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

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**Abstract**

We study the effect of culture on important economic outcomes by examining 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 women's behavior in the US in 1970. We show that these cultural proxies have positive and significant explanatory power for individual work and fertility outcomes, even after controlling for possible indirect effects of culture (e.g., education and spousal characteristics). We examine alternative hypotheses for these positive correlations and show that unobserved human capital, neither at the individual level nor embodied in the ethnic network, are likely to be responsible. We also show that the effect of these cultural proxies is amplified the greater is the tendency for ethnic groups to cluster in the same neighborhoods.

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## 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 possibility that preferences and beliefs themselves, broadly speaking, have a systematic component that reflects past interactions of preferences, beliefs, markets, and institutions. Variation in this systematic component–which we will call culture–therefore may also be responsible for observed differences in outcomes.

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.[2]

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

[2] It is unclear whether Stigler and Becker regarded their criticism as also applying to differences in beliefs which, in a static framework, are indistinguishable from differences in preferences in their reduced form. 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 persistence in behavior even if the environment changes. This is, in fact, how the authors think of habits or customs. 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.

This paper seeks to address this deficiency by attempting to show that systematic variation in preferences and beliefs (i.e., in culture) matters to important economic phenomena.

Culture is a rather hazy concept.[3] 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. To be clear, we do not consider culture to be any more or less "primitive" than markets or institutions. In our view, all three interact 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 stays home to take care of them. 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. Beliefs and preferences are transmitted across generations by the family and by local society (e.g., schools, religious organizations, neighborhood composition, etc.). Thus, culture tends to evolve slowly over time in society, but can also suddenly shift as new information (e.g., new anecdotes or changes in neighborhood composition or media availability) becomes more widely diffused.[4] 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.[5]

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. Fertility and women's participation in the formal labor market vary widely across time and space. The hypothesis that a significant part of this variation can be explained by different beliefs as to

[3] 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."

[4] Empirically it is difficult to distinguish between beliefs, information, and preference transmission and we will not attempt to do so.

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

the appropriate role of women in society, i.e., by culture, as opposed to solely economic and institutional variation, seems particularly apt in this context and the economic importance of these decisions is incontrovertible.[6]

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 conditions 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 conditions should no longer be relevant for the second-generation American women (as neither the country nor the time period is the same), the beliefs embodied in these variables may still matter if parents and/or neighborhood transmitted them to the next generation.

We use the 1970 census to study work and fertility outcomes for women and use 1950 values of female labor force participation (LFP) and total fertility rates (TFR) in the country of ancestry as the cultural proxies.[7] We find that the cultural proxies are significant to both work and fertility outcomes. In order to ensure that these results are not driven by parental characteristics that differ in a systematic fashion by country of origin, we control as well 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.[8] 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

[6] 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. Fernández, Fogli, and Olivetti (2004) present a model of endogenous preference evolution through family experience and explore the role of these preferences in increasing female labor force participation. See Goldin (1990) for a history of women and work in the US.

[7] 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.

[8] Our data set does not permit us to observe the financial and educational backgrounds of parents directly.

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 suspect for this role are unobserved human capital embodied either in the woman or in the "quality" of the networks available to her. 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 their children. Alternatively, if the human capital of one's ethnic group is an important input in the formation of one's 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 in a few ways. We use the General Social Survey (GSS) to control directly for the parent's level of education and show that our results are robust to these additional controls. As our GSS sample is restricted to a smaller number of countries, we also construct measures of ethnic human capital by using the 1940 census to calculate the average education of immigrants by country of origin. 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 ethnic human capital is sometimes significant in explaining how much women work (though not their 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. It is also possible that it is the quality of human capital that matters, and that this is correlated with our cultural proxies. We use education quality data by Hanushek and Kimko (2000) to investigate this issue and find that our cultural proxies remain significant. Lastly, we examine wages directly. We run standard Mincer regressions with and without selection and show that our cultural proxy does not help predict women's wages.

Perhaps our most revealing test, however, is related to men. We show that our cultural proxies are unable to explain men's work behavior, though they have explanatory power for the

[9] We also used country dummies in our analysis. We show that our cultural proxies are able to explain a significant portion of the variation in the coefficients of the country dummies.

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: 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, though perhaps surprisingly the husband's culture seems to be more important in driving his wife's work outcomes.[10] We also investigate whether variation across country of 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.[11] 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 whether unobserved human capital may be responsible for our results. 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.[12] More recently, culture plays a

[10] This evidence is also in line with Fernández, Fogli, and Olivetti (2004). They show that a quantitatively important factor explaining whether a man's wife works is whether his own mother worked when he was growing up. This finding holds even after controlling for education, income, and other family background variables. Whether his mother worked or not is probably influenced by her beliefs about women's role, which may then have been transmitted to her son and thus influenced any household bargaining/decision affecting his wife's work outcome.

[11] 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.

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

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.[13]

There is little quantitative evidence, however, that demonstrates that culture is a significant determinant of important economic outcomes. In fact, probably the best-known paper in this field—Carroll, Rhee, and Rhee (1994)—finds that culture does not help explain differences in saving rates. The authors study immigrants in Canada using a household data set which allows them to identify immigrants by region, though not by country of origin. They find that, although there is an immigration effect common to the savings behavior of those who were not born in Canada, there is no effect of culture that further distinguishes the savings behavior of immigrants from different regions. As the authors acknowledge, however, their conclusions must be viewed as tentative due to data restrictions. In particular, they can control only for broad regions of origin, wealth is imperfectly measured, and remittances are not observed.

Our paper belongs to a very recent literature that has attempted to meet the challenge of showing that culture matters. Guiso, Sapienza, and Zingales (2005) present evidence that culture affects trust and trade. They use commonality of religion, the genetic distance between indigenous populations, and the history of wars between nations as proxies for culture and show that these are correlated with a measure of trust (where the latter is obtained from surveys conducted by Eurobarometer that include a question about trusting individuals from other countries). Trust is then shown to be quantitatively significant in explaining the amount of economic exchange between countries. Tabellini (2005) presents evidence that culture affects economics development. He measures culture by aggregating at the regional level the individual responses in the World Value Survey to questions of respect for others and how confident one is about the link between individual effort and economic success. Giuliano (2005) also uses the 1970 census to present evidence that culture–as reflected in the greater or lesser tendency for individuals to live with their parents as young adults–matters. She shows that Western European second-generation immigrants to the US tend to replicate the family living arrangements of their country of origin.

There has also been some work in the fields of labor and fertility that examines the inter-relationship between country of origin and economic outcomes. 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,

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

which perhaps is not surprising given that ethnic groups vary substantially in the length of time they have been in the US. Antecol (2000) uses a similar strategy to study the effect of male and female LFP in the country of ancestry on the inter-ethnic gender gap in labor force participation rates in the US, though she studies first-generation immigrants and groups together second and higher-generation individuals. The results suffer from the possibility that they could be driven by other factors that differ across countries such as education levels, or from differences in parental background that lead to systematic variations in unobserved human capital. These alternative hypotheses are not examined.

In addition to the above studies focusing on immigrants, there has also been work using measures of attitudes towards women's role within a country. Levine (1993), for example, finds that attitudes, as reflected in responses to GSS questions, 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 1970s and early 1980s. Vella (1994) uses Australian data and likewise finds that attitude variables are important determinants of the extent of women's involvement in market work. A more recent paper is Fortin (2005), who uses the World Value Surveys to investigate the role of gender role attitudes and work attitudes on female labor outcomes for twenty five OECD countries.

There is also a small literature on cultural effects on fertility. Guinnane, Moehling, and O Grada (2002) 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).[14] 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.

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

[14] See also Gjerde and McCants (1995) for an analysis of how culture affected the marital and fertility decisions of Norwegian immigrants to the US.

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, Data Sets, 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 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 focus on married women as these display the largest variation in work and fertility outcomes.[16] 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).[17] There are 87,305 women who are born in U.S. and satisfy these criteria.[18] 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 hours worked in the previous year or the number of weeks worked in the previous week. In the 1970 census, information on weeks and hours worked is reported in intervals.[19] We compute our measure of

[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] Our robustness section shows that our results are valid for all women regardless of marital status.

[17] 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.

[18] 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.

[19] The number of weeks worked in the previous year are recorded in six 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 eight intervals: 1-14 hours, 15-29, 30-34, 35-39, 40, 41-48, 49-59, 60+.

time worked by assigning the midpoint of each chosen 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 1930-1940 or even a decade or two earlier 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 reflect 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. 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 Nations *Demographic Yearbook,* respectively. Female LFP is the rate of economically active population for women over 10 years of age.[20] 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.

All other observations are coded as N/A and treated as zeros in this work.

[20] 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' cooperatives, unpaid family workers, persons engaged in the production of economic goods and services for own and household consumption, and apprentices who receive pay.

