THE EFFECT OF CULTURE ON FERTILITY BEHAVIOR OF US TEEN MOTHERS

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Abstract:

This paper studies the impact of culture on the fertility behavior of teenage women in the US. To identify this effect, it took an epidemiological approach, exploiting the variations in teenage women's fertility rates by ancestral home country. Using three different databases (the US National Longitudinal Survey of Youth 1979, the US National Longitudinal Survey of Youth 1997, and the 2000 US Census), the results show that culture has quantitatively important effects on the fertility behavior of teenage women. This finding is robust to alternative specifications, to the introduction of a range of home country variables to proxy culture, and to the measurement of individual characteristics present when teenage women continue with a pregnancy to have a child.

Keywords:

Fertility, culture, adolescent women

JEL Codes: J13, Z13

1.- Introduction

During the last four decades, many countries have seen a considerable decline in the number of young, specifically teenaged, women giving birth. For example, in both Italy and Germany, the number of live births per 100 women under 20 years old has dropped from 4.5 in 1970 to less than 1 in 2010 (United Nations Statistics Division, Department of Economics and Social Affairs [UN DESA] 1948–97). However, many developed countries continue to sustain high levels of teen motherhood rates, such as the United Kingdom where this indicator reached the rate of 2.5 in 2010. This phenomenon is even more remarkable in certain less-developed countries such as Mexico, where the rate was 8.5 in 2010. Although this constitutes a sizable percentage of total fertility, it is nevertheless a concern due to the negative consequences for those countries. Teen motherhood is associated with socioeconomic disadvantages for British women (Arnaud Chevalier and Tarja K. Viitanen 2003) and their children (Marco Francesconi 2008).

Teen mothers in the United States have a higher probability of not finishing school (Daniel Klepinger, Shelly Lundberg, and Robert Plotnick 1999), which then negatively affects their career prospects (M. Anne Hill and Elizabeth King 1995), causes them to have lower market wages when they are older (Chevalier and Viitanen 2003), and actually causes them to be overweight, according to Australian

data (Dinand Webbink, Nicholas Martin, and Peter Visscher 2008). All of these results are compared to those women who delay motherhood, using data for the US (Amalia Miller 2011). To combat all of these negative effects of teen motherhood on women, organizations such as the World Health Organization (WHO) have recommended, among other objectives, creating an understanding and supportive community aiming to reduce pregnancy before the age of 20 (WHO 2011). Thus, the study of the determinants of teen motherhood is an important issue.

Researchers have examined several potential determinants of teen motherhood in the US, focusing on institutional factors, such as changes in abortion laws (John Donohue, Jeffrey Grogger, and Steven Levitt 2009), welfare reform (Shelly Lundberg and Robert D. Plotnick 1995), family planning policy (Lundberg and Plotnick 1995), public assistance payments (Rebecca M. Blank 1995), and reforms in compulsory schooling legislation in the US and Norway (Sandra E. Black, Paul J. Devereux, and Kjell G. Salvanes 2008). Research has also focused on family and socioeconomic factors in the US, such as family size and family structure (Elizabeth C. Cooksey 1990), parental education (Cooksey 1990), maternal employment (Leonard M. Lopoo 2004), family income (Scott South 1999; Arnstein Aassve 2003), neighborhood socioeconomic disadvantages (South 1999), marriage and cohabitation expectations (Barbara Wolfe, Robert Haveman, Karen Pence, and Jonathan A. Schwabish 2007), income expectations (Wolfe et al. 2007), and racial differences

(South 1999), among others. This paper explores the importance of culture on teenage women's fertility behavior.

Following the definition proposed by the United Nations Educational, Scientific and Cultural Organization (UNESCO 2001), we consider culture as the set of distinctive spiritual, material, intellectual, and emotional features of society or a social group. Not only does this set encompass art and literature, but it also includes lifestyles, ways of living together, value systems, traditions, and beliefs. Although most economic researchers would agree that culture is an important determinant of human behavior, it is not easy to measure such beliefs and values directly. As Raquel Fernández (2007) argues, the interrelation among institutions, economic conditions, and social norms is the source of the difficulty. To isolate the impact of culture from the effect of institutions and markets, we follow an epidemiological approach: we explore the fertility behavior of adolescent women who were born and have lived in the US and whose ethnicity or national origin is reported (Fernández 2007). We use dissimilarities in fertility rates by ancestral home country to document the significance of culture's impact on fertility rates, since a woman's attitudes are probably similar to the preferences of her parents, forebears, and ethnic communities.

There is substantial literature analyzing the impact of culture (as measured by country of origin) on socioeconomic outcomes (Raquel Fernández 2011). Utilizing empirical strategies quite analogous to ours, researchers have explored the role of culture in savings rates,

finding no effect (Christopher D. Carroll, Byung-Kun Rhee, and Changyong Rhee 1994). Researchers have shown a substantial effect of culture on women's labor force participation and fertility (Dante Contreras and Gonzalo Plaza 2010; Raquel Fernández and Alessandra Fogli 2006, 2009; Fernández 2007), living arrangements (Paola Giuliano 2007), unemployment (Beatrix Brügger, Rafael Lalive, and Josef Zweimüller 2009), self-employment (Miriam Marcén 2014), and divorce (Delia Furtado, Miriam Marcén, and Almudena Sevilla-Sanz 2013).

We contribute to these lines of research by exploring the impact of culture on the fertility behavior of teenage women. Because of the availability of information, in the main analysis, we use data from the dataset known as the US National Longitudinal Survey of Youth 1979 (NLSY79; US Bureau of Labor Statistics 1979) although, as we explain below, we have repeated the analysis with much more recent datasets and results do not vary. Our results point to culture as an important factor in determining the fertility behavior of teenage women, even after adding controls for an array of socioeconomic characteristics concerning women. We find that, when the ancestral home country live birth rate of women under 20 years of age rises by 1, the probability that an adolescent woman in the US is a teen mother rises by about 2.3 percent.

In our main empirical analysis, we include controls for the socioeconomic characteristics considered in the literature to be determinants of the fertility patterns of adolescents. The NLSY79 also

allows us to extend these controls to other factors, potentially affecting the probability of a teenage woman having a child (however, some of these are excluded from our main model because of endogeneity concerns). One of these determinants is the marital status of teenage women. In the period considered, women who become pregnant as an adolescent tend to marry in a higher proportion than their peers who are without a child (Wendy Manning 1993). Controlling for this endogenous factor would lead to biased estimates. Thus, aware of these endogeneity problems, we have repeated the analysis, adding controls for these attributes at the individual level. Our results do not change substantially.

