)	(2.096)			(0.020)	(0.897)	(0.204)
Husband High School	-2.371*	-5.067**	-2.251	-0.049	-0.057**	-2.499**	-0.220+
	(0.916)	(1.861)			(0.019)	(0.898)	(0.116)
Husband Some College	-1.603*	-3.451*	-1.516	-0.034	-0.042*	-1.622+	-0.186+
	(0.866)	(1.763)			(0.019)	(0.888)	(0.103)
Husband College +	-6.166**	-13.173**	-5.446	-0.126	-0.142**	-6.248**	-0.196**
	(0.627)	(1.763)			(0.012)	(0.735)	(0.050)
Husband Total Income	-4.324**	-11.931**	-5.390	-0.117	-0.113**	-4.058**	0.115*
	(0.383)	(1.284)			(0.014)	(0.367)	(0.049)
Obs.	6774	6774	6774	6774	6726	6774	6774
Adj. R-sq	0.042						
Psd. R-sq					0.0543		

+ significant at 10%; * significant at 5%; ** significant at 1%. Marginal effects in third and fourth column are calculated at the mean of the independent variables. Age and age squared for wife and age range dummies for husband in all specifications with demographics. The last two specifications include SMSA fixed effects. Robust standard errors account for clustering at country level.

Table VIII

COUNTRY FIXED EFFECTS AND CULTURAL PROXIES

Panel A **First Stage Regression**

	Weeks		Hours		Children	
	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error
Canada	2.023**	0.480	2.236**	0.414	0.499**	0.033
Mexico					1.301**	0.089
Norway	3.078**	0.649	1.819**	0.550	0.052	0.045
Sweden	3.639**	0.576	2.290**	0.590	-0.041	0.051
U.K.	3.261**	0.566	1.620**	0.468	0.173**	0.033
Ireland	-0.289	0.645	0.281	0.511	0.878**	0.040
Netherlands	3.354**	0.516	1.880**	0.438	0.198**	0.054
Greece	0.710	0.648	1.251*	0.484	-0.241**	0.034
Italy	2.072*	0.698	1.762**	0.483	-0.002	0.020
Portugal	2.388**	0.674	2.688**	0.513	0.044	0.087
Austria	2.297*	0.876	2.147**	0.599		
Germany	3.661**	0.529	2.734**	0.398	0.161**	0.026
Japan	4.932**	0.668	4.000**	0.795	-0.113	0.123
Obs.	6191		6191		6191	
Adj. R-sq	0.052		0.050		0.123	

Panel B **Second Stage Regression**

	Weeks		Hours		Children	
	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error
Female LFP 1950	0.109*	0.048	0.079*	0.032		
TFR 1950					0.292**	0.050
Obs.	13		13		13	
Adj. R-sq	0.254		0.299		0.731	

+ significant at 10%; * significant at 5%; ** significant at 1%. All regressions in Panel A include full set of individual characteristics for the woman and her husband and SMSA fixed effects (coefficients not reported). Robust standard errors account for clustering at country level.

Table IX

CULTURE, WORK, AND PARENTAL EDUCATION -- GSS

Probit for whether woman works full time -- Marginal Effects

	(i)	(ii)	(iii)	(iv)	(v)
Female LFP 1950	0.007**	0.006**	0.007*	0.007**	0.007**
	(0.002)	(0.002)	(0.003)	(0.002)	(0.003)
High School		0.158**	0.182**	0.153**	0.140**
		(0.045)	(0.068)	(0.041)	(0.054)
Some College		0.131+	0.135*	0.135	0.092
		(0.076)	(0.056)	(0.098)	(0.062)
College +		0.271**	0.292**	0.368**	0.328**
		(0.098)	(0.076)	(0.105)	(0.078)
Husband High School				0.069	0.144**
				(0.051)	(0.055)
Husband Some College				0.121+	0.247**
				(0.069)	(0.056)
Husband College +				-0.033	0.045
				(0.060)	(0.086)
Husband Total Income				-0.037**	-0.029**
				(0.008)	(0.008)
Mother's Education			0.001		0.010
			(0.007)		(0.007)
Father's Education			-0.012		-0.016+
			(0.009)		(0.009)
Obs.	456	455	348	415	322
Pseudo R-sq	0.037	0.057	0.007	0.102	0.117

+ significant at 10%; * significant at 5%; ** significant at 1%. Region and year of survey fixed effects in all specifications. Age and age squared variables are included in all specifications with demographics. Full-time work is defined as working at least 40 hours. Robust standard errors in parentheses account for clustering at country level. Income measured in units of $10,000.