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.[21] 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 1950s 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.[22] Since our regressions are all run at the individual level, including these small numbers of observations does not affect our results. Our final sample consists of 6,774 women and 25 countries of ancestry.[23]

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 deviations are 20.9 weeks and 16.3 hours. 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 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

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

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

[23] Note that we do not impose any restrictions on the characteristics of these women's husbands.

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 was done in Table I. 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 20 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 $j$.[24] 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 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 hours worked in the previous year or weeks 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. 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 workforce 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 daughters' 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 individual characteristics, in particular the woman's age (and its square) 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

[24] An 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.

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 (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.[25]

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 variables as for the woman), and his total income.[26] 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 5 hours less per week than a woman whose husband did not complete high school, almost half the mean labor supply of the women in our sample. Marriage to a man with $10,000 more income over the mean is associated, on average, with a woman working almost 3 hours less a week. 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 her 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 by one standard deviation (across countries) is associated with an increase of 0.82 hours per week, which is about

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

[26] 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.

30% of the variation in hours worked per week across ancestries. Similarly, a one standard deviation increase in female LFP is associated with an increase of 1.06 weeks of work per year. 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.

Some analyses of labor supply include the number of children as an explanatory variable. As we are primarily interested in investigating the effect of culture, and work and fertility are simultaneously determined variables both affected by culture, we do not include the number of children in the labor supply equation. We have, nonetheless, included a specification in which we control for the presence of a child under the age of five living in the household (Child5), as this affects the tendency to work but does not fully capture the impact of culture on family size. As shown in column (v) of Table II, our cultural proxy remains significant at the one percent level.[27]

Our analysis of women's fertility behavior in Table II repeats the same regression strategy used to analyze work, as shown in columns (vi) through (viii). 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 hers or her husband's–are associated with fewer children, whereas higher total income is associated with higher fertility. Having a husband who makes $10,000 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 (ix) 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

[27] In the section on robustness we run a seemingly unrelated regression for work and fertility.

does not help explain fertility. An increase in TFR 1950 by one standard deviation is associated with a 0.71 decrease in weeks worked and a 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 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.[28] 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 0.76 hours worked over the week (or, in a weeks worked regression with an increase of 1.11 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

[28] 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. We also excluded (one at a time) Italy and Mexico to ensure that these were not driving our results.

women 30-34 years old, as our cultural proxy. This allows us to control better for demographic differences across countries.[29] 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 0.83 hours worked).

Column (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 remains positive and statistically significant. A one standard deviation increase in female LFP in 1960 is associated with a 0.89 increase in hours worked (or a 1.16 week 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 0.8 increase in hours worked in 1970 (or an increase of about one-week in the weeks worked regression) 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.[30]

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 age 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: a one standard deviation increase in TFR 1950 is associated with a 0.52 increase in the number of children.

### 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 hours worked is reported as falling into one of nine intervals rather than as a continuous variable, we ran an ordered Probit with the nine possible outcomes. Table VI reports the results obtained for the full specification of the model as before. The first row in the table reports the predicted probability that an observation

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

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

belongs to a given interval when all variables take their mean values (e.g., the average woman in the sample has around a 70% probability of not working).[31] 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 on the probability of working 40 hours. The expected value of the marginal effect on hours worked is 0.07 hours. This implies that a one standard deviation increase in the cultural proxy leads to an increase of 0.83 hours (or, for a similar probit done for weeks, of 0.81 weeks). This result is similar 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 hours worked. The results for our full specification model are reported in Table VII. Columns (i)-(iii) report the coefficients from the Tobit regression, the correspondent marginal effects for the unconditional expected value, and the probability that the observation is uncensored. These are calculated at the mean of the independent variables. A one standard deviation increase in the cultural proxy is associated with a 2.3% increase in the probability of working and a 0.79 increase in expected hours worked.

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 an increase of 2.3 percentage points in the probability of working over its predicted value at the mean of 34.5%.

Lastly, since a woman's work and fertility decisions are unlikely to be independent of one another, we also estimated both models simultaneously by running a seemingly unrelated regression. We included both cultural proxies in the work equation but only TFR in 1950 in the fertility regression (as female LFP in 1950 is insignificant in the latter). We report the results from the full specification in columns (v) and (vi) in Table VII. As shown, the cultural proxies are positive and significant in both work and fertility regressions.

### 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.

[31] If we look instead at weeks worked over the entire previous year, the average woman has a 57% probability of not working.

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 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 50 observations, leaving us with 6,626 observations and 20 countries.[32]

In our work and fertility regressions, the country dummies are jointly highly significant. The magnitude of the country-of-ancestry effect ranges from four additional hours worked per year by women with Japanese ancestry to essentially zero for women with Irish ancestry, as compared to their Mexican counterparts. For fertility they range from 1.3 additional children for women of Mexican ancestry to essentially no additional children for women of German or Danish 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 $\beta_j$ 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 and 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 of 0.57 in the country fixed effect; an increase of one standard deviation in TFR in 1950 is associated with an increase of 0.23 in the country fixed effect. Furthermore, the adjusted R squares are sizable, indicating that variation in female LFP and in TFR in 1950 explains an important proportion of the variation

[32] Using our cultural proxies with this sample yields very similar results to the original one. An increase of one standard deviation in female LFP 1950 is associated with 0.74 more hours worked per week. An increase of one standard deviation in TFR 1950 is associated with 0.42 more children.

in the country coefficients.[33] Hence, using these variables rather than the more "black box" approach of a country dummy appears to be a good strategy.

## 6. Unobserved Human Capital

The prior section established that our results are robust to a number of alternative variable definitions, sample selection criteria, and estimation techniques. The main remaining 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 main suspect is unobserved differences in human capital, broadly defined, either embodied in the individual or in her ethnic network.

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, the human capital embodied in neighborhood networks, particularly ethnic ones, may also help determine outcomes if, for example, it facilitates obtaining a job.

Before turning to examining the question of human capital directly, we first show that per capita GDP is not responsible for our results. It can be argued that this variable reflects both the quality and quantity of human capital, although it is also likely to be affected by how much women work outside the home. We find, for all specifications, that our cultural proxies for work and fertility remain positive and statistically significant when we include per capita GDP in 1950 by country of ancestry in our regressions.[34] These results are shown in columns (v) and (iv) of Tables IV and V, respectively, for the full specification. Including per capita GDP does not affect the magnitude of the work cultural proxy, though 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.[35]

[33] 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.

[34] GDP per capita in 1950 Geary-Khamis dollars, Maddison (1995) data. The numbers are reported by country in Table I.

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

We next turn to examining these issue of unobserved human capital in a variety of more direct manners.

### 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.[36] Each cross section contains about 1,500 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 nine countries of ancestry: Canada, Great Britain, France, Germany, Ireland, Italy, Mexico, Norway, and Sweden.[37]

We explore the effect of culture on whether women work full time. We create 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.

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

[37] We exclude from the sample eight observations that declare themselves students.

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 $j$.[38] $X_i$ is a vector of controls which varies with the particular specification considered, $f_s$ 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 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.[39]

Table IX allows us to conclude that culture appears to play a quantitatively important role even after controlling for parental education.[40] 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%, this increase brings the probability of working full-time to 32.5%.[41]

A drawback of the GSS analysis is that our sample includes only 9 countries rather than the 25 in our main sample and our sample size is significantly smaller. An alternative to controlling

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

[39] 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 midpoints and imputations. For details see GSS Methodological Report No. 64.

[40] We were not able to repeat the same set of exercises for fertility since, once we include the husband's characteristics, the sample size is reduced and TFR 1950 is no longer significant independently of whether we control for parental education.

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

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, Borjas 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.[42]

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 25 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.[43] 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 I for the average education of immigrants, reported by country of ancestry.

The results obtained from including this variable (denoted Human Capital 1940) in our

[42] Whether he thinks of these as being strictly economic or having a cultural component, however, is not clear.
[43] All countries have over 75 observations with the exception of Lebanon, for which we have only 4.

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 helps to explain the amount the hours worked by women, though only in the full specification in column (v) and not when it is combined with LFP 1950.[44] 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 as 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 25 and 45.[45] We find a very similar pattern of results as for 1940 Human Capital.[46]

We also explored the robustness of our results to other measures of ethnic human capital for both 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 similar across all cases.

### 6.3. The Quality of Education

Although our analysis shows that neither 1940 nor 1970 ethnic human capital is responsible for the relationship that exists between our cultural proxies and women's work and fertility outcomes,

[44] Similar results obtain with weeks worked. In the full specification for that variable, 1940 human capital is significant at the 10% level even when female LFP is included, but the coefficient on the cultural proxy remains positive and significant.