Additionally, we check whether unobserved heterogeneity across ethnic groups is driving our findings. For instance, it can be argued that differences in fertility of adolescent women across countries are due to variations in the age at first marriage, rather than fertility culture. To take this issue into account, we add controls for home country characteristics to our main analysis. In all specifications, the estimated coefficient for the country of origin live birth rate varies very little. We also repeat the analysis using more recent databases, such as the US National Longitudinal Survey of Youth 1997 (NLSY97; US Bureau of Labor Statistics 1997) and the 2000 US Census (Steven Ruggles, J. Trent Alexander, Katie Genadek, Ronald Goeken, Matthew B. Schroeder, and Matthew Sobek 2010), and our results are maintained. Further, we run placebo tests to check whether our results are driven by the fertility culture of teenage

women rather than other unobserved characteristics that could be correlated with our cultural proxy. If, for example, these unobserved variables (such as risk attitudes, differences in human capital accumulation, and social norms) were the main determinants of divergence in the fertility behavior of teenage women, then we would expect them to also affect the fertility behavior of all women. However, in that case, we observe no impact of the national origin live birth rates of women under age 20, indicating we are not erroneously identifying culture's effect.

2.- Empirical strategy

To separate the impact of culture from the impacts of markets and institutions on the teenage women's fertility behavior, we use data on teenage women born and living in the US who report a country of origin or ethnicity. These women have all lived under the same markets and institutions, so that, if only institutions and markets are relevant to their fertility behavior, home country live birth rates (LBR) of women under age 20 should have no impact on the probability of being a teen mother. However, if home country LBRs can explain the fertility propensities of young women, cross-country differences in fertility can be considered as documenting the effect of culture. To test this issue, we estimate the following linear probability model:[1]

$$F_{ijk} = \beta_1 LBR_j + X_{ijk}\beta_2 + \delta_k + \gamma_r + \varepsilon_{ijk} \quad (1)$$

F_{ijk} is a dummy variable that takes value 1 when a woman i of cultural origin j living in region k is a teen mother. In the baseline regression, our measure of culture, LBR_j, is the live birth rate of women under 20 years old in country of origin j, measured in the year when woman i is 19 years old (see Supplemental Online Appendix B, available online on the publisher's website, for a detailed definition). The vector X_{ijk} includes individual characteristics, such as education (Jennifer Manlove 1998) and whether they live in a rural area (E. Helen Berry, Audrey M. Shillington, Terry Peak, and Melinda M. Hohman 2000), which may have an impact on fertility behavior for reasons independent of culture. In addition, we control for the region of residence , δ_k.[2] We have also introduced year fixed effects, represented by γ_r, to pick up unobserved characteristics that can bias our estimations, since the women in our sample are age 19 over a range of years, from 1979 to 1984. Finally, in order to consider any within- ethnicity correlation in the error terms, standard errors are clustered at the country of origin level.

Our variable of interest is LBR_j. Higher LBRs are assumed to correspond to cultural attitudes more accepting of teen motherhood. If culture plays a role here, then young women who are from countries with a more accepting culture regarding teen motherhood should have, everything else being equal, a higher probability of having a child at an early age than women from countries with a less accepting attitude. Then, we would expect β_1 to be positive.

An alternative strategy would be to include dummy variables for

the countries of origin. The benefit would be that it does not require a linear relationship between cultural proxy and fertility. However, this technique does not allow for a clear identification of how culture matters. Evidence suggests that the two approaches lead to similar conclusions. Young women whose country of origin has a more accepting attitude toward teen motherhood are more likely to be teen mothers.

3.- Data

In the main analysis, we use data from the NLSY79. Our sample consists of women age 19 who were born in the US and report an ethnicity or place of national origin. As the preferences and attitudes of these young women are likely similar to those of their parents, forebears, or ethnic communities, we argue that differences in LBRs by national origin can be considered as supporting evidence of the importance of culture. To identify ancestry or national origin, we use information on the first-reported ancestry. We incorporate second- and higher-generation immigrants (those with at least a parent or a forebear born out of the US). Although prior literature on culture mainly uses information on second-generation immigrants to avoid language barriers (Fernández 2007), there are also examples using second- and higher-generation immigrants (Marcén 2014). Although language problems are avoided, the effect of the ancestral country culture can diminish as generations continue. We estimate an aggregate effect across generations (we revisit this issue below). Thus,

our estimated impact of culture on fertility behavior of teenage women should be seen as a lower bound.

We use as cultural proxy the LBR of women under age 20 in their country of origin, measured when they are 19 years old. The LBR data, obtained from the UN Demographic Yearbooks (UN DESA 1948–97, 1998–2010), is calculated as the number of live births per hundred women under age 20 (see Supplemental Online Appendix B for a description). The selection of this birth rate as cultural proxy reflects the notion that teenage women's behavior is better determined by the behavior of their counterparts in their country of origin. However, it could be argued that teen women's behavior is best characterized by the preferences of their parents. Thus, we should utilize as cultural proxy the LBR of their country of origin in the year of their birth (we revisit this issue below).

Table 1 Summary statistics by country of origin, using the NLSY79

Country of origin	*Mean home country LBR women under 20*	*Proportion teen mothers*	*Proportion enrolled high school*	*Proportion high school graduated*	*Proportion enrolled college*	*Proportion living ruralarea*	*GDP per capita*	*Mean women age first marriage*	*Number of observations*
Cuba	8.785	0.062	0.058	0.383	0.483	0.000	2.1	19.8	13
Mexico	7.873	0.349	0.063	0.376	0.324	0.095	2.9	21.6	52
Portugal	3.993	0.320	0.313	0.190	0.090	0.000	3.1	23.4	19
Poland	3.404	0.098	0.000	0.369	0.489	0.039	1.8	22.7	29
United Kingdom	2.890	0.140	0.021	0.466	0.382	0.251	8.5	23.0	800
Spain	2.375	0.133	0.000	0.572	0.323	0.078	5.1	23.4	18
Italy	2.178	0.074	0.000	0.483	0.357	0.171	7.3	23.8	67
Germany	2.148	0.114	0.009	0.499	0.409	0.219	10.2	22.9	530
Ireland	2.141	0.090	0.000	0.507	0.400	0.175	5.9	24.6	157
France	1.625	0.109	0.026	0.532	0.314	0.172	10.8	23.0	200
Average	2.508	0.124	0.016	0.484	0.384	0.217	8.8	23.1	
Std. dev.	0.785	0.329	0.127	0.500	0.486	0.412	1.9	0.5	