Table X

CULTURE, WORK, AND 1940 HUMAN CAPITAL

Dependent variable is Weeks Worked

	(i)	(ii)	(iii)	(iv)	(v)	(vi)
Human Capital 1940	0.205	0.074	0.175	0.091	0.399**	0.261+
	(0.160)	(0.151)	(0.122)	(0.138)	(0.145)	(0.138)
Female LFP 1950		0.057*		0.039		0.065*
		(0.028)		(0.030)		(0.029)
High School			1.647*	1.567*	3.836**	3.719**
			(0.646)	(0.651)	(0.664)	(0.653)
Some College			-0.130	-0.232	4.204**	4.057**
			(1.182)	(1.179)	(1.164)	(1.152)
College +			2.195*	2.076*	8.974**	8.807**
			(0.876)	(0.849)	(0.905)	(0.869)
Husband High School					-2.522**	-2.583**
					(0.867)	(0.866)
Husband Some College					-1.678+	-1.714*
					(0.858)	(0.867)
Husband Colllege +					-6.303**	-6.360**
					(0.746)	(0.745)
Husband Total Income					-4.071**	-4.086**
					(0.365)	(0.364)
Obs.	6774	6774	6774	6774	6774	6774
Adj. R-sq	0.012	0.013	0.020	0.020	0.052	0.052

+ significant at 10%; * significant at 5%; ** significant at 1%. SMSA fixed effects in all specifications. Age and age squared for wife and age range dummies for husband in all specifications with demographics. Robust standard errors in parentheses account for clustering at country level. Income is measured in units of $10,000. All specifications include a constant.

Table XI

CULTURE, CHILDREN, AND 1940 HUMAN CAPITAL

Dependent variable is Children

	(i)	(ii)	(iii)	(iv)	(v)	(vi)
Human Capital 1940	-0.080	-0.004	-0.035	0.031	-0.030	0.033
	(0.091)	(0.028)	(0.067)	(0.021)	(0.062)	(0.021)
TFR 1950		0.248**		0.232**		0.232**
		(0.056)		(0.047)		(0.047)
High School			-0.552*	-0.428*	-0.505**	-0.404**
			(0.221)	(0.177)	(0.182)	(0.149)
Some College			-0.630**	-0.530**	-0.578**	-0.509**
			(0.240)	(0.202)	(0.201)	(0.177)
College +			-1.031**	-0.895**	-0.980**	-0.884**
			(0.258)	(0.208)	(0.236)	(0.202)
Husband High School					-0.289*	-0.226*
					(0.130)	(0.115)
Husband Some College					-0.237*	-0.194+
					(0.099)	(0.104)
Husband College +					-0.264**	-0.206**
					(0.049)	(0.049)
Husband Total Income					0.094+	0.114*
					(0.055)	(0.048)
Obs.	6774	6774	6774	6774	6774	6774
Adj. R-sq	0.027	0.059	0.072	0.099	0.079	0.106

+ significant at 10%; * significant at 5%; ** significant at 1%. SMSA fixed effects in all specifications. Age and age squared for wife and age range dummies for husband in all specifications with demographics. Robust standard errors in parentheses account for clustering at country level. Income is measured in units of $10,000. All specifications include a constant.

Table XII

CULTURE, WORK, AND 1970 HUMAN CAPITAL

Dependent variable is Hours Worked

	(i)	(ii)	(iii)	(iv)	(v)	(vi)
Human Capital 1970	0.153	-0.224	0.075	-0.292	0.486**	0.155
	(0.155)	(0.234)	(0.134)	(0.203)	(0.136)	(0.209)
Female LFP 1950		0.067**		0.065*		0.059*
		(0.023)		(0.025)		(0.026)
High School			0.590*	0.592	2.096**	2.093**
			(0.491)	(0.493)	(0.546)	(0.547)
Some College			0.000	-0.012	3.169**	3.151**
			(1.060)	(1.060)	(1.002)	(1.004)
College +			0.973+	0.969+	5.985**	5.973**
			(0.537)	(0.528)	(0.498)	(0.482)
Husband High School					-1.769*	-1.765*
					(0.727)	(0.728)
Husband Some College					-1.374	-1.358
					(0.819)	(0.826)
Husband Colllege +					-5.044**	-5.036**
					(0.471)	(0.465)
Husband Total Income					-2.855**	-2.852**
					(0.306)	(0.307)
Obs.	6774	6774	6774	6774	6774	6774
Adj. R-sq	0.017	0.018	0.023	0.024	0.052	0.053

+ significant at 10%; * significant at 5%; ** significant at 1%. SMSA fixed effects in all specifications. Age and age squared for wife and age range dummies for husband in all specifications with demographics. Robust standard errors in parentheses account for clustering at country level. Income is measured in units of $10,000. All specifications include a constant.