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

[46] When weeks worked are used as the dependent variable, both human capital 1970 and LFP 1950 become insignificant and the adjusted R squared decreases as the two variables are highly correlated (over 0.7).

this may be due to only controlling for differences in years of education and not the quality of human capital. In this section we extend our analysis to include two measures of schooling quality developed by Hanushek and Kimko (2000). The authors show that these measures help to explain cross-country growth between 1960 and 1990. Including either of them in a cross-country growth regression significantly increases the adjusted $R^2$ and tends to render average years of education insignificant. Furthermore, the quality of education is shown to help determine the earnings of immigrants when included in a standard Mincer regression.

Hanushek and Kimko construct two measures of quality (which we denote by education quality 1 and 2) using the performance of countries in four international exams and two US exams. The first measure converts each performance series (across countries and time) to a mean of 50 (i.e., it assumes that the mean world science and math performance is constant over time and that the countries taking the tests are a random draw from the world distribution). The second uses time series information from the NAEP tests taken in math and science in the US to provide an absolute benchmark of performance to which the US scores on international tests can be keyed, thus allowing the mean for each international test series to drift with the US drift in the NAEP and international tests. The two quality measures are reported in Table 1 for the countries in our sample.[47] The country mean for our sample is 49.21 and 52.69 with a standard deviation of 7.96 and 10.01, for education quality measures 1 and 2 respectively.

Tables XIV and XV report the results from including education quality in our regressions. As the results are similar for both quality variables, we use education quality 1 throughout and show the results for the second only for the full specification. As can be seen from table XIV, the significance of the education quality variable drops whenever the work cultural proxy is included in the specification whereas female LFP remains positive and significant. A similar pattern can be noted for fertility, with education quality never significant once TFR is included. We also included education quality along with our measures of 1940 ethnic human capital. As can be seen in the last two columns in Tables X and XI, they are insignificant and the magnitude and significance of the cultural proxies are unaffected.

From the above we can conclude that differences in education quality (whether in the form of unobserved human capital from parents or in the quality of the human capital in ethnic networks)

[47] Hanushek and Kimko provide direct measures of quality for only some 30 plus countries and then estimate a production function which they use to construct quality measures for another 40 or so countries for which test scores are not available. Our measures of quality do not distinguish between the two sets of countries. Note that individuals with ancestry from either Cuba and Lebanon are dropped from all regressions in this section as quality measures were not available for them.

are not responsible for the significance of our cultural proxies in explaining women's work and fertility decisions.

### 6.4. Wages

In this section we take a more direct approach to unobserved human capital by examining women's wages. It is possible that the positive correlation that we find between work and fertility outcomes and our cultural proxies is a result of higher wages earned by women from countries with high female LFP (or low TFRs), even with the same observed level of education as women from countries with low female LFP (or high TFRs). We next turn to examining whether this alternative hypothesis finds support in the data.

We start by examining solely those women who both work and declare positive earnings in order to run a standard Mincer regression. As our dependent variable, we would have liked to use the log of hourly wages. We cannot use exactly this measure as the income and hours reported are from different time periods. Census respondents report total pre-tax wage and salary income—that is, money received as an employee—for the previous calendar year. They also report the number of weeks worked in the previous year but the hours reported are from the week preceding the interview. Accordingly, we construct a measure of hourly wages by dividing labor income by weeks worked times hours worked. This would coincide with the hourly wage if the number of hours worked the previous week corresponded to the average number of hours worked in a typical week the previous year.[48]

Table XVI reports the results from the Mincer regressions of log hourly wage on education (captured by our four education dummies), potential experience (age minus number of years of education minus six), and potential experience squared. All regressions include a full set of metropolitan areas dummies and, as before, errors are clustered at the country of ancestry level. Our main interest is in determining whether female LFP in 1950 is significant in explaining wages. As can be seen in the table, the cultural proxy has a coefficient of zero and is always insignificant.[49]

[48] We could have constructed a weekly wage instead, which would have the advantage that both income and work reports would be from the same calendar year. The fact that women vary significantly in the number of hours that they work, however, would significantly bias our estimates as this measure would attribute high weekly wages to women who simply worked many hours. In particular, as women from high female LFP countries work more hours, this would render the work cultural proxy positive and significant even in the absence of any unobserved human capital.

[49] We find similar results when we use years of education rather than education dummies and when we control for husband's characteristics (the latter are never significant in the wage equations).

This remains the case when the quality of education variables are introduced as well.[50]

Of course, it is possible that lower unobserved human capital (and hence lower market wages) is why some women are not participating in the labor market. Table XVII reports the results obtained when wages are estimated with a Heckman selection model in which the husband's characteristics are used to control for selection into employment.[51] We find results very similar to those obtained for the restricted sample: the cultural variable is never significant in explaining hourly wages. We also report the results obtained with the two education quality measures; once again the cultural proxy is insignificant.[52]

We find the results presented in this and the preceding sections fairly strong evidence against the alternative hypothesis that unobserved human capital explanation is responsible for our finding of a positive correlation between our cultural proxies and women's work and fertility decisions. We next turn to a different test of our hypothesis: the link between men's work and fertility behavior and our cultural proxies regarding women's role and family size.

## 7. Men and Culture

In this section we conduct what we consider an important test of the validity of our hypothesis. In particular, we ask whether our proxy for cultural attitudes towards women working 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 for the amount that 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.[53] 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.

[50] It is interesting to note that although Hanushek and Kimko find that their quality of education variables enter positively and significantly in Mincer wage regressions for immigrants, these variables are no longer significant for the subsample of immigrants who obtained their schooling in the US. Our sample of women, of course, is more similar to this subsample as our women were born (and presumably educated) in the US.

[51] We find similar results when a dummy variable that is equal to one when a woman has a child under five years old is used in the selection equation.

[52] We also imputed wages to non-working women following Blau and Kahn (2005). We ran our baseline labor supply regressions and found that our cultural proxy remained significant.

[53] 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.

Consequently, one may well expect the cultural proxy 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 6,710 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 6,710 men with the sample of 6,774 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, including the metropolitan area fixed effects.

We report our results both for hours and weeks worked in Table XVIII. 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 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 5% and 1% levels for hours and weeks, 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 of 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 it did not also contain a significant component of culture. For example, this variable may be picking up the possibility that parents from low female LFP countries invest less in unobserved human capital for their daughters *relative* to their sons than parents from high female LFP countries, precisely the type of cultural explanation we are attempting to explore. That is, although one may conjecture that this asymmetric 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 XIX.

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.[54] 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.

[54] Whether women and men "assimilate" at a different rate is an interesting question to pursue in future research. An alternative possibility is that second-generation American women marry differently (in terms of culture) than their male counterparts. We explore a related question in the next section.

## 8. 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 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.[55]

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 spouse's 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. To do this, 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).[56] In this sample, 32.6% of women are married to men whose father was born in the US (and thus these women's fathers were 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.

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

[56] 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.

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 XX.

The first column in Table XX reports the results for hours 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 significant than that of his wife's (which is significant at the 10% level). Furthermore, in this last specification, the coefficient on the cultural proxy when the culture of the two spouses is the same is significant and larger than either of the two different cultures coefficients.

Columns (iv)-(vi) repeat the same specifications for fertility. The cultural proxy is positive and 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 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 is essentially the same as 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.[57] 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.

## 9. 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

[57] There are 2,381 such observations.

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 from 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 the proportion of an ethnic group in a neighborhood, the larger the effect of the cultural proxies on individual behavior. Note that this is a different type of "ethnic externality" from 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 then averaging this number across respondents.[58] We use Borjas' estimates of residential segregation for second-generation Americans to attach an average ethnic density to each country of ancestry.[59] 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 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 on how large that ethnic group is in the population (since if the

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

[59] 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.

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 XXI and XXII report the effects for hours worked and fertility, respectively.[60] Across all specifications, density is significant only 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 the average density of an ethnic group, the greater the impact of culture on a woman's work and fertility outcomes.[61]

## 10. 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 is likely to be a driving force. 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

[60] Similar results are obtained for weeks worked.

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

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 are higher for mothers who do not work, then 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 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. Furthermore, we do not see this pattern for men by country of ancestry. This implies that if discrimination (in hiring) 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 impact of culture are likely to underestimate its true importance. Indeed, we find it telling 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. Moreover, there is no reason to believe that culture's impact is restricted to the variables we studied. Culture is also likely to play a role in explaining cross-country variation in other individual economic outcomes such as entrepreneurial activity, creativity, and physical and human capital accumulation. These, similarly to female labor force participation and fertility, are all likely to affect aggregate outcomes such as per capita GDP, growth, or inequality. Culture, therefore, is too important an area for economists to ignore.