Notes: Countries of origin ordered by home country LBR (live births per 100 women under age 20, constructed from UN Demographic Yearbook [UN DESA] 1998–2010). The other descriptive statistics were constructed using the NLSY79, except GDP per capita – taken from UN Statistics Division (2010), "Per Capita GDP at Current Prices in US$" – and the average female age at first marriage, taken from Population Division of the Department of Economic and Social Affairs of the UN Secretariat (2003) and UN, Department of Economic and Social Affairs, Population Division (2008). The home country LBR of women under age 20 and the GDP per capita are a mean of the period 1979–84 when young women were age 19. The sample consists of 1,885 women born in the US at age 19 from 1979 to 1984 and who report an ethnic origin.

Our final sample contains 1,885 observations for the period 1979–84 – the period when women were 19 years old in the sample.[3] Table 1 presents summary statistics of the relevant variables by country of origin (ten different ancestries), ordered from the highest to the lowest average LBR of women under age 20. Column (1) displays large LBR differences across countries: from 8.78 live births per hundred women under age 20 in Cuba, to 1.62 in France. The other columns describe our main sample. Overall, 12.4 percent of women are teen mothers, but Mexican and Portuguese women are substantially more likely to be teen mothers. About 48 percent of women have graduated from high school, although educational levels vary significantly across countries of origin, with Cuba, Poland, and Germany having the highest proportion of women enrolled in a college degree and Portugal having the lowest. In most cases, women originating from countries with a high LBR are teen mothers in higher proportions. However, this could also be explained, for example, by differences in educational attainment. Thus, a more detailed analysis isneeded.

4.- Results

Baseline regression

In Table 2, we show the estimates for the baseline specification in column (1) using the NLSY79. In this case, the cultural proxy is the home country LBR of women under age 20, measured in the year when

each woman was age 19. A rise in the home country LBR of an adolescent woman is related to a greater probability that this woman is a teen mother. We add controls for individual socioeconomic characteristics, in addition to year- and region- fixed effects. These variables may have an effect on the probability of being a teen mother for reasons other than culture. With respect to education level, since women who do not drop out of school are less likely to have a child as teens, it is not striking that we found more educated women less likely to be teen mothers (Manlove 1998).[4] Women's place of residence is a potential factor affecting fertility behavior. Thus, we include information on whether women live in rural areas and on their regions of residence. Although the coefficient is negative, living in a rural area is not statistically significant.

It is comforting that the cultural proxy has a positive and statistically significant impact on the probability of being a teen mother. Specifically, a 1-point increase in the cultural proxy is associated with a 2.3 percent increase in the probability of being a teen mother. Put differently, results indicate that a woman from Mexico (7.9 live births on average per 100 women under age 20 in the period 1979–84) is 14.4 percent more likely to have a child when she is under age 20 than a woman from France, the country with the lowest LBR (1.6 on average).

Table 2 Teen fertility culture, suing the NLSY79 (Deendent variable: teen mother)

	(1)	(2)	(3)	(4)	(5)	(6)
Home country LBR	0.023***					
	(0.006)					
Home country LBR 1950		0.013**				
		(0.005)				
Home country LBR 1980			0.028***			
			(0.008)			
Home country LBR 2005				0.017***		
				(0.005)		
Home country LBR year of birth					0.014**	
					(0.005)	
Mean home country LBR						0.016**
						(0.007)
Enrolled high school	−0.335***	−0.332***	−0.335***	−0.334***	−0.333***	−0.332***
	(0.031)	(0.030)	(0.032)	(0.030)	(0.029)	(0.030)
High school graduated	−0.243***	−0.244***	−0.243***	−0.244***	−0.245***	−0.244***
	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)
Enrolled in college	−0.378***	−0.379***	−0.378***	−0.378***	−0.380***	−0.379***
	(0.020)	(0.021)	(0.020)	(0.020)	(0.020)	(0.020)
Rural	−0.018	−0.018	−0.019	−0.019	−0.019*	−0.020*
	(0.011)	(0.011)	(0.011)	(0.011)	(0.010)	(0.010)
Constant	0.334***	0.359***	0.315***	0.359***	0.338***	0.330***
	(0.023)	(0.028)	(0.025)	(0.023)	(0.026)	(0.030)
Year FE	YES	YES	YES	YES	YES	YES
Region FE	YES	YES	YES	YES	YES	YES
Observations	1,885	1,885	1,885	1,885	1,885	1,885
R^2	0.150	0.149	0.150	0.150	0.150	0.149

Notes: Home country LBR calculated as number of live births per 100 women under age 20, measured when women were 19 years old in column (1); in 1950, 1980, and 2005 in columns (2), (3), and (4), respectively; when women were born in column (5); and in the previous decade, the first wave of the NLSY79 (1969–78) in column (6). The sample consists of women age 19 and born in the US (1979–84). For both teen mothers and non-teen mothers, we take their personal information when they are 19 years old. We estimate linear probability models where the dependent variable is 1 if the woman is a teen mother and 0 otherwise. Robust standard errors are in parenthesis in all tables. Observations are weighted using survey weights in all tables. ***, **, * denote statistical significance at the 1, 5, and 10 percent levels, respectively, in all tables.

Robustness checks

To check whether our findings are sensitive to the definition of the cultural proxy or the sample selection, we run several simple robustness checks. We show these results in Table 2, columns (2) to (6).

The existing literature on the effect of culture on socioeconomic variables typically employs information on the variable of interest for several years as cultural proxy. As Fernández and Fogli (2009) claim, it is not clear, theoretically, which year to utilize in the study. Since most of the prior literature uses information on immigrants, these authors suggest the culture of immigrants is better measured at their time of immigration. Alternatively, as Furtado, Marcén, and Sevilla-Sanz (2013) explain, if immigrants remain in contact with their family and friends in their home countries for several years after immigrating, then their attitudes can be better characterized by the behavior of their counterparts in their country of ancestry (if measured at the time of the survey). For those studies using second- and higher-generation immigrant samples, it can also be argued that these individuals' preferences are better measured by their parents' preferences as expressed in the country of origin when the immigrants were born, or as expressed some years after their arrival (assuming that parents transmit their preferences when the child is young). To tackle this issue, rather than solving it theoretically (as done by Furtado, Marcén, and Sevilla-Sanz [2013]), we use alternative definitions of our variable of interest, the cultural proxy.