Table XIII

CULTURE, CHILDREN, AND 1970 HUMAN CAPITAL

Dependent variable is Children

	(i)	(ii)	(iii)	(iv)	(v)	(vi)
Human Capital 1970	-0.343**	-0.184+	-0.268**	-0.096	-0.265**	-0.091
	(0.073)	(0.028)	(0.056)	(0.099)	(0.053)	(0.097)
TFR 1950		0.163*		0.176*		0.179*
		(0.073)		(0.074)		(0.074)
High School			-0.401*	-0.383*	-0.383*	-0.368*
			(0.165)	(0.168)	(0.139)	(0.141)
Some College			-0.430*	-0.448*	-0.420*	-0.443*
			(0.193)	(0.193)	(0.171)	(0.171)
College +			-0.803**	-0.811**	-0.810**	-0.823**
			(0.197)	(0.196)	(0.195)	(0.194)
Husband High School					-0.214+	-0.203+
					(0.109)	(0.111)
Husband Some College					-0.169+	-0.168
					(0.094)	(0.098)
Husband College +					-0.181**	-0.176**
					(0.046)	(0.048)
Husband Total Income					0.115*	0.120*
					(0.048)	(0.048)
Obs.	6774	6774	6774	6774	6774	6774
Adj. R-sq	0.056	0.065	0.089	0.099	0.096	0.106

+ significant at 10%; * significant at 5%; ** significant at 1%. SMSA fixed effects in all specifications. Age and age squared for wife and age range dummies for husband in all specifications with demographics. Robust standard errors in parentheses account for clustering at country level. Income is measured in units of $10,000. All specifications include a constant.

Table XIV

MEN, WORK, AND CULTURE

	Dependent variable is Weeks Worked			Dependent variable is Hours Worked		
	(i)	(ii)	(iii)	(iv)	(v)	(vi)
Female x Female LFP 1950	0.066*	0.049+	0.093**	0.047**	0.041*	0.072**
	(0.024)	(0.024)	(0.028)	(0.012)	(0.016)	(0.015)
Male x Female LFP 1950	0.030+	0.008	0.006	0.028	-0.003	-0.005
	(0.015)	(0.009)	(0.008)	(0.046)	(0.037)	(0.035)
Female	14.628**	47.668	0.090	9.940**	31.455	-1.818
	(0.895)	(33.025)	(31.031)	(0.470)	(30.093)	(28.515)
Male	47.956**	53.981**	45.967**	40.662**	29.108	23.851
	(0.508)	(7.913)	(10.567)	(1.258)	(29.668)	(27.897)
Female x High School		1.598*	3.783**		0.491	2.137**
		(0.676)	(0.677)		(0.520)	(0.576)
Female x Some College		-0.173	4.187**		-0.147	3.205**
		(1.184)	(1.173)		(1.079)	(1.037)
Female x College		2.134*	8.912**		0.816	6.032**
		(0.824)	(0.882)		(0.493)	(0.495)
Male x High School		1.739**	1.388**		2.323**	1.977**
		(0.305)	(0.286)		(0.618)	(0.614)
Male x Some College		1.714**	1.272**		2.892**	2.346**
		(0.306)	(0.277)		(0.601)	(0.667)
Male x College		2.071**	1.595**		2.647**	1.831**
		(0.302)	(0.311)		(0.550)	(0.597)
Husband's Education			YES			YES
Wife's Education			YES			YES
Husband's Total Income			-4.068**			-2.845**
			(0.368)			(0.307)
Wife's Total Income			-2.142**			-2.166**
			(0.370)			(0.626)
Obs.	13484	13484	13484	13484	13484	13484
Adj. R-sq	0.845	0.846	0.851	0.790	0.791	0.795

+ significant at 10%; * significant at 5%; ** significant at 1%. SMSA fixed effects in all specifications. Age and age squared and age range dummies for spouse interacted with sex dummies in all specifications with demographics.
Robust standard errors in parentheses account for clustering at country level. Income is measured in units of $10,000.