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**Table I**

**COUNTRY SUMMARY STATISTICS**

| Country | Obs. | Weeks Worked | Hours Worked | Children | Female LFP 1950 | TFR 1950 | GDP pc 1950 | H. Cap. 1940 | H. Cap. 1970 | Avg. Ethnic Density | Female 30-34 LFP 1950 | Education Quality 1 | Education Quality 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Canada | 720 | 14.88 | 10.41 | 3.29 | 17.82 | 3.73 | 7291 | 9.60 | 12.10 | 7.40 | 20.95 | 47.57 | 54.58 |
| Mexico | 839 | 15.23 | 10.87 | 4.22 | 8.42 | 6.87 | 2365 | 4.59 | 9.17 | 18.10 | 11.90 | 35.06 | 37.24 |
| 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 | 53.48 | 61.76 |
| Finland | 54 | 15.36 | 11.07 | 2.56 | 39.56 | 2.97 | 4253 | 7.43 | 12.44 | 3.90 | 58.45 | 48.76 | 59.55 |
| Norway | 141 | 16.14 | 10.49 | 2.82 | 20.11 | 2.60 | 5463 | 9.00 | 12.44 | 3.00 | 20.11 | 49.60 | 64.56 |
| Sweden | 187 | 15.66 | 9.93 | 2.74 | 23.21 | 2.21 | 6739 | 8.89 | 12.77 | 1.70 | 27.05 | 47.41 | 57.43 |
| U.K. | 498 | 15.77 | 9.43 | 2.86 | 25.34 | 2.18 | 6939 | 9.77 | 12.86 | 1.20 | 26.85 | 53.98 | 62.52 |
| Ireland | 465 | 11.38 | 7.42 | 3.51 | 22.95 | 3.38 | 3453 | 8.33 | 12.70 | 3.30 | 27.90 | 47.59 | 50.20 |
| Belgium | 24 | 13.00 | 6.58 | 3.29 | 18.98 | 2.33 | 5462 | 8.52 | 12.08 | 0.70 | 23.90 | 53.25 | 57.08 |
| France | 66 | 13.83 | 9.74 | 3.14 | 28.28 | 2.73 | 5271 | 9.29 | 12.31 | 0.30 | 27.05 | 54.15 | 56.00 |
| Netherlands | 101 | 15.84 | 9.55 | 3.16 | 18.65 | 3.06 | 5996 | 8.85 | 12.29 | 3.90 | 18.55 | 56.84 | 54.52 |
| Switzerland | 50 | 22.10 | 12.78 | 3.24 | 25.73 | 2.28 | 9064 | 9.60 | 12.62 | 0.80 | 27.70 | 57.17 | 61.37 |
| Greece | 197 | 13.57 | 9.47 | 2.48 | 17.95 | 2.29 | 1915 | 7.07 | 12.83 | 1.10 | 25.00 | 49.11 | 50.88 |
| Italy | 1909 | 14.88 | 9.77 | 2.76 | 20.99 | 2.32 | 3502 | 5.91 | 11.76 | 12.10 | 25.05 | 44.59 | 49.41 |
| Portugal | 100 | 16.15 | 11.83 | 3.13 | 16.99 | 3.04 | 2086 | 5.15 | 10.74 | 6.80 | 22.20 | 44.09 | 44.22 |
| Spain | 65 | 15.23 | 8.71 | 2.58 | 12.56 | 2.57 | 2189 | 6.84 | 12.22 | .. | 17.21 | 49.40 | 51.92 |
| Austria | 270 | 14.53 | 9.96 | 2.77 | 36.29 | 2.09 | 3706 | 7.64 | 12.58 | 2.10 | 44.60 | 53.20 | 56.61 |
| Germany | 616 | 16.27 | 10.82 | 2.87 | 34.23 | 2.16 | 3881 | 8.95 | 12.48 | 3.20 | 44.53 | 59.03 | 48.68 |
| China | 53 | 18.75 | 13.27 | 2.64 | 47.12 | 6.22 | 439 | 7.30 | 13.52 | 6.20 | 80.90 | 59.28 | 64.42 |
| Japan | 148 | 22.64 | 16.84 | 2.43 | 32.99 | 2.75 | 1921 | 9.36 | 13.03 | 12.60 | 49.15 | 60.65 | 65.50 |
| Philippines | 67 | 22.63 | 14.53 | 3.07 | 23.75 | 7.29 | 1070 | 9.08 | 11.72 | 6.50 | 46.39 | 34.35 | 33.54 |
| 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 | 31.66 | 30.23 |
| Turkey | 42 | 14.00 | 10.63 | 2.21 | 52.76 | 6.90 | 1623 | 7.58 | 13.44 | 0.30 | 77.95 | 41.52 | 39.72 |
| Average | 270.96 | 16.12 | 10.68 | 2.92 | 24.44 | 3.66 | 3938.20 | 7.79 | 12.33 | 4.25 | 32.68 | 49.21 | 52.69 |
| Std. Dev | 414.12 | 3.93 | 2.57 | 0.42 | 11.40 | 1.83 | 2289.36 | 1.92 | 0.86 | 4.54 | 18.41 | 15.61 | 17.46 |

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 Nations Demographic Yearbook 1997, Historical supplement Table 4, Borjas (1995), Table 2 and Hahushek and Kimko (2000), Table C1. For variable definitions, see text.

**Table II**

## CULTURE, WORK AND FERTILITY

| | Dependent variable is Hours Worked | | | | | Dependent variable is Children | | | |
|---|---|---|---|---|---|---|---|---|---|
| | (i) | (ii) | (iii) | (iv) | (v) | (vi) | (vii) | (viii) | (ix) |
| Female LFP 1950 | 0.047** | 0.041* | 0.072** | 0.053** | 0.045** | | | | -0.010 |
| | (0.012) | (0.016) | (0.015) | (0.016) | (0.014) | | | | (0.008) |
| TFR 1950 | | | | -0.225* | | 0.250** | 0.219** | 0.219** | 0.194** |
| | | | | (0.103) | | (0.056) | (0.041) | (0.041) | (0.051) |
| High School | | 0.490 | 2.136** | 2.059** | 2.114** | | -0.415* | -0.393** | -0.378* |
| | | (0.520) | (0.575) | (0.572) | (0.511) | | (0.181) | (0.151) | (0.147) |
| Some College | | -0.147 | 3.205** | 3.160** | 3.336** | | -0.503* | -0.485** | -0.457* |
| | | (1.078) | (1.034) | (1.024) | (0.963) | | (0.213) | (0.185) | (0.179) |
| College + | | 0.815+ | 6.032** | 5.968** | 6.744** | | -0.869** | -0.865** | -0.838** |
| | | (0.492) | (0.494) | (0.480) | (0.448) | | (0.214) | (0.204) | (0.195) |
| Husband High School | | | -1.737* | -1.789* | -1.826** | | | -0.218+ | -0.210+ |
| | | | (0.730) | (0.716) | (0.694) | | | (0.116) | (0.113) |
| Husband Some College | | | -1.329 | -1.370+ | -1.312+ | | | -0.184+ | -0.177+ |
| | | | (0.829) | (0.822) | (0.786) | | | (0.103) | (0.103) |
| Husband College + | | | -5.003** | -5.054** | -4.467** | | | -0.194** | -0.185** |
| | | | (0.452) | (0.459) | (0.493) | | | (0.050) | (0.049) |
| Husband Total Income | | | -2.844** | -2.862** | -2.806** | | | 0.116* | 0.118* |
| | | | (0.308) | (0.303) | (0.258) | | | (0.049) | (0.049) |
| Child 5 | | | | | -7.536** | | | | |
| | | | | | (0.554) | | | | |
| Obs. | 6774 | 6774 | 6774 | 6774 | 6774 | 6774 | 6774 | 6774 | 6774 |
| Adj. R-sq | 0.018 | 0.024 | 0.053 | 0.053 | 0.098 | 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 WEEKS WORKED