Specifically, we use the home country LBR of women under age 20 as measured in 1950, 1980, and 2005; these can be found in columns (2), (3), and (4), respectively.[5] As expected, results are quite similar. Coefficients of interest are always positive and statistically significant at the 5 percent and 1 percent level. Additionally, we test this issue by measuring the cultural proxy when women were born (column [5]). In this case, the range of years of the cultural proxy is 1960–

65. As before, the results do not change substantially. Finally, we use the average LBR of the previous decade to the first wave of the survey (1969– 78). Thus, we consider the years in which the individuals in our sample were pre-teens, under 14 years old. Results are shown in column (6), and, once again, we obtain similar results.

Another potential problem with our estimates is that teenage women in the US may not be a representative sample of their counterparts in their ancestral home countries. As explained in Furtado, Marcén, and Sevilla-Sanz (2013), for example, those living in home countries may show patterns of adventure-seeking behavior, risk aversion, or political preferences that are quite different from those of the individuals living in the US. In addition, individuals tend to migrate away from specific areas; for example, many tend to leave a specific region with economic problems. It is possible this makes US teen women similar to other US teen women; but, it is probable that this makes them quite different from the women in their ancestral home countries. This can be a problem for our estimates. However if, for instance, all teen women living in the US and reporting an ancestry

were less “risk adverse” than the women in their country of origin, regardless of their ancestry, then our work would not be affected by any bias since it is based on cross-country variation.

It could be the case that women whose ancestry is Cuban and are living in the US are different from their Cuban ancestors mainly because their parents had to immigrate to the US for political reasons in the 1950s–60s during the Cuban revolution and after the establishment of the Communist regime. Thus, it could be argued that there are differences in the preferences and attitudes of ethnic Cubans born in the US and their counterparts living in Cuba. If these differences matter, then we should observe changes in our estimates after excluding women of Cuban ancestry. We check this in Table 3. Column (1) displays the estimated coefficients after excluding young Cuban women, and we observe that the impact of the cultural proxy increases slightly in magnitude. However, this result can also be conditional given the scarcity of observations from Cuba (just thirteen observations), making this result difficult to be interpreted. Adding or deleting these observations does not substantially change our results.

In Table 3, we show other simple robustness checks, following Furtado, Marcén, and Sevilla-Sanz (2013), to test if our findings are sensitive to sample selection. Column (2) excludes information for women whose ancestry originates in the country with the most observations – the UK, and column (3) excludes women from Cuba and the UK – the countries with the fewest and the highest number of observations, respectively. Results remain unchanged. Similarly,

column (4) excludes the country with the lowest average LBR – France. The highest LBR is found in Cuba, and column (1) already reports these estimates. Finally, column (5) does not incorporate observations for Cubans and French. Again, results do not vary. The positive impact of culture on fertility of teen women appears to be quite consistent.[6]

In addition to these checks, we take advantage of the wealth of information in the NLSY79 to introduce another set of covariates that may have an effect on the probability of being a teen mother (Cooksey 1990; Gary Painter and David Levine 2000; M. Lynne Cooper 2002). In Table 4, we can observe the results after including controls for the subjects' religious affiliation when they were children and when they were surveyed, included in columns (1) and (2), respectively; family size, in column (3); whether the respondent grew up in a single-parent family or without parents at all, in columns (4), (5), and (6); several measures of teen women's risk attitudes, in columns (7), (8), (9), and (10); and a measure of women's attitudes in column (11). Our findings are quite robust to the introduction of all these controls.[7]

Table 3 Teen fertility culture and the probability of being a teen mother, different samples using the NLSY79 (Dependent variable: teen mother)

	(1)	(2)	(3)	(4)	(5)	(6)
Home country LBR	0.023***					
	(0.006)					
Home country LBR 1950		0.013**				
		(0.005)				
Home country LBR 1980			0.028***			
			(0.008)			
Home country LBR 2005				0.017***		
				(0.005)		
Home country LBR year of birth					0.014**	
					(0.005)	
Mean home country LBR						0.016**
						(0.007)
Enrolled high school	−0.335***	−0.332***	−0.335***	−0.334***	−0.333***	−0.332***
	(0.031)	(0.030)	(0.032)	(0.030)	(0.029)	(0.030)
High school graduated	−0.243***	−0.244***	−0.243***	−0.244***	−0.245***	−0.244***
	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)
Enrolled in college	−0.378***	−0.379***	−0.378***	−0.378***	−0.380***	−0.379***
	(0.020)	(0.021)	(0.020)	(0.020)	(0.020)	(0.020)
Rural	−0.018	−0.018	−0.019	−0.019	−0.019*	−0.020*
	(0.011)	(0.011)	(0.011)	(0.011)	(0.010)	(0.010)
Constant	0.334***	0.359***	0.315***	0.359***	0.338***	0.330***
	(0.023)	(0.028)	(0.025)	(0.023)	(0.026)	(0.030)
Year FE	YES	YES	YES	YES	YES	YES
Region FE	YES	YES	YES	YES	YES	YES
Observations	1,885	1,885	1,885	1,885	1,885	1,885
R^2	0.150	0.149	0.150	0.150	0.150	0.149

Notes: Home country LBR calculated as in Table 2, column (1). For both teen mothers and non-teen mothers, we take their personal information when they are 19 years old. We estimate linear probability models where the dependent variable is 1 if the woman is a teen mother, and 0 otherwise. Columns (1) and (2) exclude information on the country with the fewest observations (Cuba) and with the most observations (UK), respectively. Column (3) excludes both countries simultaneously. Column (4) excludes information on the country with the lowest LBR (France), and column (5), excludes information on the country with the highest LBR (Cuba) and with the lowest LBR (France).