Table XV

MEN, CHILDREN, AND CULTURE

Dependent variable is Own Children Living in Household

	(i)	(ii)	(iii)
Female x TFR 1950	0.198**	0.185**	0.191**
	(0.041)	(0.033)	(0.034)
Male x TFR 1950	0.136**	0.132**	0.123**
	(0.033)	(0.028)	(0.026)
Female	2.394**	-14.598**	-11.762**
	(0.101)	(2.850)	(2.850)
Male	2.41**	-15.043**	-4.177
	(0.099)	(3.094)	(3.504)
Female x High School		-0.151	-0.187
		(0.142)	(0.118)
Female x Some College		-0.228	-0.299+
		(0.176)	(0.151)
Female x College		-0.512**	-0.618**
		(0.180)	(0.178)
Male x High School		-0.157+	-0.143*
		(0.089)	(0.066)
Male x Some College		-0.186*	-0.139*
		(0.080)	(0.056)
Male x College		-0.270*	-0.225+
		(0.127)	(0.117)
Husband's Education			YES
Wife's Education			YES
Husband's Total Income			0.169**
			(0.040)
Wife's Total Income			-1.452**
			(0.097)
Obs.	13484	13484	13484
Adj. R-sq	0.766	0.773	0.788

+ significant at 10%; * significant at 5%; ** significant at 1%. SMSA fixed effects in all specifications. Age and age square and age range dummies for spouse interacted with sex dummies in all specifications with demographics.
Robust standard errors in parentheses account for clustering at country level. Income is measured in units of $10,000.

Table XVI

HIS OR HER CULTURE?

	Dependent variable is Weeks Worked			Dependent variable is Children		
	(i)	(ii)	(iii)	(iv)	(v)	(vi)
Same x Female LFP 1950	0.036	0.049	0.092+			
	(0.036)	(0.049)	(0.053)			
Not Same x Wife's Female LFP 1950	0.072*		0.054			
	(0.030)		(0.035)			
Not Same x Husband's Female LFP 1950		0.086**	0.076**			
		(0.030)	(0.028)			
Same x TFR 1950				0.216**	0.214**	0.312**
				(0.039)	(0.044)	(0.029)
Not Same x Wife's TFR 1950				0.179**		0.157**
				(0.036)		(0.024)
Not Same x Husband's TFR 1950					0.180**	0.162**
					(0.042)	(0.038)
High School	3.499**	3.488**	3.411**	-0.461**	-0.457**	-0.424**
	(0.581)	(0.583)	(0.461)	(0.097)	(0.100)	(0.076)
Some College	5.315**	5.321**	5.211**	-0.500**	-0.491**	-0.466**
	(0.665)	(0.547)	(0.663)	(0.099)	(0.116)	(0.092)
College +	9.491**	9.452**	9.343**	-0.949**	-0.939**	-0.911**
	(0.461)	(0.629)	(0.679)	(0.124)	(0.101)	(0.097)
Husband High School	-1.706*	-1.740**	-1.786**	-0.179**	-0.177*	-0.155**
	(0.709)	(0.501)	(0.484)	(0.057)	(0.074)	(0.059)
Husband Some College	-1.608**	-1.693**	-1.723*	-0.173**	-0.167+	-0.153*
	(0.490)	(0.631)	(0.726)	(0.051)	(0.086)	(0.066)
Husband College +	-6.220**	-6.264**	-6.311**	-0.166**	-0.178*	-0.154*
	(0.451)	(0.713)	(0.494)	(0.032)	(0.088)	(0.067)
Husband Total Income	-4.311**	-4.347**	-4.352**	0.134**	0.140**	0.141**
	(0.191)	(0.234)	(0.273)	(0.024)	(0.038)	(0.027)
Obs.	12060	12060	12060	12060	12060	12060
Adj. R-sq	0.055	0.055	0.056	0.090	0.092	0.099

+ significant at 10%; * significant at 5%; ** significant at 1%. SMSA fixed effects in all specifications. Age and age squared for wife and age range dummies for husband in all specifications with demographics. Robust standard errors in parentheses account for clustering at country of own father x country of husband's father level. Income is measured in units of $10,000. All specifications include a constant.