Dependent variable is Weeks Worked

| | (i) | (ii) | (iii) | (iv) |
|---|---|---|---|---|
| Female | 0.066** | 0.049* | 0.093** | 0.061** |
| LFP 1950 | (0.024) | (0.024) | (0.028) | (0.024) |
| TFR 1950 | | | | -0.386* |
| | | | | (0.167) |
| High School | | 1.598* | 3.783** | 3.651** |
| | | (0.676) | (0.677) | (0.643) |
| Some College | | -0.171 | 4.189** | 4.111** |
| | | (1.183) | (1.172) | (1.133) |
| College + | | 2.132** | 8.909** | 8.801** |
| | | (0.824) | (0.881) | (0.836) |
| Husband | | | -2.530** | -2.620** |
| High School | | | (0.901) | (0.880) |
| Husband | | | -1.647+ | -1.716+ |
| Some College | | | (0.894) | (0.893) |
| Husband | | | -6.281** | -6.369** |
| College + | | | (0.750) | (0.768) |
| Husband | | | -4.067** | -4.097** |
| Total Income | | | (0.368) | (0.358) |
| Obs. | 6774 | 6774 | 6774 | 6774 |
| Adj. R-sq | 0.013 | 0.020 | 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. 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 Hours Worked | | | | | |
|---|---|---|---|---|---|
| | (i) | (ii) | (iii) | (iv) | (v) |
| Female LFP 1950 | 0.052** | | | | 0.070** |
| | (0.012) | | | | (0.014) |
| Female 30-34 LFP 1950 | | | 0.045** | | |
| | | | (0.012) | | |
| Female LFP 1960 | | | | 0.078** | |
| | | | | (0.016) | |
| % LF 1960 Female | | 0.088** | | | |
| | | (0.017) | | | |
| GDP pc 1950 | | | | | 0.139 |
| | | | | | (0.085) |
| High School | 1.987** | 2.127** | 2.181** | 2.128** | 2.112** |
| | (0.530) | (0.573) | (0.580) | (0.573) | (0.567) |
| Some College | 1.704 | 3.190** | 3.255** | 3.186** | 3.166** |
| | (1.063) | (1.033) | (1.051) | (1.037) | (1.021) |
| College + | 2.324** | 6.022** | 6.081** | 6.011** | 5.995** |
| | (0.393) | (0.483) | (0.510) | (0.485) | (0.474) |
| Husband High School | | -1.751* | -1.699* | -1.750* | -1.769* |
| | | (0.729) | (0.743) | (0.729) | (0.723) |
| Husband Some College | | -1.341 | -1.302 | -1.339 | -1.360 |
| | | (0.830) | (0.833) | (0.829) | (0.827) |
| Husband College + | | -5.024** | -4.961** | -5.022** | -5.042** |
| | | (0.456) | (0.451) | (0.454) | (0.463) |
| Husband Total Income | | -2.847** | -2.828** | -2.846** | -2.857** |
| | | (0.308) | (0.311) | (0.308) | (0.306) |
| Obs. | 8280 | 6774 | 6774 | 6774 | 6774 |
| Adj. R-sq | 0.143 | 0.053 | 0.053 | 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 Hours Worked

| Category | 0 | 1 - 14 | 15 - 29 | 30 - 34 | 35 - 39 | 40 | 41 - 48 | 49 - 59 | 60 + |
|---|---|---|---|---|---|---|---|---|---|
| Predicted Probability | 0.6984 | 0.0414 | 0.0713 | 0.0346 | 0.0362 | 0.1025 | 0.0100 | 0.0032 | 0.0023 |
| Marginal Effect Female LFP 1950 | -0.2076 | 0.0143 | 0.0322 | 0.0195 | 0.0237 | 0.0946 | 0.0138 | 0.0052 | 0.0043 |
| Obs. | 6774 | | | | | | | | |
| Pseudo R-sq | 0.0327 | | | | | | | | |

Female LFP 1950 significant at 1%. Marginal effects have been multiplied by 100. They are calculated at the mean, and refer to full specification model, SMSA fixed effects included. Marginal effects for other controls not reported. Robust standard errors account for clustering at the country level.

**Table VII**

## ALTERNATIVE ESTIMATION TECHNIQUES

| | Hours Worked Tobit | | | Labor Force Probit | SUR | |
|---|---|---|---|---|---|---|
| | | | | | Hours Worked | Children |
| | Coefficient | Unconditional Exp. Value | Pr(y>0) | | | |
| | (i) | (ii) | (iii) | (iv) | (v) | (vi) |
| Female LFP 1950 | 0.210** | 0.069 | 0.002 | 0.002** | 0.053** | |
| | (0.076) | | | (0.001) | (0.016) | |
| TFR 1950 | | | | | -0.225* | 0.219** |
| | | | | | (0.103) | (0.041) |
| High School | 6.349** | 2.073 | 0.059 | 0.064** | 2.059** | -0.393** |
| | (1.485) | | | (0.014) | (0.566) | (0.150) |
| Some College | 9.900** | 3.623 | 0.097 | 0.108** | 3.160** | -0.485** |
| | (2.292) | | | (0.029) | (1.014) | (0.183) |
| College + | 20.098** | 8.263 | 0.201 | 0.240** | 5.968** | -0.865** |
| | (2.689) | | | (0.020) | (0.475) | (0.202) |
| Husband High School | -4.718** | -1.519 | -0.044 | -0.057** | -1.789* | -0.218+ |
| | (1.468) | | | (0.019) | (0.709) | (0.115) |
| Husband Some College | -3.640+ | -1.150 | -0.034 | -0.042* | -1.370+ | -0.184+ |
| | (1.989) | | | (0.019) | (0.814) | (0.102) |
| Husband College + | -14.868** | -4.293 | -0.131 | -0.142** | -5.055** | -0.194** |
| | (2.151) | | | (0.012) | (0.455) | (0.049) |
| Husband Total Income | -10.194** | -3.349 | -0.096 | -0.113** | -2.862** | 0.116** |
| | (1.089) | | | (0.014) | (0.300) | (0.049) |
| Obs. | 6774 | 6774 | 6774 | 6726 | 6774 | 6774 |
| Psd. R-sq | | | | 0.054 | 0.053 | 0.105 |

+ significant at 10%; * significant at 5%; ** significant at 1%. Marginal effects are calculated at the mean of the independent variables. All specifications include SMSA fixed effects, age and age squared for wife and age range dummies for husband. Robust standard errors account for clustering at country level.

**Table VIII**

## COUNTRY FIXED EFFECTS AND CULTURAL PROXIES

**Panel A** **First Stage Regression**

| | Hours | | Children | |
|---|---|---|---|---|
| | Coefficient | Std. Error | Coefficient | Std. Error |
| Canada | 2.145** | 0.419 | 0.508** | 0.032 |
| Mexico | | | 1.319** | 0.085 |
| Denmark | 3.487** | 0.484 | 0.183** | 0.025 |
| Finland | 2.751** | 0.584 | -0.122** | 0.032 |
| Norway | 1.751** | 0.542 | 0.073+ | 0.042 |
| Sweden | 2.170** | 0.572 | -0.024 | 0.049 |
| England | 1.575** | 0.467 | 0.175** | 0.031 |
| Ireland | 0.233 | 0.505 | 0.879** | 0.038 |
| France | 1.365** | 0.516 | 0.479** | 0.039 |
| Netherlands | 1.962** | 0.458 | 0.201** | 0.053 |
| Switzerland | 2.743** | 0.652 | 0.388** | 0.047 |
| Greece | 1.149* | 0.488 | -0.245** | 0.031 |
| Italy | 1.728** | 0.469 | -0.002 | 0.019 |
| Portugal | 2.644** | 0.481 | 0.063 | 0.083 |
| Spain | -0.254 | 0.523 | -0.125** | 0.038 |
| Austria | 2.109** | 0.574 | | |
| Germany | 2.704** | 0.407 | 0.166** | 0.025 |
| China | 1.519* | 0.766 | 0.213* | 0.089 |
| Japan | 4.455** | 0.862 | -0.198 | 0.121 |
| Philippines | 2.047** | 0.619 | 0.467** | 0.072 |
| Obs. | 6626 | | 6626 | |
| Adj. R-sq | 0.052 | | 0.123 | |

**Panel B** **Second Stage Regression**

| | Hours | | Children | |
|---|---|---|---|---|
| | Coefficient | Std. Error | Coefficient | Std. Error |
| Female LFP 1950 | 0.060* | 0.024 | | |
| TFR 1950 | | | 0.142** | 0.045 |
| Obs. | 20 | | 20 | |
| Adj. R-sq | 0.220 | | 0.323 | |

+ 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 Hours Worked

| | (i) | (ii) | (iii) | (iv) | (v) | (vi) | (vii) | (viiii) |
|---|---|---|---|---|---|---|---|---|
| Human Capital 1940 | 0.048 | -0.081 | 0.046 | -0.055 | 0.206* | 0.070 | -0.008 | -0.003 |
| | (0.090) | (0.102) | (0.078) | (0.100) | (0.092) | (0.108) | (0.158) | (0.147) |
| Female LFP 1950 | | 0.056** | | 0.047* | | 0.064** | 0.043* | 0.062** |
| | | (0.019) | | (0.021) | | (0.020) | (0.020) | (0.022) |
| High School | | | 0.606 | 0.509 | 2.234** | 2.118** | 2.121** | 2.107** |
| | | | (0.502) | (0.508) | (0.560) | (0.564) | (0.564) | (0.559) |
| Some College | | | 0.012 | -0.110 | 3.314** | 3.170** | 3.148** | 3.123** |
| | | | (1.075) | (1.082) | (1.027) | (1.025) | (1.016) | (1.017) |
| College + | | | 0.992+ | 0.849+ | 6.169** | 6.004** | 6.079** | 6.041** |
| | | | (0.526) | (0.505) | (0.511) | (0.475) | (0.475) | (0.481) |
| Husband High School | | | | | -1.691* | -1.751* | -1.791* | -1.812* |
| | | | | | (0.737) | (0.727) | (0.725) | (0.729) |
| Husband Some College | | | | | -1.312 | -1.347 | -1.532+ | -1.558* |
| | | | | | (0.822) | (0.826) | (0.795) | (0.794) |
| Husband College + | | | | | -4.968** | -5.024** | -5.130** | -5.137** |
| | | | | | (0.473) | (0.465) | (0.473) | (0.472) |
| Husband Total Income | | | | | -2.835** | -2.849** | -2.840** | -2.838** |
| | | | | | (0.309) | (0.307) | (0.309) | (0.311) |
| Education Quality 1 | | | | | | | 0.055 | |
| | | | | | | | (0.037) | |
| Education Quality 2 | | | | | | | | 0.038 |
| | | | | | | | | (0.029) |
| Obs. | 6774 | 6774 | 6774 | 6774 | 6774 | 6774 | 6730 | 6730 |
| Adj. R-sq | 0.017 | 0.018 | 0.023 | 0.024 | 0.052 | 0.053 | 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 XI**