More evidence on the impact of culture using the NLSY97 and the 2000 US Census

We use the NLSY79 because of the availability of information, which allows us to follow women during their entire reproductively fertile lifespan, and the number of observations of women of each national origin. However, all surveyed individuals were born no later than 1965, implying that their parents could have moved to the US under more restrictive immigration laws, which could, consequently, affect the number of countries considered. To provide empirical evidence that the number of countries considered is not driving our analysis, we have replicated our estimates using a more recent database, the NLSY97. This allows us to analyze the effect of culture on fertility patterns of teen women born between 1980–4. The number of countries included increases considerably, although the number of observations decreases, on average, more than 10 percent; this decrease is even greater in some of the countries of origin considered.[8]

Again, we define the LBR in different years to check our findings. Regardless of that definition, the effect of culture remains positive and statistically significant, although the effect decreases somewhat (Table 5). Being aware of the concerns in the few observations in many home countries and using the NLSY97, it is comforting that results are quite similar, suggesting that culture is relevant in teen motherhood behavior.

Table 4 Teen fertility culture and the probability of being a teen mother adding new controls, using the NLSY79 (Dependent variable: teen mother)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Home country LBR	0.023***	0.023**	0.023***	0.028***	0.024**	0.027**	0.024***	0.023***	0.023***	0.016*	0.023***
	(0.007)	(0.007)	(0.006)	(0.008)	(0.008)	(0.008)	(0.006)	(0.007)	(0.007)	(0.009)	(0.006)
Enrolled high school	− 0.336***	− 0.331***	− 0.334***	− 0.277***	− 0.292***	− 0.275***	− 0.332***	− 0.335***	− 0.342***	− 0.375***	− 0.333***
	(0.031)	(0.032)	(0.031)	(0.043)	(0.038)	(0.047)	(0.031)	(0.038)	(0.036)	(0.078)	(0.033)
High school graduated	− 0.245***	− 0.244***	− 0.243***	− 0.193***	− 0.210***	− 0.195***	− 0.241***	− 0.240***	− 0.247***	− 0.316***	− 0.242***
	(0.020)	(0.020)	(0.020)	(0.034)	(0.031)	(0.034)	(0.021)	(0.024)	(0.023)	(0.066)	(0.020)
Enrolled in college	− 0.380***	− 0.379***	− 0.377***	− 0.326***	− 0.346***	− 0.327***	− 0.374***	− 0.374***	− 0.383***	− 0.450***	− 0.376***
	(0.020)	(0.021)	(0.021)	(0.025)	(0.028)	(0.027)	(0.021)	(0.019)	(0.021)	(0.057)	(0.020)
Rural	− 0.018	− 0.021*	− 0.018	− 0.029**	− 0.033**	− 0.034**	− 0.022	− 0.021	− 0.024*	0.021	− 0.019
	(0.010)	(0.011)	(0.011)	(0.012)	(0.010)	(0.011)	(0.013)	(0.015)	(0.013)	(0.014)	(0.011)
Control 1	− 0.010	− 0.013	− 0.001	− 0.016	0.006	0.020	0.046**	0.041	0.052	0.149**	− 0.030
	(0.010)	(0.013)	(0.002)	(0.016)	(0.041)	(0.045)	(0.015)	(0.030)	(0.046)	(0.050)	(0.022)
Control 2	− 0.027*	− 0.035									
	(0.014)	(0.019)									
Control 3	0.032	− 0.023									
	(0.024)	(0.022)									

Table 4 (continued)

	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*	*(11)*
Constant	0.351***	0.300***	0.336***	0.285***	0.295***	0.273***	0.324***	0.267***	0.278***	0.347***	0.272***
	(0.020)	(0.028)	(0.020)	(0.033)	(0.025)	(0.044)	(0.024)	(0.027)	(0.031)	(0.069)	(0.028)
Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Region FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Observations	1,881	1,882	1,885	1,263	1,282	1,259	1,863	1,796	1,826	515	1,882
R^2	0.151	0.151	0.150	0.126	0.135	0.128	0.153	0.151	0.155	0.244	0.151

Notes: Columns (1) and (2) control for the religion under which respondents were raised and current religious affiliation (Protestant, Roman Catholic, and no religion, respectively). Column (3) controls for family size. Columns (4) and (5) control for whether the respondent's father and mother are still alive, respectively. Column (6) controls for whether the respondent is an orphan. Column (7) controls for whether the respondent began drinking at least once a week when she was 16 years old or younger. Column (8) controls for whether the woman ever had an abortion. Column (9) controls for whether the respondent had used narcotics when she was 18 years old or younger. Column (10) controls for whether the respondent had her first sexual intercourse when she was 16 years old or younger. Column (11) includes a control for women's attitudes. Women are classified as traditional if they declare that they strongly disagree with the following statement: "Men should share the work around the house with women, such as doing dishes, cleaning and so forth."

Another potential concern with the NLSY79 is the availability of geographical controls. Since laws affecting fertility patterns (abortion laws, access to birth control pills, welfare reforms, or family planning policies) vary by place of residence, the absence of more specific controls for the place of residence may bias our results (Betsy Stevenson and Justin Wolfers 2007). However, information on the geographical location is quite limited in the NLSY79 for non-US researchers.[9] It is worth noting that, this being a concern, prior literature has shown that the effect of culture on socioeconomic outcomes does not disappear after adding controls for the place of residence (state fixed effects or the metropolitan statistical area [MSA] fixed effects), although it is somewhat reduced (Furtado, Marcén, and Sevilla-Sanz 2013).

To check this issue, we run our analysis using data from the 5-Percent Integrated Public-Use Microdata Sample (IPUMS) of the 2000 US Census (Ruggles et al. 2010). With this data set, we are able to control for the state of residence and even for the MSA. Results are shown in Table 6. The impact of culture on the probability of being a teen mother is maintained positive and statistically significant. Note that, in this case, our sample consists of teenage immigrant women between the ages of 14 and 19, who arrived in the US when they were 5 years of age or younger. As Furtado, Marcén, and Sevilla-Sanz (2013) explain, those women could be considered similar to second-generation immigrants. This also allows us to tackle the issue of the aggregation of culture's effect on teen motherhood

across generations. We would expect a greater impact from culture using this sample; we observe exactly this, as the estimated coefficient is more than two times greater than in our baseline estimates (Table 2, column [1]), indicating that culture does play a role in teen motherhood.