Table XVII

CULTURE, WORK, AND ETHNIC DENSITY

Dependent variable is Hours Worked

	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viiii)
Density	0.007	0.078*	-0.017	0.016	0.005	-0.047	0.021	-0.124*
	(0.037)	(0.034)	(0.049)	(0.028)	(0.052)	(0.036)	(0.036)	(0.055)
Density x Female LFP 1950			0.005*		0.004			0.008**
			(0.002)		(0.003)			(0.003)
Female LFP 1950		0.079**	0.047*		0.047*		0.079**	0.033
		(0.021)	(0.022)		(0.024)		(0.025)	(0.026)
High School				0.684	0.512	2.274**	2.174**	2.058**
				(0.512)	(0.510)	(0.561)	(0.564)	(0.565)
Some College				0.141	-0.048	3.414**	3.291**	3.192**
				(1.070)	(1.097)	(1.001)	(1.019)	(1.036)
College +				1.076+	0.854	6.213**	6.072**	5.946**
				(0.578)	(0.524)	(0.543)	(0.508)	(0.494)
Husband High School						-1.704*	-1.763*	-1.836*
						(0.751)	(0.742)	(0.729)
Husband Some College						-1.368+	-1.401+	-1.461+
						(0.822)	(0.825)	(0.814)
Husband College +						-5.012**	-5.057**	-5.114**
						(0.473)	(0.460)	(0.461)
Husband Total Income						-2.859**	-2.860**	-2.876**
						(0.309)	(0.308)	(0.305)
Obs.	6709	6709	6709	6709	6709	6709	6709	6709
Adj. R-sq	0.017	0.018	0.018	0.023	0.024	0.052	0.053	0.053

+ significant at 10%; * significant at 5%; ** significant at 1%. SMSA fixed effects in all specifications. Age and age squared for wife and age range dummies for husband in all specifications with demographics. Robust standard errors in parentheses account for clustering at country level. Income is measured in units of $10,000. All specifications include a constant.

Table XVIII

CULTURE, CHILDREN, AND ETHNIC DENSITY

Dependent variable is Children

	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
Density	0.039	0.013	-0.054**	0.001	-0.056**	0.023	0.001	-0.056**
	(0.030)	(0.015)	(0.014)	(0.013)	(0.014)	(0.022)	(0.013)	(0.014)
Density x TFR 1950			0.019**		0.016**			0.016**
			(0.004)		(0.004)			(0.004)
TFR 1950		0.228**	0.013	0.216**	0.033		0.217**	0.035
		(0.060)	(0.068)	(0.055)	(0.072)		(0.056)	(0.072)
High School				-0.419*	-0.374*	-0.474**	-0.395**	-0.356*
				(0.173)	(0.167)	(0.164)	(0.145)	(0.141)
Some College				-0.503**	-0.464*	-0.524**	-0.480**	-0.447**
				(0.195)	(0.192)	(0.181)	(0.171)	(0.171)
College +				-0.876**	-0.827**	-0.928**	-0.862**	-0.820**
				(0.201)	(0.196)	(0.208)	(0.196)	(0.193)
Husband High School						-0.275*	-0.220+	-0.201+
						(0.121)	(0.113)	(0.112)
Husband Some College						-0.225*	-0.187+	-0.172+
						(0.093)	(0.101)	(0.100)
Husband College +						-0.261**	-0.213**	-0.203**
						(0.045)	(0.045)	(0.045)
Husband Total Income						0.106*	0.120*	0.125**
						(0.049)	(0.047)	(0.046)
Obs.	6709	6709	6709	6709	6709	6709	6709	6709
Adj. R-sq	0.034	0.060	0.069	0.098	0.104	0.082	0.104	0.111

+ significant at 10%; * significant at 5%; ** significant at 1%. SMSA fixed effects in all specifications. Age and age squared for wife and age range dummies for husband in all specifications with demographics. Robust standard errors in parentheses account for clustering at country level. Income is measured in units of $10,000. All specifications include a constant.

Table A1

INDIVIDUAL SUMMARY STATISTICS -- CENSUS

Variable	Mean	St. Dev.	Min	Max
Weeks worked	15.21	20.91	0	51
Hours worked	10.19	16.31	0	66
Children	3.07	1.82	0	12
Age	35.69	3.16	30	40
High School	0.53	0.50	0	1
Some College	0.11	0.31	0	1
College +	0.08	0.28	0	1
Husband High School	0.35	0.48	0	1
Husband Some College	0.13	0.33	0	1
Husband College +	0.20	0.40	0	1
Husband Age	39.00	6.00	14	100
Husband Total Income	1.13	0.68	-0.99	5