## CULTURE, CHILDREN, AND 1940 HUMAN CAPITAL

Dependent variable is Children

| | (i) | (ii) | (iii) | (iv) | (v) | (vi) | (vii) | (viiii) |
|---|---|---|---|---|---|---|---|---|
| Human Capital 1940 | -0.080 | -0.004 | -0.035 | 0.031 | -0.030 | 0.033 | 0.035 | 0.043 |
| | (0.091) | (0.028) | (0.067) | (0.021) | (0.062) | (0.021) | (0.038) | (0.038) |
| TFR 1950 | | 0.248** | | 0.232** | | 0.232** | 0.230** | 0.221** |
| | | (0.056) | | (0.047) | | (0.047) | (0.054) | (0.042) |
| High School | | | -0.552* | -0.428* | -0.505** | -0.404** | -0.407** | -0.408** |
| | | | (0.221) | (0.177) | (0.182) | (0.149) | (0.150) | (0.150) |
| Some College | | | -0.630** | -0.530** | -0.578** | -0.509** | -0.512** | -0.511** |
| | | | (0.240) | (0.202) | (0.201) | (0.177) | (0.178) | (0.178) |
| College + | | | -1.031** | -0.895** | -0.980** | -0.884** | -0.890** | -0.886** |
| | | | (0.258) | (0.208) | (0.236) | (0.202) | (0.204) | (0.206) |
| Husband High School | | | | | -0.289* | -0.226* | -0.220+ | -0.218+ |
| | | | | | (0.130) | (0.115) | (0.114) | (0.115) |
| Husband Some College | | | | | -0.237* | -0.194+ | -0.186+ | -0.185+ |
| | | | | | (0.099) | (0.104) | (0.105) | (0.104) |
| Husband College + | | | | | -0.264** | -0.206** | -0.197** | -0.198** |
| | | | | | (0.049) | (0.049) | (0.049) | (0.049) |
| Husband Total Income | | | | | 0.094+ | 0.114* | 0.111* | 0.110* |
| | | | | | (0.055) | (0.048) | (0.049) | (0.049) |
| Education Quality 1 | | | | | | | -0.002 | |
| | | | | | | | (0.012) | |
| Education Quality 2 | | | | | | | | -0.006 |
| | | | | | | | | (0.010) |
| Obs. | 6774 | 6774 | 6774 | 6774 | 6774 | 6774 | 6730 | 6730 |
| Adj. R-sq | 0.027 | 0.059 | 0.072 | 0.099 | 0.079 | 0.106 | 0.106 | 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 College + | | | | | -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**

## CULTURE, WORK, AND EDUCATION QUALITY

Dependent variable is Hours Worked

| | (i) | (ii) | (iii) | (iv) | (v) | (vi) | (vii) | (viiii) |
|---|---|---|---|---|---|---|---|---|
| Education Quality 1 | 0.052** | 0.018 | 0.044* | 0.013 | 0.090** | 0.053* | | |
| | (0.018) | (0.026) | (0.022) | (0.028) | (0.015) | (0.024) | | |
| Education Quality 2 | | | | | | | 0.067** | 0.038+ |
| | | | | | | | (0.021) | (0.022) |
| Female LFP 1950 | | 0.038* | | 0.035+ | | 0.044* | | 0.062** |
| | | (0.016) | | (0.020) | | (0.021) | | (0.019) |
| High School | | | 0.522 | 0.491 | 2.155** | 2.120** | 2.222** | 2.107** |
| | | | (0.506) | (0.513) | (0.563) | (0.571) | (0.569) | (0.565) |
| Some College | | | -0.168 | -0.209 | 3.192** | 3.146** | 3.279** | 3.122** |
| | | | (1.080) | (1.087) | (1.017) | (1.024) | (1.014) | (1.023) |
| College + | | | 0.909+ | 0.869+ | 6.124** | 6.078** | 6.193** | 6.041** |
| | | | (0.502) | (0.499) | (0.487) | (0.482) | (0.471) | (0.483) |
| Husband High School | | | | | -1.776* | -1.791* | -1.759* | -1.812* |
| | | | | | (0.725) | (0.724) | (0.750) | (0.730) |
| Husband Some College | | | | | -1.519+ | -1.533+ | -1.519+ | -1.558+ |
| | | | | | (0.799) | (0.798) | (0.818) | (0.798) |
| Husband College + | | | | | -5.121** | -5.131** | -5.073** | -5.138** |
| | | | | | (0.470) | (0.467) | (0.494) | (0.468) |
| Husband Total Income | | | | | -2.839** | -2.840** | -2.822** | -2.838** |
| | | | | | (0.309) | (0.308) | (0.306) | (0.310) |
| Obs. | 6730 | 6730 | 6730 | 6730 | 6730 | 6730 | 6730 | 6730 |
| Adj. R-sq | 0.018 | 0.018 | 0.024 | 0.024 | 0.053 | 0.053 | 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 XV**

## CULTURE, CHILDREN, AND EDUCATION QUALITY

Dependent variable is Children

| | (i) | (ii) | (iii) | (iv) | (v) | (vi) | (vii) | (viiii) |
|---|---|---|---|---|---|---|---|---|
| Education Quality 1 | -0.038* | -0.003 | -0.028* | 0.006 | -0.028* | 0.006 | | |
| | (0.018) | (0.009) | (0.013) | (0.008) | (0.012) | (0.007) | | |
| Education Quality 2 | | | | | | | -0.026* | 0.002 |
| | | | | | | | (0.011) | (0.006) |
| TFR 1950 | | 0.246** | | 0.240** | | 0.241** | | 0.230** |
| | | (0.064) | | (0.055) | | (0.056) | | (0.048) |
| High School | | | -0.490* | -0.422* | -0.457** | -0.401** | -0.463** | -0.398** |
| | | | (0.200) | (0.180) | (0.166) | (0.151) | (0.171) | (0.152) |
| Some College | | | -0.542* | -0.518* | -0.510** | -0.502** | -0.514** | -0.494** |
| | | | (0.228) | (0.208) | (0.193) | (0.181) | (0.197) | (0.185) |
| College + | | | -0.930** | -0.887** | -0.909** | -0.883** | -0.904** | -0.877** |
| | | | (0.227) | (0.211) | (0.212) | (0.203) | (0.222) | (0.206) |
| Husband High School | | | | | -0.250* | -0.215+ | -0.244* | -0.213+ |
| | | | | | (0.119) | (0.114) | (0.120) | (0.115) |
| Husband Some College | | | | | -0.207* | -0.179+ | -0.197+ | -0.179+ |
| | | | | | (0.101) | (0.103) | (0.102) | (0.103) |
| Husband College + | | | | | -0.217** | -0.191** | -0.220** | -0.187** |
| | | | | | (0.048) | (0.050) | (0.051) | (0.050) |
| Husband Total Income | | | | | 0.101+ | 0.113* | 0.099+ | 0.114* |
| | | | | | (0.053) | (0.049) | (0.055) | (0.050) |
| Obs. | 6730 | 6730 | 6730 | 6730 | 6730 | 6730 | 6730 | 6730 |
| Adj. R-sq | 0.041 | 0.06 | 0.081 | 0.099 | 0.087 | 0.105 | 0.088 | 0.105 |