Other family and individual attributes

We included many of the factors determining fertility patterns among teenage women in the baseline regression. The NLSY79 also contains information on other potentially relevant variables not included in the baseline model because of endogeneity concerns. One of these determinants is women's marital status. Married women have children in higher proportions than non-married women. However, a child conceived as a result of premarital intercourse also increases the parents' probability of marriage – "shotgun marriage." The marriage expectations of young women appear to be relevant when having a child at an early age (Manning 1993; Wolfe et al. 2007). Inclusion of these endogenous factors would lead to bias in our estimates. With this in mind, we have repeated the analysis, adding controls for teen women who have never been married. Column (1) in Table 7 presents our findings. As expected, never-married teenage women are less likely to be teen mothers. Interestingly, our estimate of the impact of culture on the probability of being a teen mother does not change.

Table 5 Teen fertility culture and the probability of being a teen mother, using the NLSY97 (Dependent variable: teen mother)

	(1)	(2)	(3)	(4)	(5)	(6)
Home country LBR	0.017***					
	(0.006)					
Home country LBR 1950		0.011**				
		(0.004)				
Home country LBR 1980			0.016**			
			(0.007)			
Home country LBR 2010				0.018***		
				(0.006)		
Home country LBR					0.016**	
					(0.006)	
Mean home country LBR						0.014**
						(0.005)
Enrolled high school	−0.295***	−0.292***	−0.291***	−0.294***	−0.291***	−0.295***
	(0.100)	(0.102)	(0.102)	(0.100)	(0.102)	(0.101)
High school graduated	−0.231***	−0.231***	−0.231***	−0.231***	−0.230***	−0.231***
	(0.062)	(0.062)	(0.062)	(0.062)	(0.062)	(0.062)
Enrolled in college	−0.376***	−0.376***	−0.377***	−0.376***	−0.376***	−0.377***
	(0.064)	(0.065)	(0.064)	(0.065)	(0.064)	(0.064)
Rural	−0.017	−0.020	−0.017	−0.017	−0.017	−0.017
	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)
Constant	0.374***	0.374***	0.358***	0.374***	0.362***	0.375***
	(0.068)	(0.065)	(0.069)	(0.068)	(0.068)	(0.067)
Year FE	YES	YES	YES	YES	YES	YES
Region FE	YES	YES	YES	YES	YES	YES
Observations	1,260	1,260	1,260	1,260	1,260	1,260
R^2	0.161	0.160	0.160	0.160	0.162	0.161

Notes: Home country LBR calculated as in Table 2, column (1); in 1950, 1980, and 2005 in columns (2), (3), and (4), respectively; when women were born in column (5) and in the decade prior to the first wave of the NLSY97 (1987–96) in column (6). The sample consists of women age 19 and born in the US. For both teen mothers and non-teen mothers, we take their personal information when they are 19 years old. We estimate linear probability models where the dependent variable is 1 if the woman is a teen mother, and 0 otherwise. We control for the level of education, whether the woman's current residence is rural, year fixed effects, and region of current residence fixed effects.

Table 6 Teen fertility culture and the probability of being a teen mother using the 2000 US Census (Dependent variable: teen mother)

	(1)	(2)	(3)	(4)
Home country LBR 2000	0.058***	0.058***		
	(0.007)	(0.007)		
Home country LBR 1990			0.049***	
			(0.007)	
Home country LBR 1980				0.073***
				(0.017)
Age	−0.191***	−0.204***	−0.191***	−0.195***
	(0.031)	(0.028)	(0.031)	(0.031)
Age squared	0.007***	0.007***	0.007***	0.007***
	(0.001)	(0.001)	(0.001)	(0.001)
High school	−0.036***	−0.036***	−0.036***	−0.038***
	(0.013)	(0.011)	(0.013)	(0.013)
Some college	−0.082***	−0.081***	−0.082***	−0.085***
	(0.022)	(0.020)	(0.022)	(0.022)
Constant	1.669***	1.478***	1.324***	1.346***
	(0.323)	(0.204)	(0.213)	(0.212)
State FE	YES	NO	YES	YES
MSA FE	NO	YES	NO	NO
Observations	11,633	11,633	11,577	11,416
R^2	0.053	0.074	0.052	0.051

Notes: Home country LBR calculated as number of live births per 100 women under 20, measured in 2000 in columns (1) and (2), in 1990 in column (3), and in 1980 in column (4). We estimate linear probability models where the dependent variable is 1 if the woman is a teen mother, and 0 otherwise. All columns include controls for the age and the age squared, and the level of education. Columns (1), (3), and (4) include state fixed effects. Column (2) adds MSA fixed effects.

Similarly, income variables are not included because of potential endogeneity concerns. Teen mothers live in poor families in a higher proportion than non-teen mothers (Kristin Luker 1996; John Hobcraft and Kathleen Kiernan 2001; Melissa S. Kearney and Phillip B. Levine 2007). If teen mothers are those living in poorer families and have lower income expectations, then controlling for income variables

would lead to bias in our results. Mindful of this, we have included a dummy variable that takes value 1 if a woman reports that her family is in poverty (column [2] of Table 7). As before, our coefficient of interest does not vary substantially although its impact decreases slightly. We also include a control for family income in column (3), finding that teen women in high-income families are less likely to become adolescent mothers.[10] Once again, our coefficient of interest does not change.[11]

Table 7 Teen fertility culture and the probability of being a teen mother adding potential endogenous controls, using the NLSY79 (Dependent variable: teen mother)

	(1)	(2)	(3)
Home country LBR	0.021***	0.021**	0.026**
	(0.005)	(0.007)	(0.009)
Enrolled high school	−0.146***	−0.339***	−0.301***
	(0.024)	(0.032)	(0.046)
High school graduated	−0.133***	−0.250***	−0.239***
	(0.021)	(0.018)	(0.023)
Enrolled in college	−0.187***	−0.375***	−0.374***
	(0.029)	(0.018)	(0.032)
Rural	−0.032*	−0.012	−0.020
	(0.014)	(0.015)	(0.014)
Marital status	−0.339***		
	(0.014)		
Poverty status		0.048	
		(0.043)	
Family income			−0.020***
			(0.003)
Constant	0.512***	0.340***	0.473***
	(0.026)	(0.026)	(0.056)
Year FE	YES	YES	YES
Region FE	YES	YES	YES
Observations	1,885	1,767	1,481
R^2	0.278	0.155	0.164

Notes: Home country LBR calculated as in Table 2, column (1). For both teen mothers and non-teen mothers, we gather their personal information when they are 19 years old. We estimate linear probability models where the dependent variable is equal to 1 if the woman is a teen mother, and 0 otherwise. Column (1) controls for marital status. Column (2) controls for family poverty status. Column (3) controls for family income.