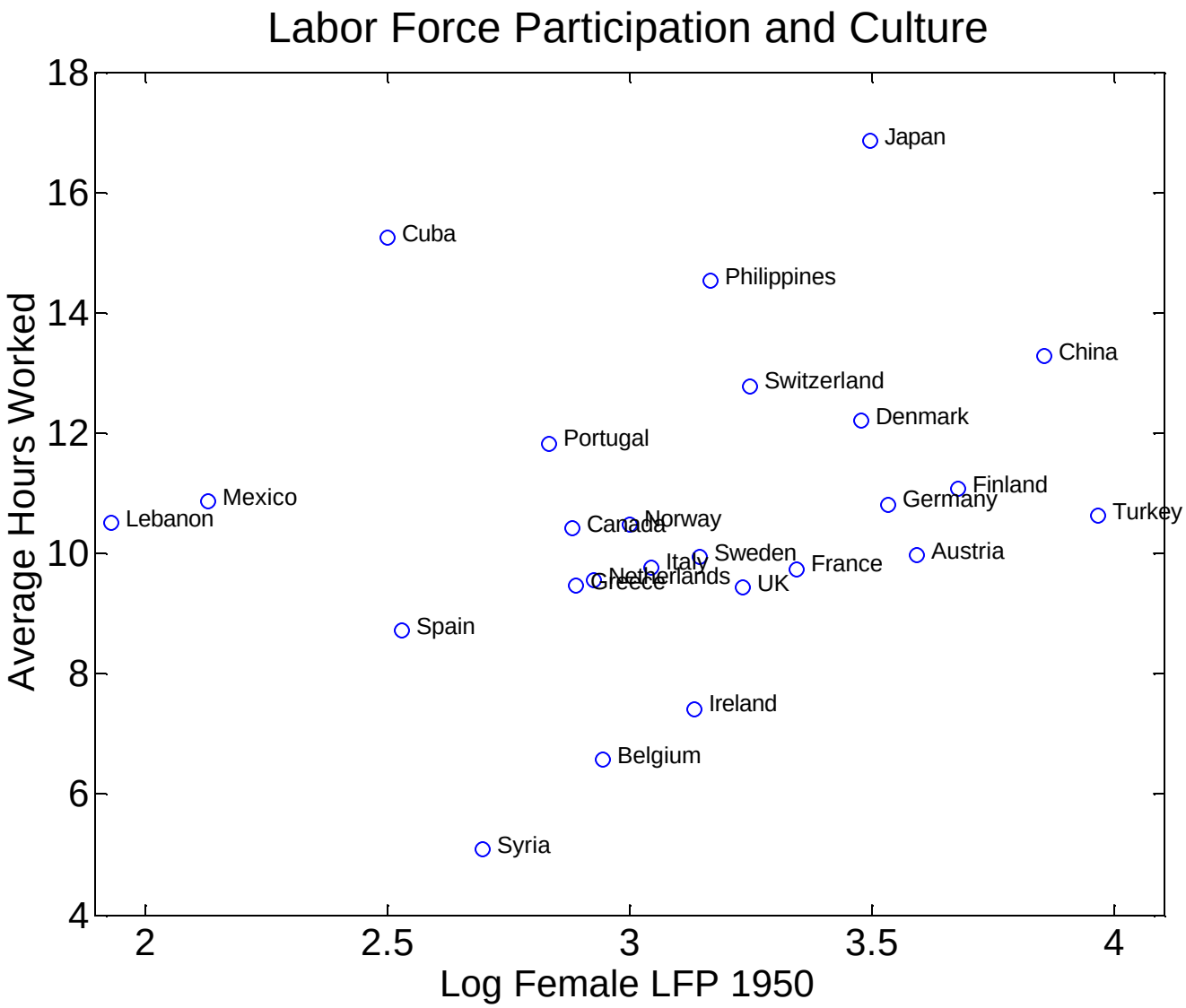
There are 6774 married couples in our sample. Data are from 1% 1970 Form 2 Metro Sample of the U.S. Census. The sample includes married women age 30-40 not living in farms or group quarters and not working in agricultural occupations whose father was born in one of the 25 countries in our sample. Income is measured in units of $10,000.