+ 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 XVI**

## CULTURE AND WAGES (OLS)

Dependent variable is Log Hourly Wage

| | (i) | (ii) | (iii) | (iv) | (v) | (vi) |
|---|---|---|---|---|---|---|
| Female LFP 1950 | | 0.002 | | 0.000 | | 0.002 |
| | | (0.002) | | (0.002) | | (0.002) |
| Education Quality 1 | | | 0.003* | 0.003 | | |
| | | | (0.001) | (0.002) | | |
| Education Quality 2 | | | | | 0.002 | 0.001 |
| | | | | | (0.002) | (0.002) |
| High School | 0.074** | 0.067* | 0.065* | 0.064* | 0.069** | 0.065** |
| | (0.027) | (0.025) | (0.026) | (0.025) | (0.024) | (0.024) |
| Some College | 0.301** | 0.291** | 0.285** | 0.285** | 0.291** | 0.286** |
| | (0.050) | (0.048) | (0.050) | (0.050) | (0.049) | (0.048) |
| College + | 0.681** | 0.666** | 0.663** | 0.663** | 0.671** | 0.664** |
| | (0.061) | (0.057) | (0.058) | (0.057) | (0.055) | (0.056) |
| Experience | -0.017 | -0.020 | -0.016 | -0.016 | -0.015 | -0.016 |
| | (0.024) | (0.024) | (0.024) | (0.024) | (0.024) | (0.024) |
| Experience Sq. | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |
| Obs. | 1977 | 1977 | 1962 | 1962 | 1962 | 1962 |
| Adj. R-sq | 0.103 | 0.103 | 0.104 | 0.103 | 0.103 | 0.103 |

+ significant at 10%; * significant at 5%; ** significant at 1%. All specifications include a constant and SMSA fixed effects. Robust standard errors in parentheses account for clustering at country level. Income is measured in units of $10,000.

**Table XVII**

## CULTURE AND WAGES (HECKMAN SELECTION)

Dependent variable is Log Hourly Wage

| | (i) | (ii) | (iii) | (iv) | (v) | (vi) |
|---|---|---|---|---|---|---|
| Female LFP 1950 | | 0.002 (0.002) | | 0.000 (0.002) | | 0.002 (0.002) |
| Education Quality 1 | | | 0.004* (0.002) | 0.003 (0.002) | | |
| Education Quality 2 | | | | | 0.002 (0.002) | 0.001 (0.002) |
| High School | 0.081** (0.027) | 0.073** (0.025) | 0.070** (0.027) | 0.070** (0.024) | 0.075** (0.023) | 0.071** (0.023) |
| Some College | 0.309** (0.049) | .298** (0.046) | 0.292** (0.048) | 0.291** (0.047) | 0.298** (0.047) | 0.293** (0.046) |
| College + | 0.698** (0.063) | 0.681** (0.058) | 0.678** (0.059) | 0.677** (0.058) | 0.687** (0.056) | 0.679** (0.056) |
| Experience | -0.013 (0.027) | -0.016 (0.026) | -0.013 (0.027) | -0.013 (0.027) | -0.011 (0.027) | -0.012 (0.027) |
| Experience Sq. | 0.000 (0.001) | 0.000 (0.001) | 0.000 (0.001) | 0.000 (0.001) | 0.000 (0.001) | 0.000 (0.000) |
| Obs. | 6528 | 6528 | 6486 | 6486 | 6486 | 6486 |
| Censored Obs. | 4551 | 4551 | 4524 | 4525 | 4524 | 4524 |
| Log pseudo-likelihood | -5678 | -5675 | -5635 | -5635 | -5636 | -5635 |
| $\lambda$ (=$\sigma\rho$) | 0.056 | 0.053 | 0.049 | 0.050 | 0.055 | 0.053 |

+ significant at 10%; * significant at 5%; ** significant at 1%. All specifications include a constant and SMSA fixed effects.
The selection equation also includes age and education dummies for husband and husband's total income. Robust standard errors in parentheses account for clustering at the country level.

**Table XVIII**

## MEN, WORK, AND CULTURE

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

+ 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 XIX**

## 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 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 XX**

**HIS OR HER CULTURE?**

| | Dependent variable is Hours Worked | | | Dependent variable is Children | | |
|---|---|---|---|---|---|---|
| | (i) | (ii) | (iii) | (iv) | (v) | (vi) |
| Same x Female LFP 1950 | 0.027 | 0.035 | 0.070* | | | |
| | (0.026) | (0.030) | (0.034) | | | |
| Not Same x Wife's Female LFP 1950 | 0.058** | | 0.044+ | | | |
| | (0.015) | | (0.023) | | | |
| Not Same x Husband's Female LFP 1950 | | 0.067** | 0.058** | | | |
| | | (0.020) | (0.016) | | | |
| 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 | 2.348** | 2.343** | 2.280** | -0.461** | -0.457** | -0.424** |
| | (0.304) | (0.408) | (0.365) | (0.097) | (0.100) | (0.076) |
| Some College | 3.542** | 3.552** | 3.463** | -0.500** | -0.491** | -0.466** |
| | (0.476) | (0.509) | (0.520) | (0.099) | (0.116) | (0.092) |
| College + | 6.344** | 6.320** | 6.230** | -0.949** | -0.939** | -0.911** |
| | (0.245) | (0.493) | (0.579) | (0.124) | (0.101) | (0.097) |

**Table XXI**

## 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 XXII**

## 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 |
|---|---|---|---|---|
| Hours worked | 10.19 | 16.31 | 0 | 66 |
| Weeks worked | 15.21 | 20.91 | 0 | 51 |
| 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 |

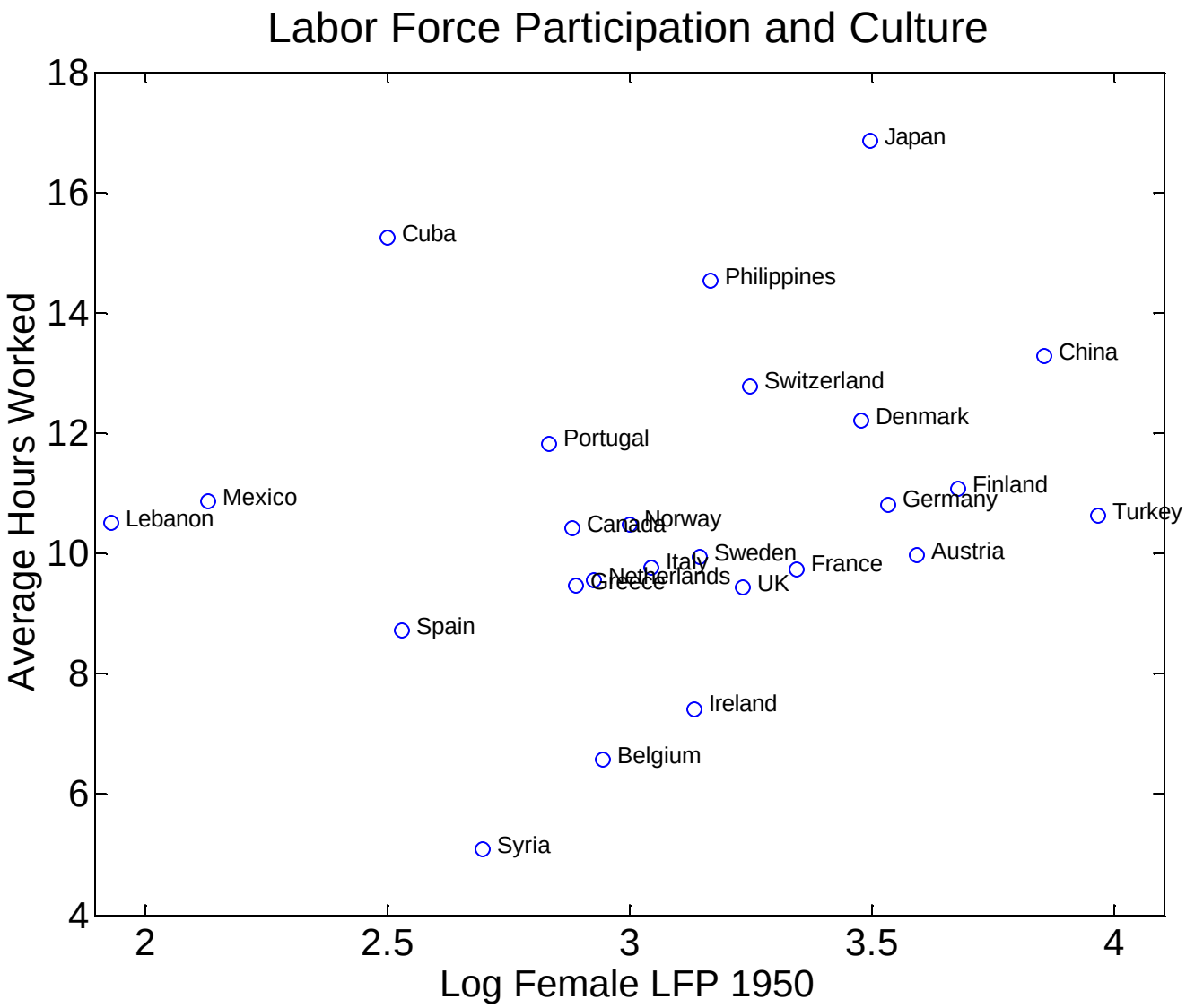
There are 6774 married couples in our sample. Data are from 1% 1970 Form 2 Metro Sample of the U.S. Census. The sample includes married women age 30-40 not living in farms or group quarters and not working in agricultural occupations whose father was born in one of the 25 countries in our sample. Income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