Unobserved heterogeneity and differences across ancestries

We consider in more depth the possibility that our estimates could be picking up differences in other country-of-origin characteristics in addition to, or instead of, fertility culture. For example, it is possible

to argue that those women originating from countries where women marry at a young age also have children when they are younger.

Table 8 Teen fertility culture and the probability of being a teen mother, cross-country differences using the NLSY79 (Dependent variable: teen mother)

	(1)	(2)	(3)	(4)
Home country LBR	0.029***	0.020**	0.024***	0.027***
	(0.006)	(0.006)	(0.006)	(0.007)
Enrolled high school	−0.336***	−0.336***	−0.334***	−0.336***
	(0.031)	(0.031)	(0.031)	(0.031)
High school graduated	−0.244***	−0.243***	−0.243***	−0.243***
	(0.020)	(0.020)	(0.020)	(0.020)
Enrolled in college	−0.378***	−0.378***	−0.378***	−0.378***
	(0.020)	(0.020)	(0.020)	(0.020)
Rural	−0.019	−0.019	−0.018	−0.019
	(0.011)	(0.011)	(0.011)	(0.011)
Per capita GDP	0.005**			0.003
	(0.002)			(0.003)
Age at first marriage		−0.014**		−0.003
		(0.005)		(0.012)
Age consensual relations			−0.005*	−0.002
			(0.003)	(0.005)
Constant	0.287***	0.656***	0.409***	0.394
	(0.025)	(0.130)	(0.041)	(0.246)
Year FE	YES	YES	YES	YES
Region FE	YES	YES	YES	YES
Observations	1,885	1,885	1,885	1,885
R^2	0.151	0.150	0.150	0.151

Notes: Home country LBR calculated as in Table 2, column (1). For both teen mothers and non-teen mothers, we record their personal information when they are 19 years old. We estimate linear probability models where the dependent variable is 1 if the woman is a teen mother, and 0 otherwise. Column (1) controls for the per capita GDP of the country of origin. Column (2) controls for the mean age at first marriage in each country in 1980. Column (3) controls for the minimum legal age of consent. Column (4) includes all controls.

We have tested this further by adding home country characteristics in Table 8. We first add per-capita GDP at the country of origin level (data from UN Statistics Division [2010], see Supplemental online Appendix B) to our main model in column (1). Surprisingly, we obtain a positive relationship between per capita GDP and the probability of teen motherhood. This can be explained by differences in migration patterns. For example, it could be argued that rich people living in poor countries tend to move to more developed countries, such as the US. Thus, the fertility behavior of these teenage women would be different from their counterparts in their ancestral home country. In this case, our cultural proxy is still positively correlated with the probability of being a teen mother, and the magnitude of the effect has slightly increased. We then incorporate controls for the average age at first marriage at the country level (for a description, see Supplemental Online Appendix B). Results are reported in column (2). As expected, an increase in a woman's age at first marriage decreases the probability of being a teen mother. In this case, the coefficient picking up the cultural effect decreases in magnitude.

Additionally, we introduce controls for the minimum legal age of consent (several sources, see Supplemental Online Appendix B) in each country. We document these in column (3). Again, as expected, an increase in the minimum legal age of consent decreases the probability of being a teen mother. The effect of culture on the probability of being a teen mother remains positive

and statistically significant. Finally, we add all controls in column (4). In this case, coefficients on the control variables turn out to be nonsignificant. Our variable of interest is still positive and statistically significant. It appears, then, that we are correctly interpreting our results asevidence of culture.

Placebo tests

We present additional evidence to show that we are not capturing unobserved characteristics, such as risk attitudes or norms that can be correlated with our cultural proxy. If, for example, these unobserved variables were the main factor in divergence in teen women's fertility behavior, then we would expect them to affect the fertility behavior of all women. Similarly, unobserved characteristics of the parents of the young women can also be correlated with our cultural proxy, and this may impact the fertility behavior of teen women and can certainly have an effect on the family income.

To tackle this issue, we follow Fernández and Fogli (2009) and Furtado, Marcén, and Sevilla-Sanz (2013) by running placebo tests. We first consider as the dependent variable an indicator variable that takes value 1 if the woman has been a mother at any point in her life. Results are reported in column (1) of Table 9. We also repeat the analysis, but we now include as the dependent variable the total net family income measured in logarithm, as represented in column (2). As can be seen, we obtain no statistically significant coefficient of the

cultural proxy, implying that these unobserved factors are not likely to bias our main point estimates.

Table 9 Teen fertility culture and the probability of being a teen mother, placebo tests using the NLSY79 (Dependent variables: mother and log total net family income)

	(1)	*(2)*
Home country LBR	−0.010	0.009
	(0.018)	(0.008)
Enrolled high school	−0.187**	0.440***
	(0.073)	(0.102)
High school graduated	−0.091**	0.574***
	(0.030)	(0.078)
Enrolled in college	−0.174***	1.024***
	(0.041)	(0.096)
Rural	0.039	−0.155***
	(0.037)	(0.033)
Constant	0.830***	9.224***
	(0.067)	(0.150)
Year FE	YES	YES
Region FE	YES	YES
Observations	1,885	1,481
R^2	0.031	0.105

Notes: Home country LBR calculated as in Table 2, column (1). For both teen mothers and non-teen mothers, we take their personal information when they are 19 years old. Column (1) includes the variable mother as dependent variable that takes value 1 if the woman is a mother, and 0 otherwise. Column (2) includes the logarithm of the total net family income as dependent variable. All columns include controls for the level of education, whether the woman's current residence is rural, year- fixed effects, and region of current residence fixed effects.

Fertility behavior

Although in the previous subsections we have included a range of characteristics of women when they are 19 years old to serve as controls, it could be argued that what is relevant in determining the effect of culture are the characteristics of these women when they

decide, or not, to have a child. One of these potential factors may be the education level of teen women at the time of the decision whether to have a child. It is possible to hypothesize that the social norms and preferences of teen women are better measured when they decide, or not, to have a child; thus, the cultural proxy should be measured at the time of the decision.