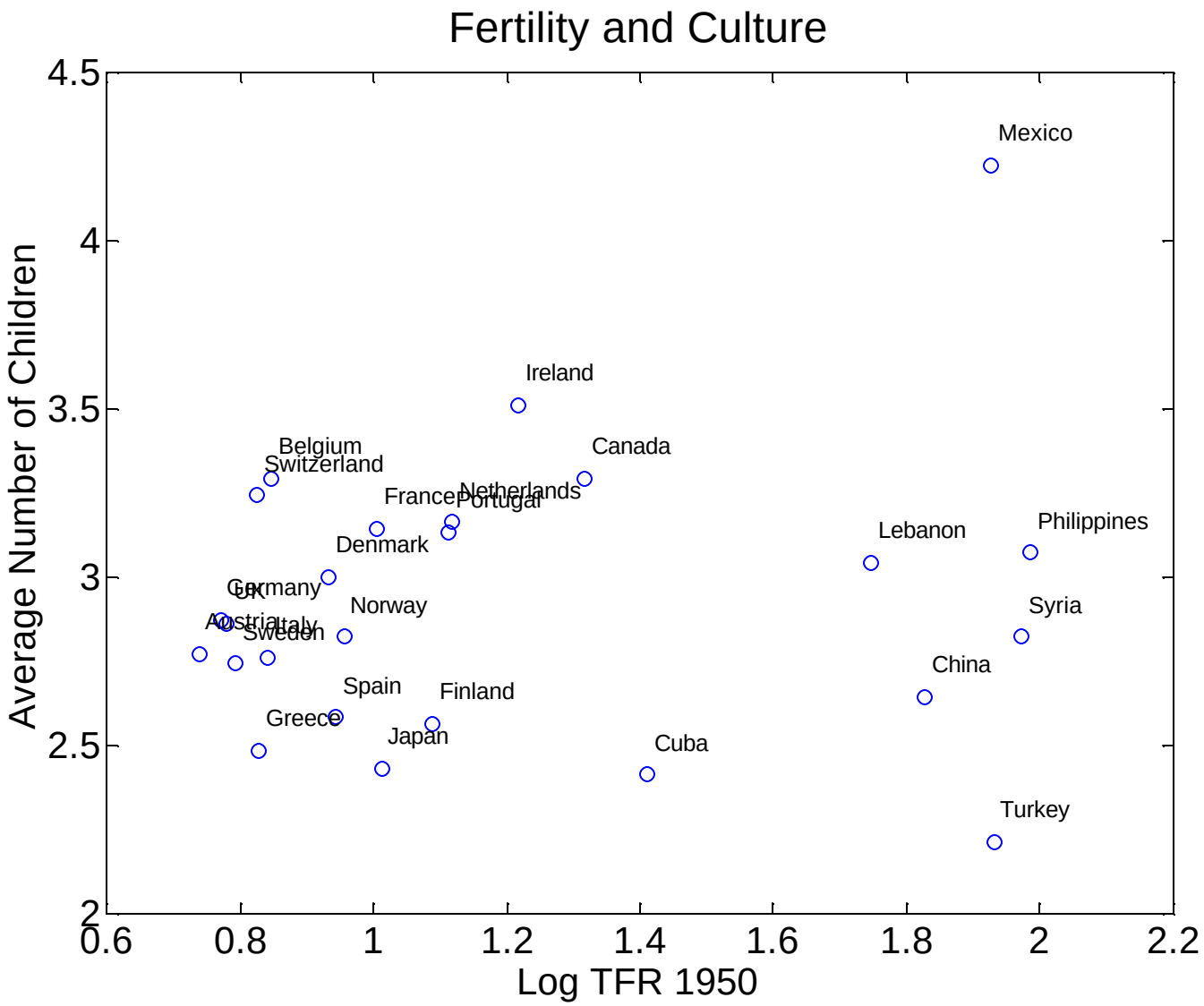
Table A2

INDIVIDUAL SUMMARY STATISTICS -- GSS

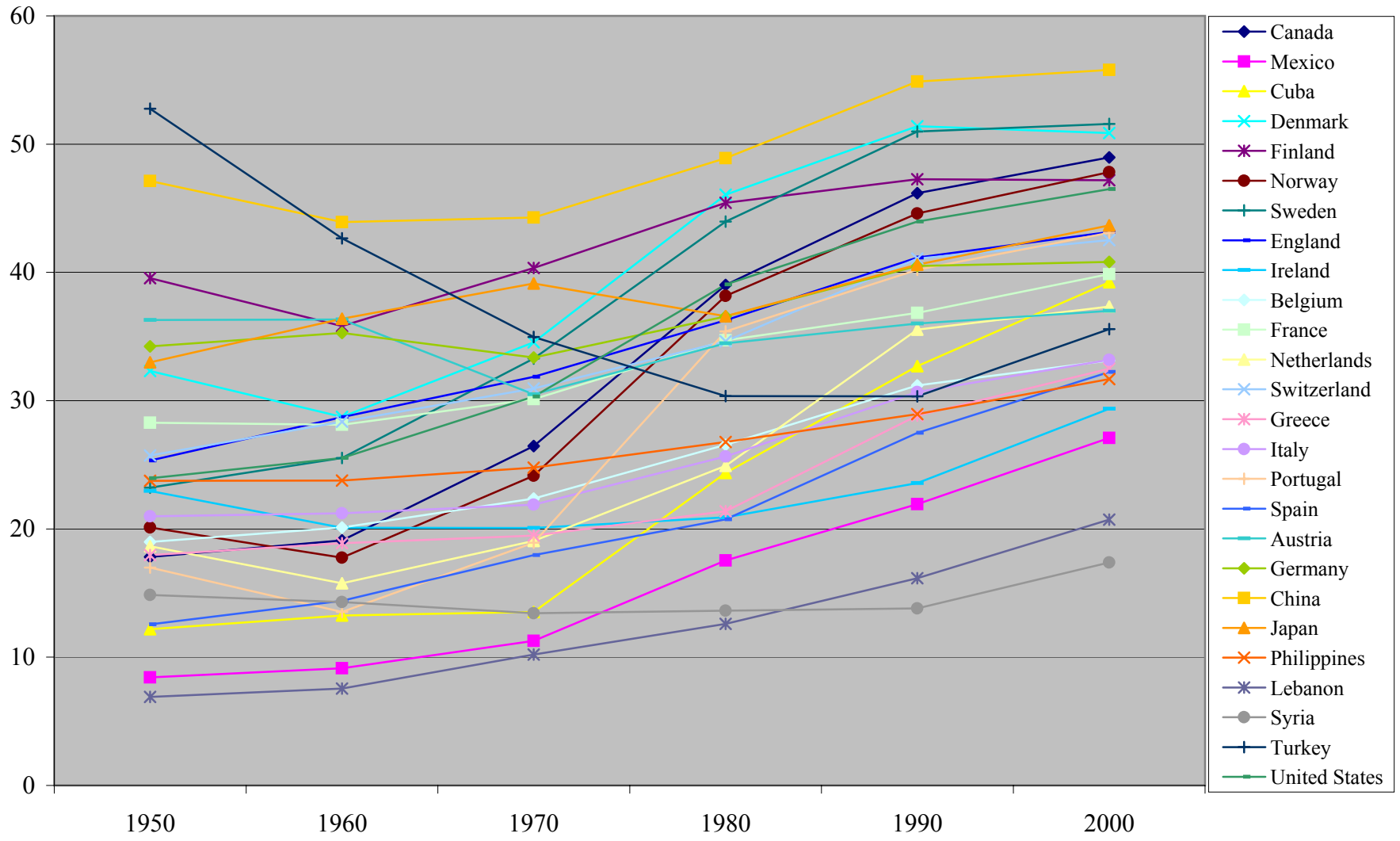
Variable	Mean	St. Dev.	Min	Max
Full Time	0.31	0.46	0	1
Children	2.51	1.57	0	8
Age	38.20	6.49	29	50
High School	0.49	0.50	0	1
Some College	0.16	0.37	0	1
College +	0.18	0.39	0	1
Husband High School	0.34	0.47	0	1
Husband Some College	0.21	0.41	0	1
Husband College +	0.24	0.43	0	1
Husband Age	40.17	8.84	19	99
Husband Total Income	3.41	2.67	-0.73	16.26

There are 456 married couples in our sample. Data are from the General Social Survey, years 1977, 1978, 1980 and 1982. The sample includes married women age 29-50, born in US whose ancestors came from one of the 9 countries in our sample. Income is measured in units of $10,000.


Labor Force Participation and Culture
Average Hours Worked
Log Female LFP 1950
18
16
14
12
10
8
6
4
2
2.5
3
3.5
4
Japan
Cuba
Philippines
China
Switzerland
Denmark
Portugal
Finland
Mexico
Germany
Lebanon
Canada
Norway
Turkey
Sweden
Austria
Italy
France
Netherlands
Greece
UK
Spain
Ireland
Belgium
Syria


Fertility and Culture
Average Number of Children
Log TFR 1950
4.5
4
3.5
3
2.5
2
0.6
0.8
1
1.2
1.4
1.6
1.8
2
2.2
Mexico
Ireland
Canada
Belgium
Switzerland
Netherlands
France
Portugal
Denmark
Lebanon
Philippines
Germany
UK
Norway
Syria
Austria
Italy
Sweden
China
Spain
Finland
Greece
Japan
Cuba
Turkey

Female Labor Force Participation 1950-2000



Total Fertility Rate 1950-2000