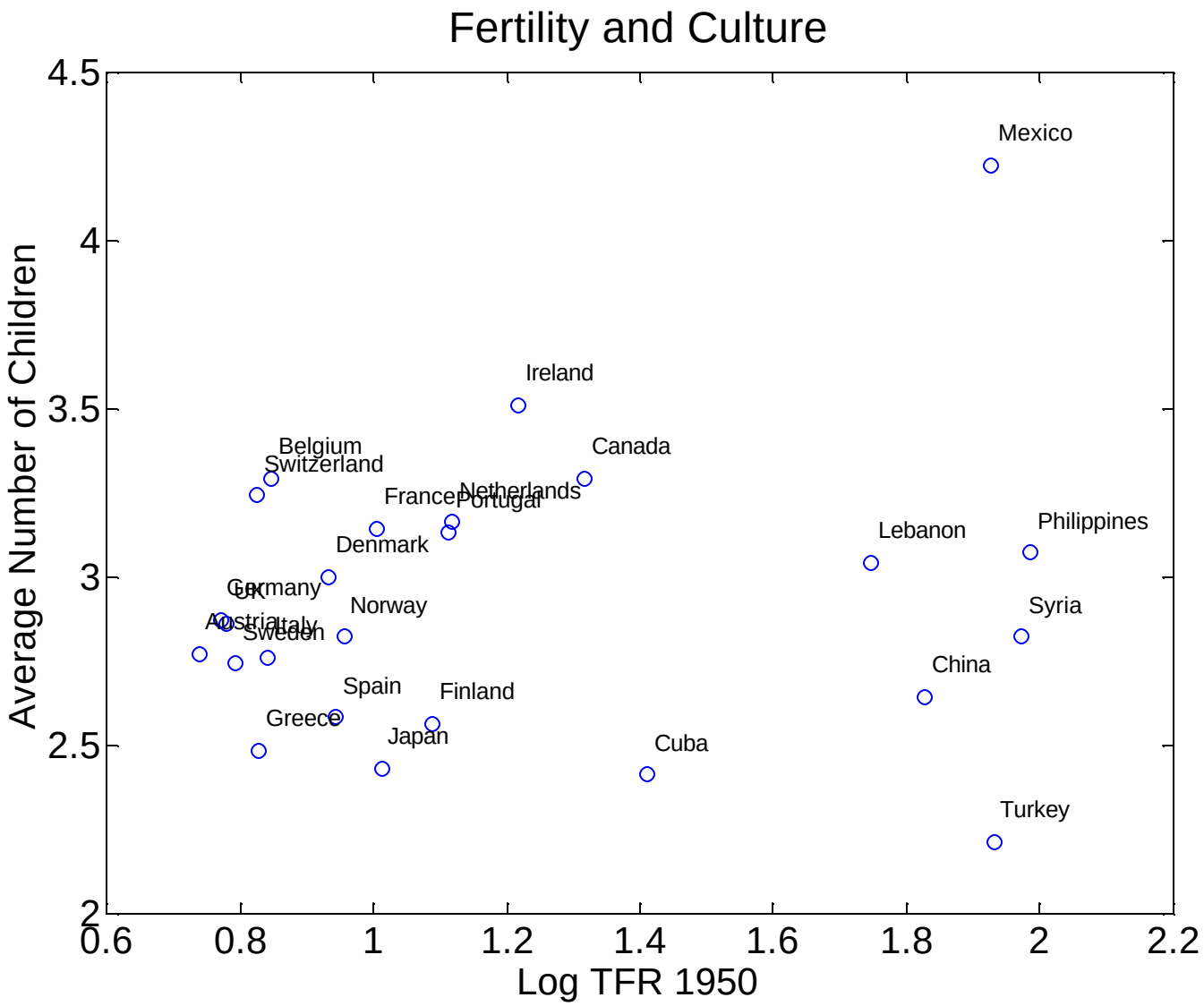
**Table A2**

## INDIVIDUAL SUMMARY STATISTICS -- GSS

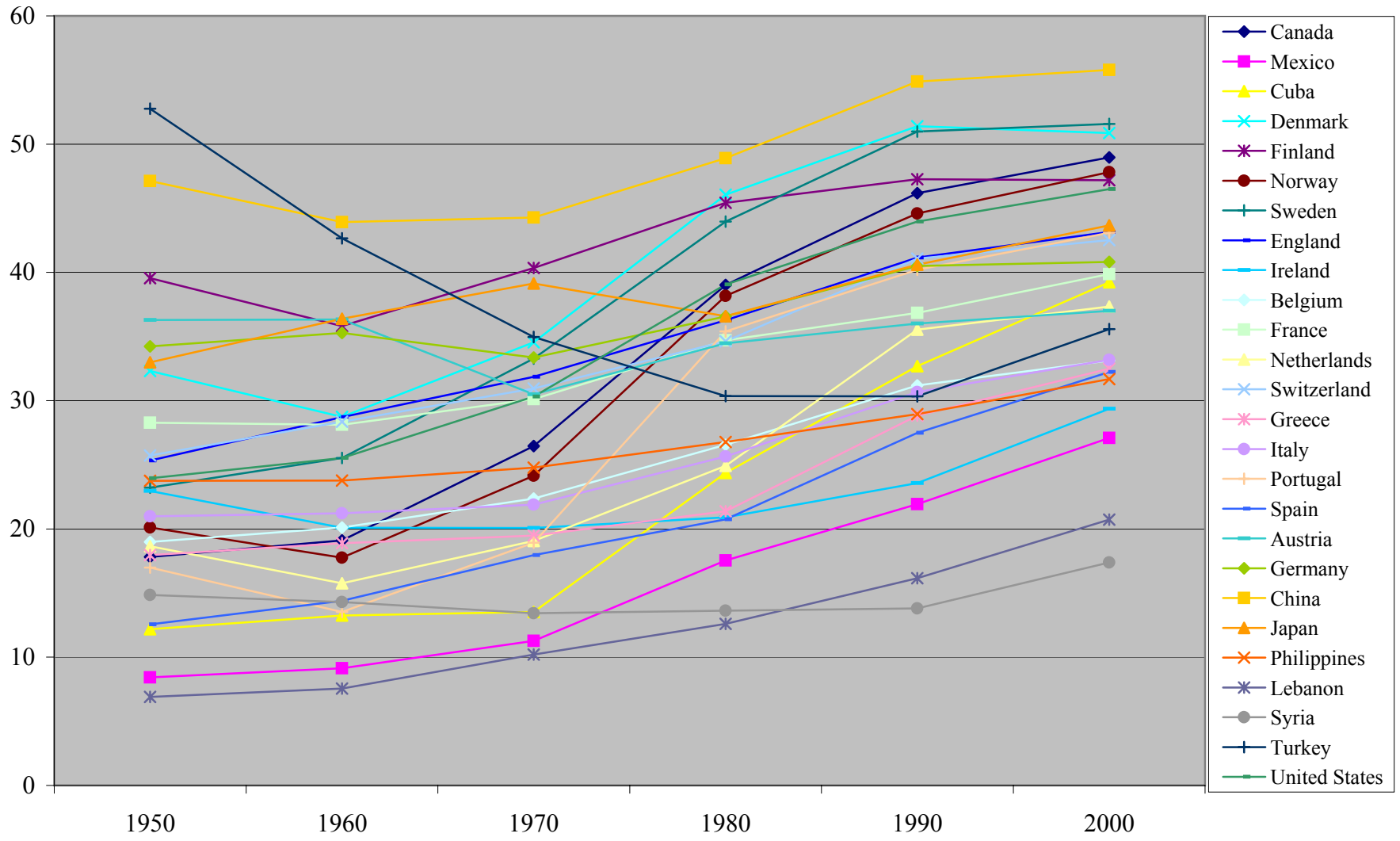
| Variable | Mean | St. Dev. | Min | Max |
|---|---|---|---|---|
| Full Time | 0.31 | 0.46 | 0 | 1 |
| Children | 2.51 | 1.57 | 0 | 8 |
| Age | 38.20 | 6.49 | 29 | 50 |
| High School | 0.49 | 0.50 | 0 | 1 |
| Some College | 0.16 | 0.37 | 0 | 1 |
| College + | 0.18 | 0.39 | 0 | 1 |
| Husband High School | 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 the 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