To improve our empirical evidence, we incorporate the home country LBR – measured in the year of the birth if they are teen mothers, and when they are 18 years old if they are not teen mothers. In the case of teen mothers, we choose the year of birth as a proxy of the characteristics of women when they decide to have a child. We consider this a good proxy, since the decision to have a child, or to have an abortion, is normally made in the period between becoming pregnant (information on when these women become pregnant is not available) and the legal time limit when abortions are allowed, which is reasonably close to the delivery date. For non-teen mothers, we record their personal information when they are 18 years old. Since the proportion of teen mothers is considerably greater when women are 18 and 19 years old, we gather that measuring those variables when non-teen mothers are 18 years old is the best proxy for knowing their characteristics when a woman makes the decision not to have a child.[12] We also introduce controls for women's education levels when they decide – or not – to have a child, rather than when they are 19 years old. Results are shown in Supplemental Online Appendix A, Table A.2. As can be seen, our findings are maintained

even after using information on the moment in which women make their decisions whether to have a child. In sum, the fertility culture of teen women appears to be a relevant factor in determining the decision whether to have a child.

5.- Conclusions

This paper examines the impact of culture on teen motherhood in the US. Teen motherhood is an important issue since, according to WHO, being a teen mother has significant negative consequences for both mother and child.[13] To measure the effect of cultural variation, we exploit the variation in fertility rates by country of origin of teen women's forebears. The differences in fertility rates of teenage women by national origin can be interpreted as supporting evidence of the relevance of fertility culture. This epidemiological approach allows us to strictly separate the impacts of markets and institutions from the effects of culture in ascertaining the fertility behavior of teen women. We find that home country LBRs, our main cultural proxy, have economically and statistically significant effects on the probability of becoming a teen mother.

Our findings are robust to alternative specifications, to different samples and databases, and to individual characteristics. In addition, we check whether unobserved heterogeneity across ethnic groups is driving our results; we do this by adding controls for home country characteristics. In all specifications, the estimated coefficient on home

country LBRs varies very little. Placebo tests also suggest that we are correctly interpreting the impact of our cultural proxy.

Our results suggest that differences in fertility rates of teen women by ethnicity can explain, at least in part, the fertility behavior of teen women who have spent their life in the US. This can be understood as supporting evidence indicating that cultural differences are, at least, a partial explanation for the variations in fertility rates of teenage women across countries. This finding can clarify the differences in the effects of traditional policies, such as the diffusion of contraception information and in the improvement of adolescent sex education. Policymakers should take cultural differences into consideration to act more efficiently in decreasing teen motherhood rates. The tools used should be focused on the specific characteristics of each segment of teenagers by ethnicity, for example, by providing family planning specialists of appropriate racial or ethnic background or by hiring social workers who can more fully understand the specific circumstances and culture of the teen women in question. In this line, there have been several initiatives attempting to reduce teen pregnancies that focus on the different ethnicities of the teen mothers. For example, Teen Pregnancy Prevention 2010–15, developed by the Office of Adolescent Health (OAH) of the US Department of Health and Human Services, focuses on reaching African American and Latino/Hispanic individuals.

Further, public policies supporting teen mothers cannot be

forgotten, especially because these public assistance payments cannot be blamed for teen pregnancies (Blank 1995), and can reduce the negative consequences of teenage pregnancy for both the mother and her child. Social policies focused on teenage single mothers can be developed, distinguishing them from other single mothers or even other poor parents (Randy Albelda, Susan Himmelweit, and Jane Humphries 2004; Susan Himmelweit, Barbara Bergmann, Kate Green, Randy Albelda, The Women's Committee of One Hundred, and Charlotte Koren 2004). It would also be important to implement policies promoting alternative arrangements for working hours that consider the special situation of teenage mothers; these arrangements can vary by cultural origin, as suggested by Carmen Sirianni and Cynthia Negrey (2000).

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Notes

1 Note that, throughout the article, we use a linear probability model for simplicity, as in prior works on the study of cultural effects. Results are similar when using probit or logit models. See Table A.1 in Supplemental Online Appendix A.

2 The US is divided into four regions: North East (omitted

variable), North Central, South, and West.

3 As in prior literature on culture, in order to make meaningful comparisons across averages of teen women by country of origin, we exclude those women from countries of origin with fewer than ten observations.

4 The omitted variable includes women who completed less than the twelfth grade.

5 We also use the LBR measured in 1960, 1970, 1990, and 2000, and the results do not change.

6 We have also excluded each country one at a time during the course of our study, and we do not find differences.

7 Again, our results do not vary when we introduce all of these controls in the same specification.

8 This dataset allows us to incorporate the following ancestral origins: China, Cuba, Denmark, France, Germany, Greece, Haiti, Hungary, India, Ireland, Italy, Mexico, the Netherlands, Norway, the Philippines, Poland, Portugal, Russia, South Korea, Spain, Sweden, and the UK.

9 As can be read on the Bureau of Labor Statistics' Internet webpage: "To protect respondent confidentiality, the NLSY public-use files do not include geographic variables such as state, county, and metropolitan area"
(see: http://www.bls.gov/nls/nlsfaqs.htm#anch25);
"The Bureau of Labor Statistics (BLS) only grants access to geocode files for researchers in the United States who agree (in writing) to adhere to the BLS confidentiality policy and whose projects further the mission of BLS and the NLSY program to conduct sound, legitimate research in the social sciences. Applications from abroad cannot be accepted."
See: http://www.bls.gov/nls/nlsfaq2.htm#anch32.

[10] We have reestimated these results including all endogenous covariates at the same time, and results do not substantially change.

[11] It is also possible to argue that the level of education of teenage women is an endogenous factor that can lead to bias in our estimates. As with the rest of the potential endogenous variables, we have also repeated the analysis without controls for educational level, and results do not change.

[12] We have reestimated these results taking the personal information of non-teen mothers when they are 19 years old. Results are quite similar. Problems of availability of data make it more complicated to draw consistent comparisons at the country level with a sample of women under age 18.

[13] The negative consequences of teen pregnancies are possible for all teen women, according to the existing literature. WHO (and others, such as United Nations Children's Fund [UNICEF]) does not make age distinctions between teenage women when they describe the negative consequences of being a teen mother; they recognize all these women can suffer the negative consequences of having a child during teen years.
(see: http://www.who.int/maternal_child_adolescent/topics/maternal/adolescent_pregnancy/en/).

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